The Making of Social Democracy

The Economic and Electoral Consequences of Norway's 1936 School Reform

Daron Acemoglu
MIT

Tuomas Pekkarinen
VATT

Kjell Salvanes
NHH

Matti Sarvimäki
Aalto

JEEA Teaching Slides

(.tex version and figures available here)

Introduction

- Social democratic governments profoundly shaped Norway from 1935 onwards
  - new institutions based on macroeconomic management, collective bargaining, fiscal redistribution and publicly provided education, social insurance, health services...
  - radical break from what prevailed earlier
    - high inequality, low levels of intergenerational mobility
    - high levels of industrial conflict
  - "Patient Revolution": gradual reforms through peaceful and democratic means
    - the legacy of these reforms is now widely supported
- The broad questions
  - what were the impacts of these reforms?
  - what enabled the social democrats to carry them out?

This paper

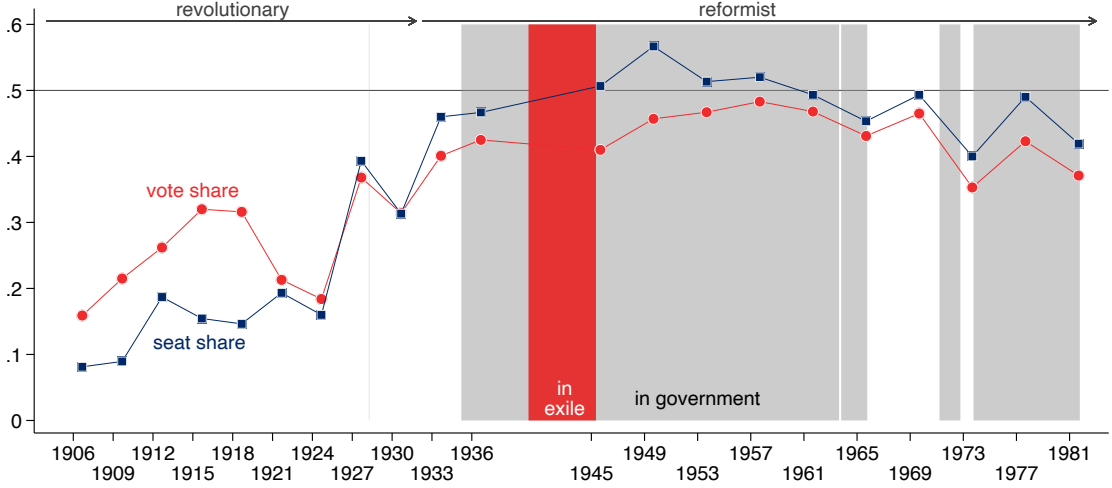
- The impact of the 1936 Law on Rural Primary Schools
  - the first reform of Norway's first social democratic government
  - harmonization of school quality across geographical areas
  - starts a series of reforms eventually leading to comprehensive school system
- Main results
  - increased long-term income and post-mandatory education
    - likely spillovers on the next generation
  - **increased social democratic vote share**
    - rule out direct education effect and increased political participation as channels
    - proposed mechanism: changes in perceptions and/or gratitude towards the Labour Party

Contribution

- Origins of social democracy in Europe
  - classic work emphasizes the role of labor unions and coalition with agrarian interests (Esping-Andersen 1990, Baldwin 1990, Rothstein, 1998)
  - we highlight the role of education reforms
- Successful political reforms
  - transition to democratic regimes (Acemoglu and Robinson, 2006, 2012; Fearon 2011, Bidner and Francois 2013, Brender and Drazen 2007, Giavazzi and Tabellini 2005)
  - institutional reforms within democratic political systems (Fernandez and Rodrik 1991, Strulovici 2010, Grossman and Helpman 2001)
  - no earlier work examining the impact of schooling reforms on institutions
- Education and democracy
  - does education increase support for democratic institutions? (Verba and Almond 1963, Lipset 1959, Glaeser et al. 2007, Acemoglu et al 2005, 2008, Milligan et al. 2004, Friedman et al. 2016)
  - idelological differences in education policies (Ansell and Lindvall, 2013)
  - our argument different: fulfilling an electoral promise increased support for the Labour Party

Background and the reform

Norway's social democrats



Norway's social democrats

- A typical Western European socialist party
  - founded in 1887, in Parliament since 1904
  - characterized by internal conflicts between the revolutionary and reformist factions
    - member of the Comintern in 1919–23 $\rightarrow$ split of the party $\rightarrow$ reunited in 1927
  - strong revolutionary wing, ambivalent attitude towards parliamentary democracy

Election poster from 1930

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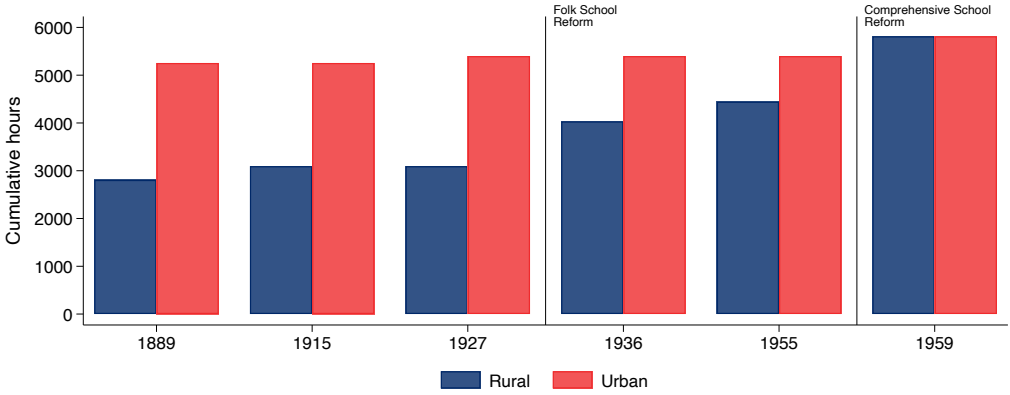
    - member of the Comintern in 1919–23 $\rightarrow$ split of the party $\rightarrow$ reunited in 1927
  - strong revolutionary wing, ambivalent attitude towards parliamentary democracy
- The reformists win in the early 1930s
  - context: election loss in 1930, severe recession in late 1920s, threat of fascism
  - appeal beyond core supporters
  - strongly parliamentarist party ever since

Election poster from 1933

Nygaardsvold's cabinet

- Form a minority government in 1935 (with the support of the Agrarian Party)
  - committee work on school reform started almost immediately → the Law passed in June 1936

Primary education: cumulative hours



- Mandatory education since 1739; minimum of 7 years since 1889
  - separate legislation for rural and urban areas
- Calls to increase instruction time in rural areas already in 1902
  - third objective of Labour's 1936 program (after democratic rights and equal justice)

1936 Law on rural primary schools

- New minimum weeks in rural areas
  - 16 in grades 1-3 (increase of 4 weeks)
  - 18 in grades 4-7 (increase of 4 weeks)
  - corresponds to 30% increase in minimum requirements
- Other components
  - maximum class size
  - minimum teacher salaries
  - barring physical punishment
  - more central government funding
- Implementation
  - launched in July 1937 with a transition period
  - transition period ends in July 1942
  - German occupation between 4/1940-5/1945
    - does not seem to affect implementation

Data and measurement

Data

- Human capital and income
  - 1960 census, the population registers, tax register
  - information on annual income 1967-2010
  - final educational attainment
  - military data on cognitive ability test scores
    - available only for the second generation men
- Elections
  - municipality-party level vote counts at national elections
  - candidates in national elections (Fiva and Smith, 2017)
  - survey on individual level voting (Valgundersokelsene, 1957)
- Schools
  - digitalized municipal level school information from 1930s onwards
  - tons of information, but content varies across years
  - key variable: distribution of children by weeks of education in 1935

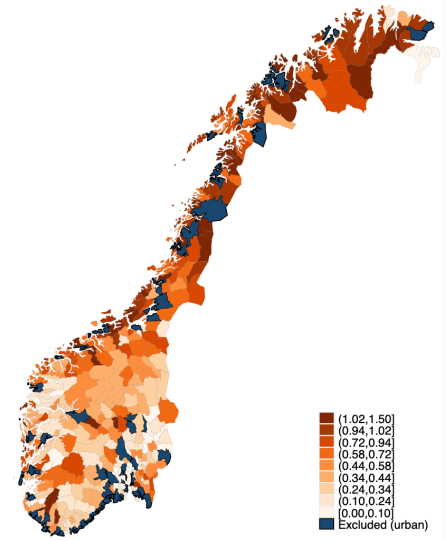
Treatment intensity

- For each municipality j, we use 1935 data to calculate the **pre-reform distance from the post-reform minimum requirements**

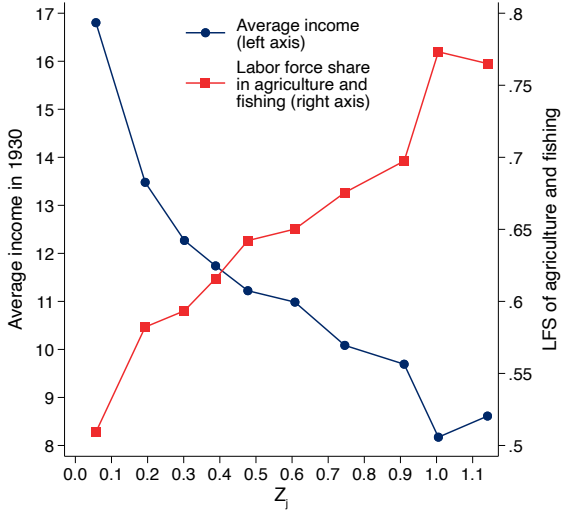
$$Z_j = \frac{3\sum_b s_{bj}\max(16-b,0) + 4\sum_b S_{bj}\max(18-b,0)}{28}$$

  - s_{bj}: share of 1–3 graders getting b weeks of education
  - S_{bj}: share of 4–7 graders getting b weeks of education
  - denominator: the change in minimum requirements was 28 weeks
- Proxy for how much "bite" the reform had on each municipality
  - more than just weeks, correlated with the other components of the reform

Treatment intensity

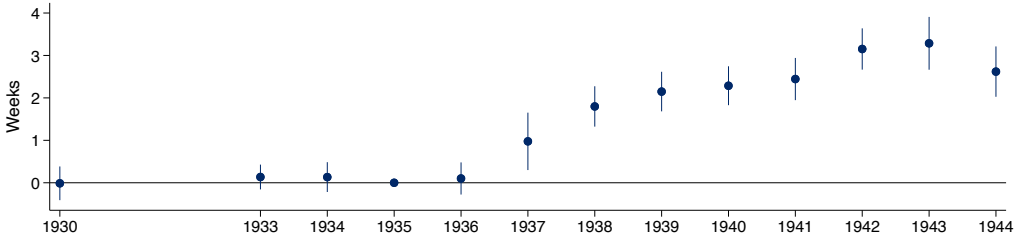


(A) Geographical distribution

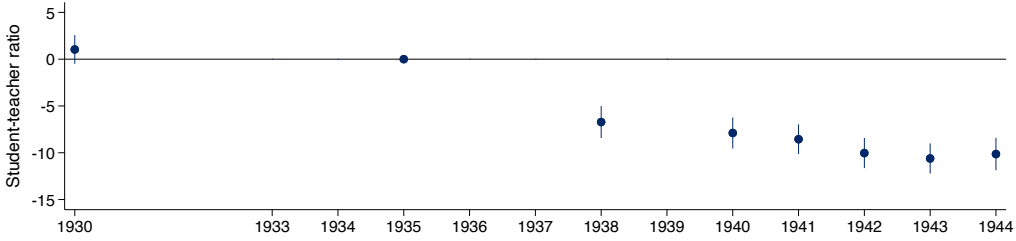


(B) Pre-reform income and industrial structure

Event-study estimates for instruction time and class size



(A) Instruction time



(B) Class size

Human capital and income

Specifications

- Specification 1: Event-study

$$y_{icj} = \sum_{k \in K} \beta_k (Z_j \times 1[c = k]) + \sum_{k \in K} (X_{j0} \times 1[c = k]) \theta_k + \mu_c + \mu_j + \epsilon_{icj}$$

y_{ijc}: outcome of individual i, born (or parent born) in municipality j in year c

K: set of birth years ranging from 1917 to 1940 (apart from the omitted category)

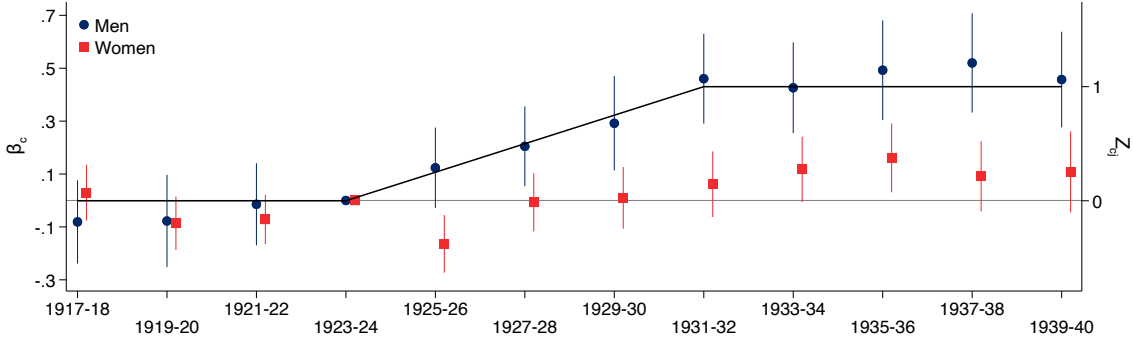
Z_j: pre-reform distance from the new requirements for municipality j

X_{j0}: municipality characteristics measured before the reform (some specifications only)

μ_c: year of birth fixed effects

μ_j: municipality of birth fixed effects

Event-study estimates for first generation's years of education



Specifications

- Specification 2: Differences-in-differences

$$y_{icj} = \beta Z_{jc} + \sum_{k \in K} (X_{j0} \times 1[c = k])\theta_k + \mu_c + \mu_j + \epsilon_{icj}$$

$Z_{jc} = \sum_c \pi_c Z_j$, where π_c is the share of years birth cohort c studied under the new requirements (assuming that the reform was implemented in 1938)

TABLE 2. Differences-in-Differences Estimates for the First Generation

	Men					Women				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Years of education	0.473 (0.051)	0.231 (0.073)	0.220 (0.078)	0.302 (0.088)	0.291 (0.086)	0.163 (0.036)	0.052 (0.048)	-0.015 (0.057)	0.004 (0.057)	-0.016 (0.057)
Log income (age 50–64)	0.143 (0.015)	0.088 (0.020)	0.051 (0.022)	0.048 (0.021)	0.043 (0.022)	0.156 (0.022)	0.102 (0.026)	0.086 (0.029)	0.055 (0.031)	0.065 (0.031)
Controlling for:										
Region	no	yes	yes	yes	yes	no	yes	yes	yes	yes
Income	no	no	yes	no	yes	no	no	yes	no	yes
Industry	no	no	no	yes	yes	no	no	no	yes	yes

Note: Estimates for β from regression $y_{icj} = \beta Z_{jc} + \sum_{k \in K}(X_{j0} \times 1[c = k])\theta_k + \mu_c + \mu_j + \varepsilon_{icj}$, where Z_{jc} is treatment intensity in municipality j for birth cohort c, X_{j0} is a vector of pre-reform covariates, μ_c is a vector of cohort fixed-effects, and μ_j is a vector of municipality of birth fixed-effects. Each regression stems from a separate regression, which differ in the dependent variable (rows) and specification (columns). Columns (2) to (5) and (7) to (10) condition on trends by 20 regions; columns (3) and (8) add controls for trends by quintiles of municipality's 1930 average taxable income and income growth between 1915 and 1930; columns (4) and (9) for quintile dummies of municipality's labor force shares in agriculture, fishing, manufacturing, and services in 1930; and columns (5) and (10) for income and industry structure. Each entry is from a separate regression. Number of observations: 164,286 (men) and 179,685 (women) for years of education; 161,924 (men) and 156,092 (women) for log income.

Interpretation

- Intention-to-treat effect of a "full exposure" to the reform ($Z_{jc} = 1$)
  - men: education increases by $\approx$ 0.3 yrs (baseline 9 yrs), income by $\approx$ 4 log points
  - women: education increases by $\approx$ 0.1 yrs (baseline 8.2 yrs), income by $\approx$ 7 log points
  - positive, but mostly insignificant intergenerational estimates
- Tempting to interpret β as a reduced form of an IV design
  - BUT: it is unclear what the treatment exactly is
  - full exposure predicts: weeks of education increase by roughly 20 weeks, student/teacher ratio decreases by roughly 10...
  - unlikely that our data captures all dimensions of the reform

Elections

Impact on elections

- Similar as above, but now using calendar year variation, i.e., event-study:

$$y_{ptj} = \sum_{h \in H} \beta_h Z_j \times 1[t = h]) + \sum_{h \in H} \theta_h (X_{j0} \times 1[t = h]) + \mu_t + \mu_j + \epsilon_{ptj}$$

and differences-in-differences specifications:

$$y_{ptj} = \beta(1[t \geq 1945] \times Z_j) + \sum_{h \in H} \theta_h (X_{j0} \times 1[t = h]) + \mu_t + \mu_j + \epsilon_{ptj}$$

y_{pjt}: vote share of party p in municipality j, year t

H: set of election years between years 1927 and 1965

Z_j: pre-reform distance from the new requirements

X_{j0}: other pre-reform characteristics

μ_t: year FEs

μ_j: municipality FEs

Event-study estimates for the vote shares of the Labour Party

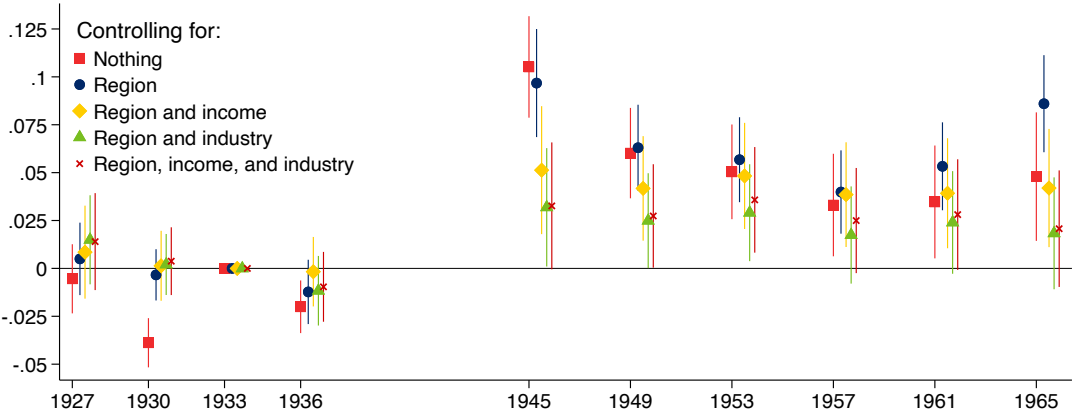


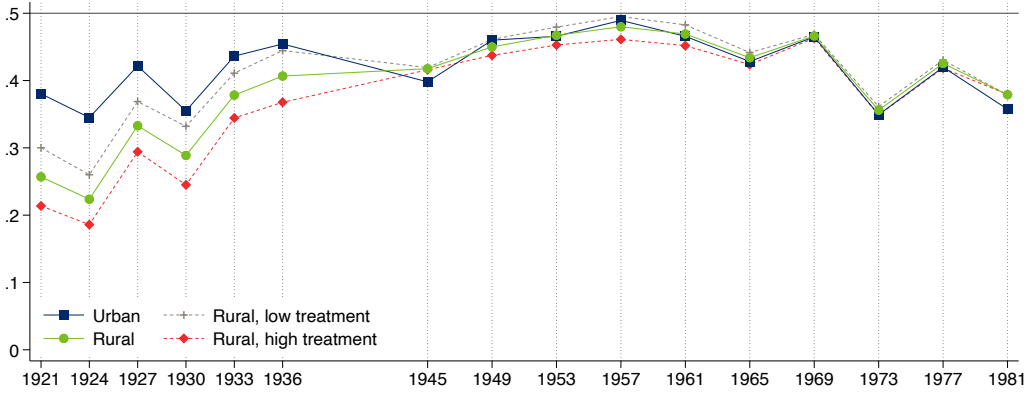
TABLE 4. Differences-in-Differences Estimates for the Vote Shares

	Vote share				
	(1)	(2)	(3)	(4)	(5)
Labour	0.070	0.068	0.042	0.023	0.027
	(0.013)	(0.010)	(0.013)	(0.012)	(0.013)
Communists	-0.012	-0.013	-0.008	-0.003	-0.005
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)
Agrarian	-0.005	-0.041	-0.016	0.005	0.000
	(0.010)	(0.012)	(0.014)	(0.012)	(0.012)
Liberal	-0.089	-0.053	-0.022	-0.018	-0.011
	(0.013)	(0.013)	(0.014)	(0.014)	(0.015)
Conservatives	-0.005	-0.027	-0.026	-0.028	-0.026
	(0.012)	(0.012)	(0.014)	(0.012)	(0.012)
Time trends by:					
Region	no	yes	yes	yes	yes
Income	no	no	yes	no	yes
Industry	no	no	no	yes	yes

Note: Point estimates and standard errors (in parentheses) for β from regression $y_{ptj} = \beta(1[t \geq 1945] \times Z_j) + \sum_{h \in H} \theta_h(X_{j0} \times 1[t = h]) + \mu_t + \mu_j + \varepsilon_{ptj}$, where y_{ptj} is the vote share for party p in municipality j in year t, Z_j measures treatment intensity (see equation (6)), $1[t \geq 1945]$ is an indicator variable taking the value one for post-war and zero for pre-war years, X_{j0} is a vector of pre-reform characteristics, and μ_t and μ_j are year and municipality fixed-effects. Each regression stems from a separate regression, which differ in the dependent variable (rows) and specification (columns). Standard errors are clustered at the municipality level. Number of observations: 6,590.

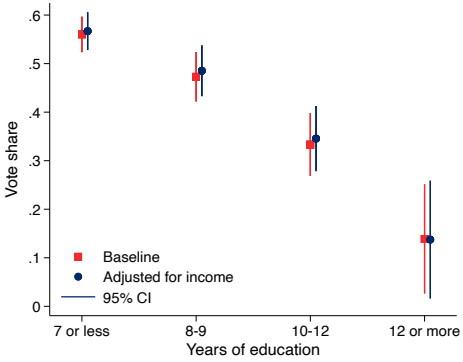
Magnitude

- Back-of-an-envelope calculation: Labour Party's rural vote share grew by 1.4–4.6 percentage points faster between 1933 and 1945 due to the reform
  - baseline: 3.9 percentage points increase in rural areas; 3.8 decrease in cities



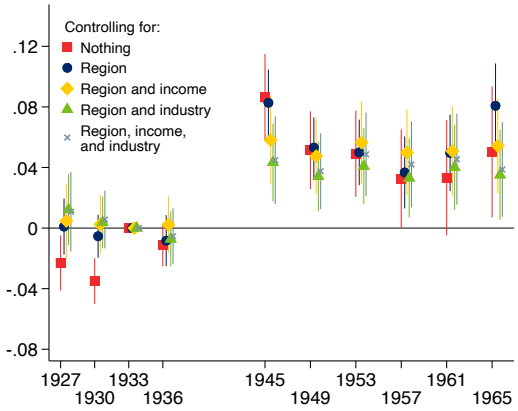
Mechanisms

- Unlikely: direct education effect
  - directly affected individuals too young in 1945
  - strong negative correlation between education and support for social democrats
- Also unlikely: increased political participation
  - no impact on turnout
  - or local candidates
- Likely: changing perceptions of the Labour Party
  - electoral effects coming from municipalities that have no previous experience with Labour rule
  - directly affected, and their parents, more likely to vote Labour in 1957

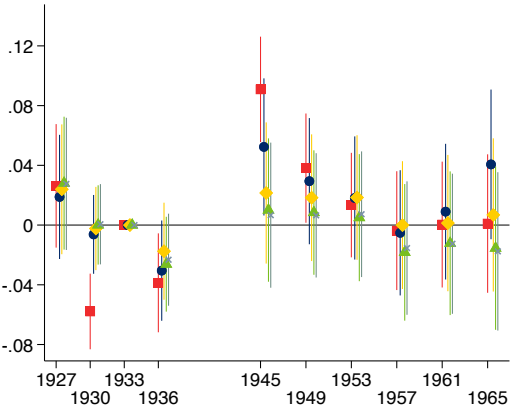


Support for the Labour Party by education 1957

Labor vote share estimates by earlier exposure to local Labour rule



(A) Non-Labour Mayor in 1934



(B) Labour Mayor in 1934

Electoral Survey, 1957

- Using the 1957 survey, we estimate

$$y_i = \alpha + \beta A_i + \gamma R_i + \delta(A_i \times R_i) + \epsilon_{ptj}$$

y_i: voted for Labour in 1957

R_i: lives in low density (rural) area

A_i: affected by the reform

  - under 35 years old
  - has children younger than 25 years

- Limitation: treatment intensity variation within rural areas not observed

	Voted the Labour Party in 1957	
	(1)	(2)
A: Children		
Constant	0.614	0.624
	(0.023)	(0.023)
Low density	-0.133	-0.160
	(0.034)	(0.035)
Young	-0.036	-0.033
	(0.045)	(0.045)
Low density × Young	0.186	0.192
	(0.069)	(0.068)

TABLE 5. Support for the Labour Party in the 1957 Election Survey Data

	Voted the Labour Party in 1957		Voted the Labour Party in first elections		Labour has implemented its agenda	
	(1)	(2)	(3)	(4)	(5)	(6)
A: Children						
Constant	0.614	0.624	0.600	0.607	0.521	0.527
	(0.023)	(0.023)	(0.022)	(0.022)	(0.023)	(0.023)
Low density	-0.133	-0.160	-0.122	-0.141	0.001	-0.012
	(0.034)	(0.035)	(0.032)	(0.033)	(0.034)	(0.036)
Young	-0.036	-0.033	-0.008	-0.002	-0.085	-0.078
	(0.045)	(0.045)	(0.047)	(0.046)	(0.044)	(0.045)
Low density ×	0.186	0.192	0.153	0.156	0.071	0.059
Young	(0.069)	(0.068)	(0.073)	(0.072)	(0.069)	(0.069)
B: Parents						
Constant	0.613	0.634	0.576	0.592	0.529	0.548
	(0.032)	(0.032)	(0.030)	(0.031)	(0.031)	(0.032)
Low density	-0.187	-0.225	-0.139	-0.163	-0.009	-0.046
	(0.048)	(0.049)	(0.044)	(0.046)	(0.048)	(0.050)
Young child	-0.014	-0.027	0.051	0.036	-0.029	-0.038
	(0.046)	(0.046)	(0.043)	(0.043)	(0.045)	(0.045)
Low density ×	0.128	0.136	0.034	0.048	0.041	0.052
Young child	(0.068)	(0.066)	(0.062)	(0.061)	(0.067)	(0.067)
Observations: children	1,105	1,103	1,218	1,214	1,166	1,162
Observatons: parents	852	851	1,011	1,008	899	897
Region FEs	no	yes	no	yes	no	yes

Conclusions

Conclusions

- The transformation of social democratic parties from revolutionary to reformist movements is a major political development
- This paper examined the first major reform Norway's social democrats launched once gaining power: improving primary education in rural areas
- Take-aways
  - increased long-term income and post-mandatory education
  - increased social democratic vote share in the next elections
  - proposed mechanism: changes in perceptions and/or gratitude towards the Labour Party