

Online Appendix  
for  
Delivering the Vote: The Political Effect of Free Mail  
Delivery in Early Twentieth Century America

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1	Tables with All Voter Outcomes, Including the Five- and Twenty-Percent Thresholds	
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Table 1: Fixed Effects Results for Voter Outcomes

VARIABLES	(1) Turnout	(2) Turnout	(3) >5 %	(4) >10 %	(5) >20 %	(6) Small Party Share
RFD Routes	-0.0935 (0.0600)		0.00429* (0.00232)	0.00552*** (0.00156)	0.00351*** (0.00107)	0.113** (0.0441)
RFD Dummy	-	-2.679* (1.378)	-	-	-	-
% Urban	-0.166** (0.0698)	-0.143** (0.0675)	-0.00686** (0.00275)	-0.00358** (0.00149)	-0.00229 (0.00161)	-0.0674 (0.0555)
% Urban Squared	0.00157 (0.00143)	0.000651 (0.00150)	0.000212*** (5.33e-05)	0.000125*** (3.28e-05)	7.29e-05** (3.30e-05)	0.00383*** (0.000992)
% Improved Farmland	0.0380 (0.0972)	0.0560 (0.0975)	-0.00636* (0.00375)	-0.00606** (0.00286)	-0.00429* (0.00215)	-0.140* (0.0768)
% Non-white	-0.0274 (0.212)	-0.0662 (0.220)	0.00426 (0.00759)	0.00182 (0.00657)	0.000947 (0.00558)	-0.194 (0.170)
% Foreign-born	-0.339 (0.269)	-0.328 (0.272)	-0.00197 (0.00988)	-0.00754 (0.00720)	-0.00854* (0.00502)	-0.0675 (0.243)
Ln(Population)	-0.203 (2.876)	0.293 (2.766)	0.226*** (0.0658)	0.123* (0.0639)	0.0715 (0.0698)	1.550 (1.372)
Observations	22,433	22,433	22,433	22,433	22,433	22,433
R-squared	0.807	0.807	0.435	0.439	0.527	0.371

Additional controls include county and year fixed effects, and dummy variables indicating the presence of Jim Crow laws, women's suffrage, secret ballots, and direct primaries. Standard errors, clustered at state level, in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Sources: RFD routes from the 1908 United States Official Postal Guide; voting data are from Clubb, Flanigan, and Zingale (2006); county characteristics are from Haines (2010) (county boundaries fixed at 1890 values as in Hornbeck (2010)).

Table 2: IV Regression for Voter Outcomes

VARIABLES	(1) Turnout	(2) > 5%	(3) > 10%	(4) > 20%	(5) Small Party
RFD Routes	0.130 (0.321)	0.0238** (0.0115)	0.0247*** (0.00782)	0.0132** (0.00585)	0.831** (0.355)
% Urban	-0.153** (0.0631)	-0.00501* (0.00286)	-0.00174 (0.00174)	-0.00107 (0.00155)	-0.0153 (0.0632)
% Urban Squared	0.000116 (0.00203)	6.87e-05 (8.72e-05)	-1.71e-05 (5.92e-05)	-3.73e-06 (4.68e-05)	-0.00103 (0.00258)
% Improved Farmland	0.0407 (0.0961)	-0.00590* (0.00345)	-0.00564** (0.00255)	-0.00384** (0.00190)	-0.137* (0.0830)
% Non-white	-0.100 (0.225)	-0.00181 (0.00882)	-0.00437 (0.00815)	-0.00179 (0.00564)	-0.453* (0.248)
% Foreign-born	-0.298 (0.275)	9.20e-05 (0.00895)	-0.00573 (0.00643)	-0.00688 (0.00488)	-0.0257 (0.241)
Ln(Population)	1.993 (3.612)	0.425*** (0.127)	0.319*** (0.0913)	0.170** (0.0740)	8.781** (3.823)
Observations	22,212	22,212	22,212	22,212	22,212
Counties	2,403	2,403	2,403	2,403	2,403
F Stat.	10.4	10.4	10.4	10.4	10.4
R-squared	0.147	-0.019	-0.033	0.018	-0.107

Additional controls include county and year fixed effects, and dummy variables indicating the presence of Jim Crow laws, women's suffrage, and secret ballots. Standard errors, clustered at state level, in parentheses. The cluster-robust Kleibergen-Paap Wald rk F statistic is reported.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Sources: RFD routes from the 1908 United States Official Postal Guide; voting data are from Clubb, Flanigan, and Zingale (2006); county characteristics are from Haines (2010) (county boundaries fixed at 1890 values as in Hornbeck (2010)); spending are collected from the Report on Wealth, Debt, and Taxation (Upton 1895); state laws information are from Stone (1894, 1896).

Table 3: Effects By Newspaper Presence for Voter Outcomes

Newspaper	(1) Turnout		(2) Turnout		(3) > 5%		(4) > 5%		(5) > 10%		(6) > 10%		(7) > 20%		(8) > 20%		(9) Small Party		(10) Small Party			
	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES		
RFD Routes	-0.181 (0.385)	0.0725 (0.249)	-0.00179 (0.0135)	0.0324*** (0.0101)	0.00692 (0.00941)	0.0287*** (0.00754)	0.00377 (0.00725)	0.0163*** (0.00568)	0.563 (0.381)	0.00377 (0.00725)	0.0287*** (0.00754)	0.00692 (0.00941)	0.0163*** (0.00568)	0.00377 (0.00725)	0.563 (0.381)	0.00377 (0.00725)	0.0163*** (0.00568)	0.563 (0.381)	0.00377 (0.00725)	0.0287*** (0.00754)	0.00692 (0.00941)	0.0163*** (0.00568)
% Urban	-0.118 (0.0871)	-0.222* (0.129)	0.00136 (0.00375)	-0.00933* (0.00535)	1.03e-05 (0.00247)	-0.00233 (0.00358)	-0.000733 (0.00249)	-0.00225 (0.00263)	-0.0223 (0.119)	0.00136 (0.00375)	-0.00933* (0.00535)	-0.00233 (0.00358)	-0.000733 (0.00249)	-0.00225 (0.00263)	-0.0223 (0.119)	-0.000733 (0.00249)	-0.00225 (0.00263)	-0.0223 (0.119)	-0.000733 (0.00249)	-0.00233 (0.00358)	0.00163 (0.00163)	-0.168* (0.0874)
% Urban Squared	0.00119 (0.00137)	0.00299 (0.00196)	6.46e-05 (7.36e-05)	2.94e-05 (8.96e-05)	2.47e-05 (5.48e-05)	-2.53e-05 (6.47e-05)	3.79e-05 (3.75e-05)	6.73e-06 (5.65e-05)	0.00163 (0.00129)	6.46e-05 (7.36e-05)	2.94e-05 (8.96e-05)	2.47e-05 (5.48e-05)	2.94e-05 (8.96e-05)	6.73e-06 (5.65e-05)	0.00163 (0.00129)	3.79e-05 (3.75e-05)	6.73e-06 (5.65e-05)	0.00163 (0.00129)	0.00163 (0.00129)	0.00299 (0.00196)	0.00148 (0.00212)	0.00148 (0.00212)
% Imp. Farmland	0.0450 (0.0996)	0.00615 (0.0690)	-0.00490 (0.00360)	-0.0113*** (0.00296)	-0.00527* (0.00284)	-0.00953*** (0.00276)	-0.00421* (0.00217)	-0.00422*** (0.00164)	-0.129 (0.0808)	-0.00490 (0.00360)	-0.0113*** (0.00296)	-0.00527* (0.00284)	-0.00953*** (0.00276)	-0.00421* (0.00217)	-0.129 (0.0808)	-0.00421* (0.00217)	-0.00422*** (0.00164)	-0.129 (0.0808)	-0.00421* (0.00217)	-0.00953*** (0.00276)	-0.165*** (0.0702)	-0.165*** (0.0702)
% Non-white	-0.0817 (0.196)	0.00163 (0.341)	-0.00191 (0.00666)	0.00509 (0.0222)	-0.00449 (0.00563)	0.00219 (0.0236)	-0.00316 (0.00545)	0.00549 (0.0150)	-0.362* (0.202)	-0.00191 (0.00666)	0.00509 (0.0222)	-0.00449 (0.00563)	0.00219 (0.0236)	-0.00316 (0.00545)	-0.362* (0.202)	-0.00316 (0.00545)	0.00549 (0.0150)	-0.362* (0.202)	-0.00316 (0.00545)	0.00509 (0.0222)	-0.282 (0.528)	-0.282 (0.528)
% Foreign-born	-0.314 (0.253)	-0.289 (0.282)	-0.00887 (0.00857)	0.00264 (0.0114)	-0.0121* (0.00647)	-0.00394 (0.00820)	-0.00982** (0.00481)	-0.00866 (0.00716)	-0.113 (0.244)	-0.00887 (0.00857)	0.00264 (0.0114)	-0.0121* (0.00647)	-0.00394 (0.00820)	-0.00982** (0.00481)	-0.113 (0.244)	-0.00982** (0.00481)	-0.00866 (0.00716)	-0.113 (0.244)	-0.00982** (0.00481)	-0.00866 (0.00716)	0.0682 (0.289)	0.0682 (0.289)
Ln(Population)	1.001 (3.857)	-9.918** (4.079)	0.180 (0.114)	0.709*** (0.226)	0.154* (0.0841)	0.401** (0.194)	0.103 (0.0779)	0.131 (0.128)	5.781* (3.447)	0.180 (0.114)	0.709*** (0.226)	0.154* (0.0841)	0.401** (0.194)	0.103 (0.0779)	5.781* (3.447)	0.103 (0.0779)	0.131 (0.128)	5.781* (3.447)	0.103 (0.0779)	0.709*** (0.226)	7.062 (4.614)	7.062 (4.614)
Observations	15,214	6,998	15,214	6,998	6,998	6,998	15,214	6,998	6,998	6,998	6,998	6,998	15,214	6,998	15,214	6,998	6,998	6,998	6,998	6,998	6,998	6,998
R-squared d	0.181	0.138	0.029	-0.110	0.035	-0.121	0.044	-0.050	-0.015	0.035	-0.121	-0.050	-0.015	-0.067	-0.015	-0.050	-0.067	-0.015	-0.050	-0.067	-0.067	-0.067
F Stat.	14.28	10.1	14.28	10.1	14.28	10.1	14.28	10.1	14.28	14.28	10.1	14.28	10.1	14.28	14.28	10.1	10.1	14.28	14.28	10.1	10.1	10.1

Additional controls include county and year fixed effects, and dummy variables indicating the presence of Jim Crow laws, women's suffrage, and secret ballots. Standard errors, clustered at state level, in parentheses. The cluster-robust Kleibergen-Paap Wald rk F statistic is reported.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Sources: RFD routes from the 1908 United States Official Postal Guide; voting data are from Clubb, Flanigan, and Zingale (2006); newspaper data are from the N.W. Ayer and Son's American Newspaper Annual, and Gentzkow, Shapiro, and Sinkinson (2011); county characteristics are from Haines (2010) (county boundaries fixed at 1890 values as in Hornbeck (2010)); spending are collected from the Report on Wealth, Debt, and Taxation (Upton 1895); state laws information are from Stone (1894, 1896).

## 2 IV Regressions with First Differences for Voter Outcomes

Table 4: IV Regressions with First Differences

VARIABLES	(1) Turnout	(2) > 5 %	(3) > 10 %	(4) > 20 %	(5) Small Party Share
Routes	0.567 (0.519)	0.0164* (0.00978)	0.0206** (0.00838)	0.00469 (0.00674)	0.592** (0.273)
% Urban	-0.175* (0.0892)	-0.0103** (0.00402)	-0.00640** (0.00287)	-0.00629** (0.00253)	-0.0739 (0.0713)
% Urban Squared	-0.00292 (0.00267)	0.000220** (8.75e-05)	8.11e-05 (7.05e-05)	0.000122** (5.92e-05)	-0.000584 (0.00240)
% Improved Farmland	0.107 (0.121)	-0.0101** (0.00473)	-0.00908** (0.00406)	-0.00814*** (0.00274)	-0.255*** (0.0716)
% Nonwhite	-0.428 (0.506)	0.0163 (0.0155)	0.0112 (0.0148)	0.0122 (0.0117)	-0.297 (0.269)
% Foreign-born	-0.520 (0.423)	-0.00788 (0.0109)	-0.0133 (0.00853)	-0.00878 (0.00762)	-0.0253 (0.235)
Ln(Population)	1.971 (5.019)	0.345*** (0.118)	0.270*** (0.0957)	0.181* (0.0955)	9.630*** (3.375)
Observations	2,380	2,380	2,380	2,380	2,380
F Stat.	7.522 <sup>+</sup>	7.522	7.522	7.522	7.522
States	42	42	42	42	42
R-squared		0.160	0.109	0.174	

<sup>+</sup> When standard errors are clustered at the district level the corresponding F statistic is 18.197.

Additional controls include county and year fixed effects, and dummy variables indicating the presence of Jim Crow laws, women's suffrage, and secret ballot laws. Standard errors, clustered at the state level, in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Sources: RFD routes from the 1908 United States Official Postal Guide; voting data are from Clubb, Flanigan, and Zingale (2006); county characteristics are from Haines (2010) (county boundaries fixed at 1890 values as in Hornbeck (2010)); spending are collected from the Report on Wealth, Debt, and Taxation (Upton 1895); state laws information are from Stone (1894, 1896).

### 3 Regional Differences

Table 5: Summary Statistics: Means by Region in 1900

	(1)	(2)	(3)	(4)	(5)
	North East	Midwest	South	South Central	West
RFD Routes	1.199 (3.109)	0.973 (1.896)	0.307 (1.078)	0.113 (0.792)	0.200 (0.815)
Congressional Turnout	68.58 (13.45)	80.87 (13.67)	61.49 (28.46)	56.91 (26.32)	63.39 (12.80)
Small Party Share	3.064 (3.739)	1.544 (1.688)	3.162 (9.862)	2.103 (7.448)	3.273 (4.738)
Percent illiterate (of white voting-age native males)	0.0301 (0.0263)	0.0312 (0.0327)	0.138 (0.0686)	0.121 (0.0885)	0.0152 (0.0295)
Total Newspaper Circ	24,004 (111,454)	3,748 (35,695)	893.8 (5,440)	738.0 (5,497)	2,620 (19,439)
Daily Newspaper Circ	23,838 (111,463)	3,704 (35,694)	861.2 (5,426)	724.2 (5,497)	2,596 (19,440)
Dem Newspaper Circ	6,520 (31,713)	1,134 (14,476)	508.8 (2,713)	660.0 (4,998)	618.9 (5,091)
Rep Newspaper Circ	14,409 (69,651)	1,719 (12,144)	241.5 (1,782)	60.09 (826.8)	1,798 (12,809)
Ind Newspaper Circ	2,528 (12,997)	774.7 (9,759)	108.5 (1,408)	3.651 (54.69)	173.5 (1,766)
Improved Farmland	59.53 (18.64)	66.96 (21.91)	42.41 (17.41)	41.37 (23.04)	30.89 (15.36)
Percent Urban	36.40 (27.74)	15.74 (20.66)	9.307 (17.48)	6.512 (14.60)	14.25 (23.53)
Ln(Population)	10.84 (0.972)	9.642 (1.016)	9.781 (0.703)	9.461 (1.030)	8.858 (1.099)
Non-white	1.463 (2.158)	1.746 (4.186)	29.84 (22.48)	23.60 (24.22)	5.121 (7.269)
Percent Foreign	13.75 (8.699)	14.03 (11.26)	1.286 (2.778)	2.752 (6.266)	16.25 (7.378)
Observations	211	1,004	254	630	235

Table 6: Summary Statistics: Means by Region in 1910

	(1)	(2)	(3)	(4)	(5)
	North East	Midwest	South	South Central	West
RFD Routes	26.57 (20.01)	19.31 (13.33)	10.64 (10.30)	9.384 (10.30)	3.611 (6.767)
Congressional Turnout	53.60 (12.32)	61.84 (16.12)	44.09 (24.23)	24.68 (16.72)	51.83 (15.41)
Small Party Share	8.678 (10.60)	4.024 (4.842)	3.802 (6.299)	3.160 (6.468)	10.03 (12.20)
Percent illiterate (of white voting-age native males)	0.0204 (0.0201)	0.0220 (0.0242)	0.102 (0.0540)	0.0844 (0.0758)	0.00865 (0.0173)
Total Newspaper Circ	39,680 (222,751)	6,861 (55,608)	1,198 (4,464)	1,770 (10,326)	5,770 (31,728)
Daily Newspaper Circ	39,649 (222,755)	6,845 (55,609)	1,183 (4,465)	1,764 (10,327)	5,759 (31,725)
Dem Newspaper Circ	16,649 (133,216)	2,257 (31,990)	863.2 (3,183)	1,579 (9,103)	1,327 (8,742)
Rep Newspaper Circ	19,091 (85,355)	3,278 (17,150)	299.3 (2,019)	98.06 (1,372)	3,832 (20,022)
Ind Newspaper Circ	3,598 (18,014)	1,186 (12,221)	20.80 (231.9)	73.89 (1,631)	585.9 (4,298)
Improved Farmland	57.95 (19.34)	71.71 (19.94)	44.35 (16.94)	40.51 (20.36)	36.30 (17.06)
Percent Urban	41.58 (28.10)	18.93 (22.52)	12.15 (18.27)	9.485 (17.15)	19.26 (24.43)
Ln(Population)	10.96 (1.080)	9.785 (0.853)	9.934 (0.666)	9.611 (0.989)	9.300 (1.107)
Non-white	1.402 (2.109)	1.511 (3.420)	29.27 (22.03)	25.48 (24.90)	3.785 (5.504)
Percent Foreign	15.74 (9.300)	11.99 (9.504)	1.562 (3.254)	3.140 (6.363)	16.52 (7.577)
Observations	214	1,009	253	526	239

Table 7: IV Regression for Voter Outcomes Split by Region

	(1) Paper NE	(2) No Paper NE	(3) Paper MW	(4) No Paper MW	(5) Paper South Central	(6) No Paper South Central
	Turnout					
RFD Routes	-0.289 (0.201)	0.527 (0.725)	0.108 (0.394)	-0.0997 (0.462)	-1.081*** (0.257)	-1.802** (0.754)
	Number of Parties with > 5%					
RFD Routes	0.0389*** (0.00268)	-0.0164 (0.0188)	0.0242* (0.0124)	-0.00441 (0.0145)	0.00937 (0.00812)	0.0153 (0.0219)
	Number of Parties with > 10%					
RFD Routes	0.0193*** (0.00209)	-0.00801 (0.00759)	0.0256** (0.0104)	0.00923 (0.00777)	0.00559 (0.00426)	0.0110 (0.0116)
	Number of Parties with > 20%					
RFD Routes	0.00590*** (0.00146)	-0.0141** (0.00571)	0.0179** (0.00737)	0.00217 (0.00930)	-0.00115 (0.00186)	0.00308 (0.00496)
	Small Party Share					
RFD Routes	0.429*** (0.0541)	-0.271 (0.232)	1.224** (0.525)	1.454*** (0.446)	0.469*** (0.133)	0.438 (0.538)
Counties	138	76	372	647	97	591
Wald Stat.	50.97	3.738	5.343	7.581	54.75	11906

  

	(7) <13% Nonwhite No Paper South	(8) Paper South	(9) >13% Nonwhite No Paper South	(10) Paper South	(11) Paper West	(12) No Paper West
	Turnout					
RFD Routes	-0.467*** (0.152)	-0.634*** (0.243)	3.015 (2.676)	0.773 (1.226)	-0.642** (0.266)	-3.327*** (0.479)
	Number of Parties with > 5%					
RFD Routes	0.00611 (0.00416)	-0.0266*** (0.00460)	-0.0331 (0.0251)	-0.0441 (0.0270)	0.00231 (0.00893)	0.121 (0.0907)
	Number of Parties with > 10%					
RFD Routes	0.00476 (0.00301)	-0.0130*** (0.00456)	0.0181 (0.0280)	-0.0258* (0.0138)	-0.00289 (0.0144)	0.0568 (0.104)
	Number of Parties with > 20%					
RFD Routes	-0.00251 (0.00164)	-0.00476*** (0.00129)	0.0513* (0.0312)	-0.0137 (0.0191)	-0.0172 (0.0170)	-0.00620 (0.0567)
	Small Party Share					
RFD Routes	0.214 (0.150)	-0.350*** (0.0726)	2.946 (2.187)	0.365 (0.846)	-0.00193 (0.474)	-1.987** (0.956)
Counties	68	15	147	32	64	156
Wald Stat.	33.91	-	2.141	7.350	101	11.46