

# Supplementary Appendix: Parties, Legislators, and the Origins of Proportional Representation

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## Abstract

A prominent line of theories holds that proportional representation (PR) was introduced in many European democracies by a fragmented bloc of conservative parties seeking to preserve their legislative seat shares after franchise extension and industrialization increased the vote base of socialist parties. In contrast to this “seat-maximization” account, we focus on how PR affected party leaders’ control over nominations, thereby enabling them to discipline their followers and build more cohesive parties. We explore this “party-building” account in the case of Norway, using roll call data from six reform proposals in 1919. We show that leaders were more likely to vote in favor of PR than rank-and-file members, even controlling for the parties’ expected seat payoffs and the district-level socialist electoral threat facing individual legislators. Moreover, using within-legislator variation, we show that the internal cohesion of parties increased significantly after the introduction of PR.

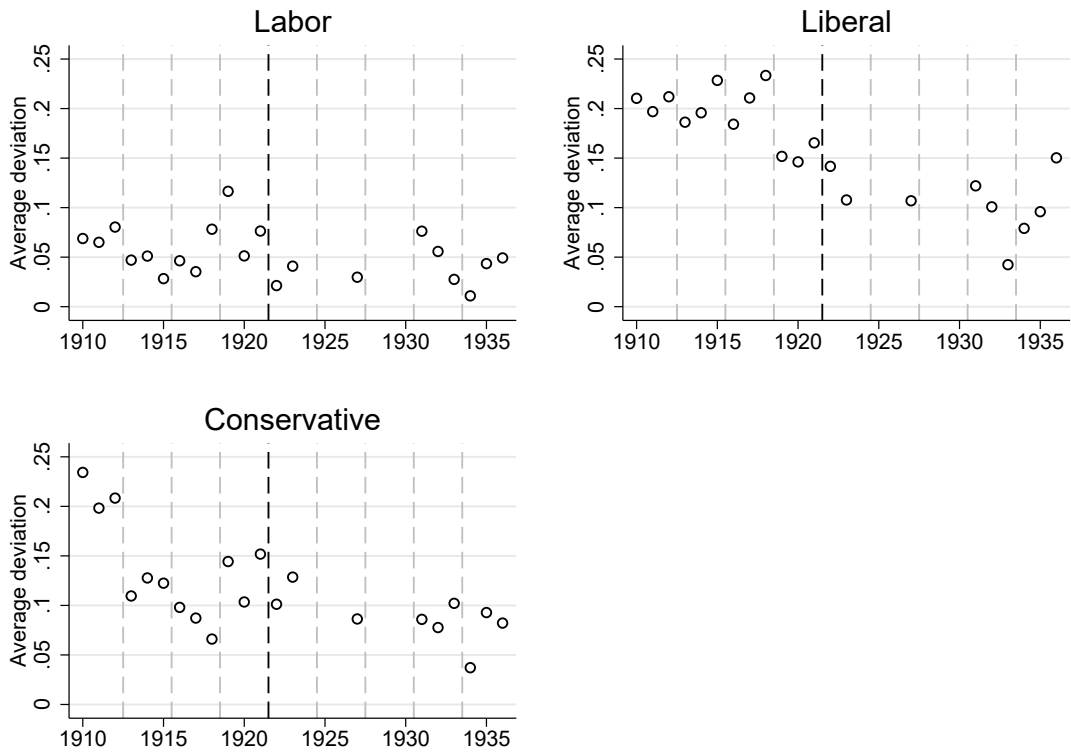
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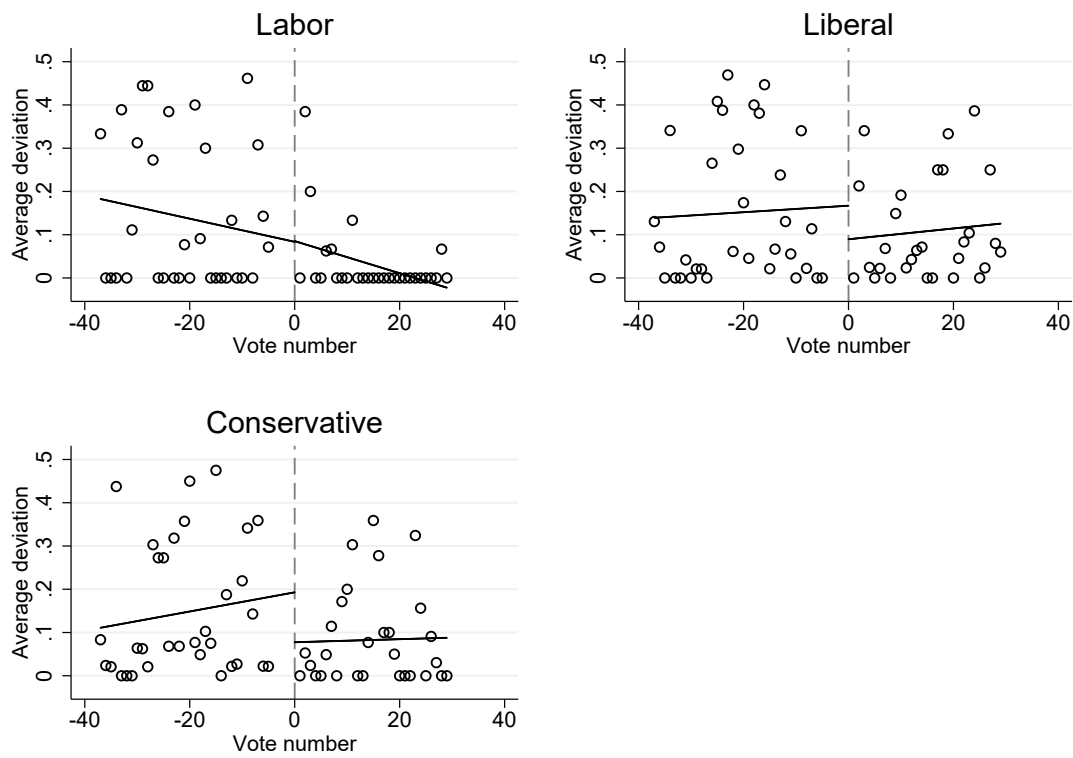
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Figure A.1: Time trend in deviation from party vote 1910-1936, by party bloc



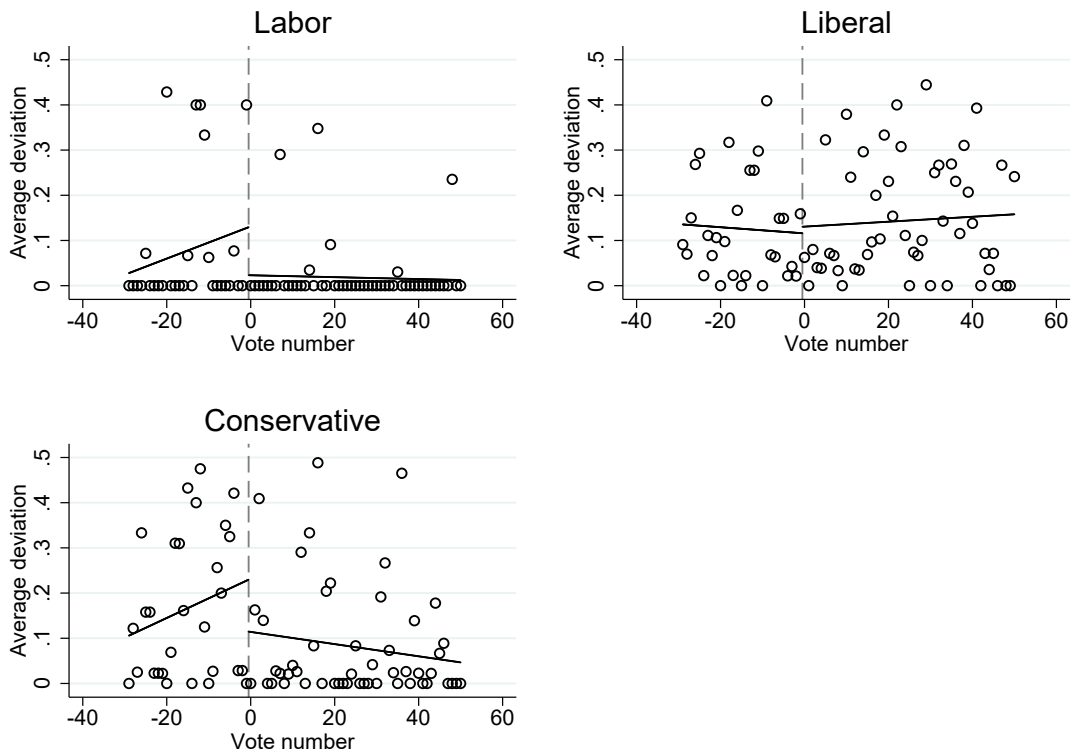
*Note: The figure displays the development over time in **Deviation** from 1910 to 1936. The black dashed vertical lines separate pre- and post-reform. The gray dashed vertical lines separate election periods. The years 1924-1926 and 1928-1930 are excluded due to missing information in the Voting Archive. Each binned scatterpoint displays the yearly average of party bloc **Deviation**.*

Figure A.2: Deviation before and after PR adoption



*Note: The figure displays the average party bloc **Deviation** from the beginning of the 1919 session to the end of the Knudsen cabinet (June 1920). Only plenary sessions are included in the samples used. The black dashed vertical lines separate the adoption of PR (final vote in 1919 session). Separate linear regression lines are estimated to the left and right of the cutoff.*

Figure A.3: Deviation before and after PR implementation



Note: The figure displays the average party bloc **Deviation** in the Blehr cabinet period (June 1921 to March 1923). Only plenary sessions are included in the samples used. The black dashed vertical lines separate the implementation of PR. Separate linear regression lines are estimated to the left and right of the cutoff.

Table A.1: Sensitivity analysis: pre-reform party elite includes deputies of current ministers

	(1)	(2)	(3)	(4)	(5)
	Postpone	B	C	D	E
Party elite	-0.332*** (0.083)	-0.177** (0.074)	-0.049 (0.054)	-0.252*** (0.095)	0.235** (0.093)
Conservative MP	0.034 (0.096)	0.205*** (0.067)	0.936*** (0.040)	-0.607*** (0.084)	-0.141 (0.091)
Socialist vote share	-0.067 (0.050)	0.087*** (0.032)	0.026 (0.030)	-0.044 (0.037)	0.121*** (0.044)
Constant	0.381*** (0.068)	0.078** (0.034)	0.030 (0.026)	0.857*** (0.051)	0.717*** (0.060)
$N$	104	104	104	104	104
$R^2$	0.100	0.186	0.892	0.474	0.116

*Note: Linear probability model. Dependent variable equals one if the MP voted in favor of the reform proposal (given in the table header), zero otherwise. Sample is limited to Liberal and Conservative MPs ( $n=104$ ). Party elite is an indicator variable equal to one if the MP served as a cabinet minister (or deputy to one), party leader, member of national board, or parliamentary leader, in the 1906-1921 period, zero otherwise. Conservative MP is an indicator variable equal to one if the MP represents the Conservative bloc, zero otherwise. Socialist vote share is the share of votes for the best performing Labor candidate in the MP's home district in the first round of the 1918 election; standardized to have mean zero and standard deviation one. Small sample robust standard errors (`vce(hc3)` option in Stata) in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .*

Table A.2: Sensitivity analysis: Logit model with penalized maximum-likelihood function

	(1)	(2)	(3)	(4)	(5)	(6)
	Postpone	A	B	C	D	E
Party elite	-2.032** (0.880)	-1.133 (1.552)	-1.710* (0.956)	-1.857 (1.459)	-1.880** (0.753)	1.265* (0.724)
Conservative MP	0.127 (0.438)	2.033 (1.525)	2.143*** (0.763)	7.025*** (1.532)	-3.027*** (0.544)	-0.668 (0.461)
Socialist vote share	-0.284 (0.212)	0.529 (0.670)	0.966** (0.396)	0.955 (0.671)	-0.339 (0.269)	0.555** (0.231)
<i>N</i>	104	104	104	104	104	104

*Note: Logit model with penalized maximum-likelihood function implemented with `firthlogit` in Stata (Coveney, 2015). Dependent variable equals one if the MP voted in favor of the reform proposal (given in the table header), zero otherwise. Sample is limited to Liberal and Conservative MPs ( $n=104$ ). Party elite is an indicator variable equal to one if the MP served as a cabinet minister (or deputy to one), party leader, member of national board, or parliamentary leader, in the 1906-1921 period, zero otherwise. Conservative MP is an indicator variable equal to one if the MP represents the Conservative bloc, zero otherwise. Socialist vote share is the share of votes for the best performing Labor candidate in the MP's home district in the first round of the 1918 election; standardized to have mean zero and standard deviation one. Standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .*