sociological science

Supplement to:

Frey, Vincenz, Delia S. Baldassarri, and Francesco C. Billari. 2024. "Bridging the Digital Divide Narrows the Participation Gap: Evidence from a Quasi-Natural Experiment." Sociological Science 11: 214-232.

Appendix A: Regression results summarized in Figure 1

Tables A1, A2, and A3 provide the full estimation results of the regressions that are summarized in Figure 1 of the paper. These are linear regressions of indicators of participation on the binary variables *web mode* and *laggard* as well as their interaction. Table A2 also includes the estimation results of the placebo test reported in the paper.

The number of observation is smaller for the models concerning civic participation and political activism than for the models concerning turnout because the items on civic participation and political activism were exclusively part of the post-election questionnaire, resulting in more missing values on these items.

Table A1: Linear regressions of indicators of civic participation.

	Contact official	Community work	Community meetings	Volunteer work	Charity donation	Organization membership	Civic participation index
Web mode	0.10^{***}	0.02	0.01	−0.01	−0.01	0.07^{***}	0.03^{*}
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Laggard	-0.07^{***}	-0.11^{***}	-0.12^{***}	-0.19^{***}	-0.11^{***}	-0.20^{***}	-0.13^{***}
	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)
Web mode × Laggard	0.04	0.08^{*}	0.15^{***}	0.11^{*}	0.12^{**}	0.11^{*}	0.10^{***}
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)
Constant	0.15^{***}	0.32^{***}	0.26^{***}	0.47^{***}	0.72^{***}	0.46^{***}	0.40^{***}
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	3397	3391	3399	3395	3395	3391	3400

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A2: Linear regressions of indicators of turnout.

	Turnout 2008 Presidential election	Turnout 2012 Presidential election	Turnout 2012 Presidential primaries	Turnout 2012 index
Web mode	0.12***	0.05***	0.14***	0.10***
	(0.02)	(0.02)	(0.02)	(0.01)
Laggard	−0.12***	−0.14***	−0.05*	−0.10***
	(0.02)	(0.02)	(0.02)	(0.02)
Web mode × Laggard	0.02	0.08*	0.13**	0.10**
	(0.04)	(0.04)	(0.04)	(0.03)
Constant	0.70***	0.76***	0.25***	0.49***
	(0.01)	(0.01)	(0.01)	(0.01)
N	3619	3397	3603	3639

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A3: Linear regressions of indicators of political activism.

	Persuade others	Attend rally	Wear sign	Other work	Campaign donation	Political activism index
Web mode	0.01	−0.00	0.03*	−0.00	0.03*	0.01
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.09***	−0.02	−0.00	−0.01	−0.05**	−0.03**
	(0.03)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Web mode × Laggard	0.07	0.02	0.03	0.02	−0.00	0.03
	(0.04)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)
Constant	0.40***	0.06***	0.14***	0.04***	0.12***	0.15***
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)
N	3397	3398	3399	3399	3399	3400

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix B: Regression results summarized in Figure 2

Tables B1, B2, and B3 show the full results of the analyses that are summarized in Figure 2 of the paper. The coefficient estimate for the interaction *web mode* × *laggard* measures the effect of connecting to the internet for the "no group" (e.g., those 55 or younger; full "diamonds" in Figure 2). The corresponding estimate for the "yes group" (e.g., those older than 55; empty circles in Figure 2) could be calculated by adding to the coefficient for the "no group" the coefficient estimate of the three-way interaction (e.g., *web mode* × *laggard* × *older than 55*), but it was actually obtained by swapping the reference category (models not reported). The p-values reported in Figure 2 indicate the significance of the difference in the treatment effect across the 'yes' and the 'no' groups. These are the p-values of the three-way interactions.

Table B1: Linear regressions investigating effect heterogeneities (summarized in Figure 2 of the paper). Dependent variable: civic participation index (i.e., mean scale of 'community work', 'community meetings', 'volunteer work', 'donation to curch or charity', and 'organization membership').

	(1)	(2)	(3)	(4)	(5)	(6)
Web mode	0.02	0.03*	0.02	0.01	0.03*	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.15***	−0.13***	−0.13***	−0.10***	−0.10***	−0.11***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Web mode × Laggard	0.15***	0.08*	0.14***	0.11***	0.12***	0.11**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)
Older than 55	0.05***					
	(0.01)					
Web mode × Laggard × Older than 55	−0.08*					
	(0.04)					
Female		0.00				
		(0.01)				
Web mode × Laggard × Female		0.03				
		(0.04)				
White			0.04***			
			(0.01)			
Web mode × Laggard × White			−0.07			
			(0.04)			
College				0.18***		
				(0.01)		
Web mode × Laggard × College				−0.02		
				(0.06)		
Income > 16250					0.09***	
					(0.01)	
Web mode × Laggard × Income > 16250					−0.05	
					(0.04)	
Voted 2008						0.16***
						(0.01)
Web mode × Laggard × Voted 2008						−0.03
						(0.04)
Constant	0.38***	0.39***	0.37***	0.34***	0.32***	0.28***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	3400	3400	3400	3400	3400	3400

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B2: Linear regressions investigating effect heterogeneities (summarized in Figure 2 of the paper). Dependent variable: turnout index (i.e., mean scale of 'turnout Presidential election' and 'turnout Presidential primaries').

	(1)	(2)	(3)	(4)	(5)	(6)
Web mode	0.07***	0.10***	0.09***	0.09***	0.09***	0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.14***	−0.10***	−0.09***	−0.07***	−0.06**	−0.04**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Web mode × Laggard	0.10*	0.07	0.10**	0.10**	0.10*	−0.05
	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)
Older than 55	0.18***					
	(0.01)					
Web mode × Laggard × Older than 55	0.03					
	(0.05)					
Female		0.02				
		(0.01)				
Web mode × Laggard × Female		0.04				
		(0.05)				
White			0.02			
			(0.01)			
Web mode × Laggard × White			−0.01			
			(0.05)			
College				0.13***		
				(0.01)		
Web mode × Laggard × College				0.00		
				(0.07)		
Income > 16250					0.08***	
					(0.02)	
Web mode × Laggard × Income > 16250					−0.00	
					(0.05)	
Voted 2008						0.44***
						(0.01)
Web mode × Laggard × Voted 2008						0.19***
						(0.04)
Constant	0.45***	0.48***	0.48***	0.46***	0.43***	0.19***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
N	3639	3639	3639	3639	3639	3639

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table B3: Linear regressions investigating effect heterogeneities (summarized in Figure 2 of the paper). Dependent variable: political activism index (i.e., mean scale of 'persuade others to vote', 'attend speeches, rallies', 'display campaign sign', 'other work for a campaign', 'donation to a campaign', and 'contact government official').

	(1)	(2)	(3)	(4)	(5)	(6)
Web mode	0.00	0.01	0.01	0.01	0.01	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	-0.05^{***}	-0.04^{**}	-0.04^{**}	-0.03^{*}	-0.03^{**}	-0.02^{*}
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Web mode × Laggard	0.08^{***}	0.02	0.04	0.03	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Older than 55	0.07^{***}					
	(0.01)					
Web mode × Laggard × Older than 55	-0.09^{***}					
	(0.03)					
Female		-0.02^{*}				
		(0.01)				
Web mode × Laggard × Female		0.03				
		(0.03)				
White			-0.01			
			(0.01)			
Web mode × Laggard × White			-0.02			
			(0.03)			
College				0.04^{***}		
				(0.01)		
Web mode × Laggard × College				-0.02		
				(0.04)		
Income > 16250					0.01	
					(0.01)	
Web mode × Laggard × Income > 16250					0.02	
					(0.03)	
Voted 2008						0.10^{***}
						(0.01)
Web mode × Laggard × Voted 2008						0.01
						(0.03)
Constant	0.13^{***}	0.16^{***}	0.16^{***}	0.14^{***}	0.14^{***}	0.08^{***}
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	3400	3400	3400	3400	3400	3400

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix C: Robustness analyses

C.1 Bivariate treatment-control comparisons

In the paper, we present results from a difference-in-difference estimation, comparing treatment-control differences in participation to baseline differences across adopters in the web and face-to-face mode. Simple, bivariate treatment-control comparisons give very similar results as this difference-in-difference approach. That is, whether or not we subtract baseline mode differences from treatment-control differences hardly changes conclusions.

Table C1 shows what percentage of people engage in the different participation behaviours in the treatment group (laggards, web) and control group (laggards, face-to-face) (as Table 1(B) of the paper). For the indices, Table C1 shows averages. The last column of Table C1 reports p-values from χ^2 tests. The null-hypothesis of no difference in the percentage of engaged people across the treatment and control group is rejected at the 5% significance level for all items concerning civic engagement and turnout. On the other hand, the null-hypothesis cannot be rejected at the 5% cutoff for three of the five items concerning political activism and for the other two items it can be rejected only with uncertainty very close to the 5% cutoff. Thus, bivariate treatment-control comparisons also suggest that connecting late adopters to the internet enhances their civic participation and turnout while such comparisons offer little evidence for effects on political activism.

Table C1: Bivariate comparisons of differences in participation rates across the treatment and control group.

	Control	Treatment	χ^2 p-value
Civic participation (past 12 months)			
Contact government official	7.77	22.41	0.00
Community meetings	13.87	29.46	0.00
Community work	20.44	30.29	0.00
Volunteer work	28.40	37.76	0.01
Organization membership	25.61	43.15	0.00
Donation to church or charity	60.44	70.95	0.01
Civic participation index	0.26	0.39	0.00
Turnout (2012)			
Presidential election	61.92	75.82	0.00
Presidential primaries	19.77	46.67	0.00
Turnout index	0.40	0.59	0.00
Political activism			
Persuade others to vote	31.07	39.00	0.04
Attend speeches, rallies	3.64	5.39	0.29
Display campaign sign	14.32	20.33	0.05
Other work for a campaign	2.91	4.56	0.27
Donation to a campaign	6.55	9.54	0.17
Political activism index	0.12	0.16	0.05
N	446	271	

C.2: Including control variables to the regressions

The results presented in the paper come from a difference-in-difference approach that assumes that compositional differences across the treatment and control group are congruent with compositional differences across the modes among adopters. The placebo test presented in the paper indicates that when we account for baseline differences across the modes among adopters, the people of the treatment group were indeed not a-priori more or less engaged citizens than those of the control group. However, we also find that the assumption of congruent mode differences among adopters and laggards is violated on some background characteristics that may correlate with participation (see Table C2). For instance, there are 11.5 %-points more Whites in the treatment group (laggards, web) than the control group (laggards, face-to-face) but this difference is with 20.3 %-points significantly larger among adopters ($p = 0.03$).

We, therefore, performed additional analyses including all the background characteristics listed in Table C2 as covariates to our difference-in-difference model. The estimation results are reported in Tables C4 to C3, and Figure C1 summarizes these results analogous to Figure 1 of the paper. As reported in the section "Robustness of results" of the paper, the inclusion of control variables renders the estimated effect on the likelihood of engagement in community work insignificant ($p = 0.051$) but does not change any of the other results at the 5% significance cutoff.

We also analysed effect heterogeneities under the inclusion of control variables. Figure C2 summarizes the results of this analysis analogous to Figure 2 of the paper (the full estimation tables are omitted). Focusing on the 5% significance cutoff, the results shown in Figure C2 are identical to those in Figure 2 of the paper.

Table C2: Means of control variables by internet access and survey mode. All variables are binary (0 = no, 1 = yes), except for age and household income. P-values obtained from linear regressions of each control variable on the binary variables *web mode*, *laggard*, and their interaction.

	Adopters		Laggards		p
	Face-to-face	Web	Face-to-face	Web	H_0: (1) − (2) = (3) − (4)
	(1)	(2)	(3)	(4)	
Age	43.15	48.92	52.85	55.31	0.02
Female	0.58	0.49	0.54	0.58	0.00
Race/ethincity					
White	0.48	0.68	0.35	0.46	0.03
Black	0.23	0.12	0.34	0.26	0.33
Hispanic	0.23	0.14	0.24	0.23	0.02
Other	0.07	0.06	0.07	0.04	0.30
College degree	0.28	0.38	0.09	0.13	0.15
Unemployed	0.07	0.06	0.11	0.14	0.13
HH income (yearly; in $1000)	53.87	65.75	23.74	28.23	0.08
Partner in HH	0.50	0.65	0.31	0.46	0.92
Children in HH	0.44	0.32	0.23	0.23	0.00
Religious	0.77	0.70	0.79	0.77	0.23
Turnout 2008 Presidential election	0.70	0.82	0.58	0.72	0.54
Region					
North east	0.16	0.16	0.16	0.13	0.17
North central	0.19	0.22	0.17	0.23	0.35
South	0.40	0.38	0.48	0.43	0.40
West	0.26	0.24	0.18	0.21	0.21
N	1606	1318	446	271	

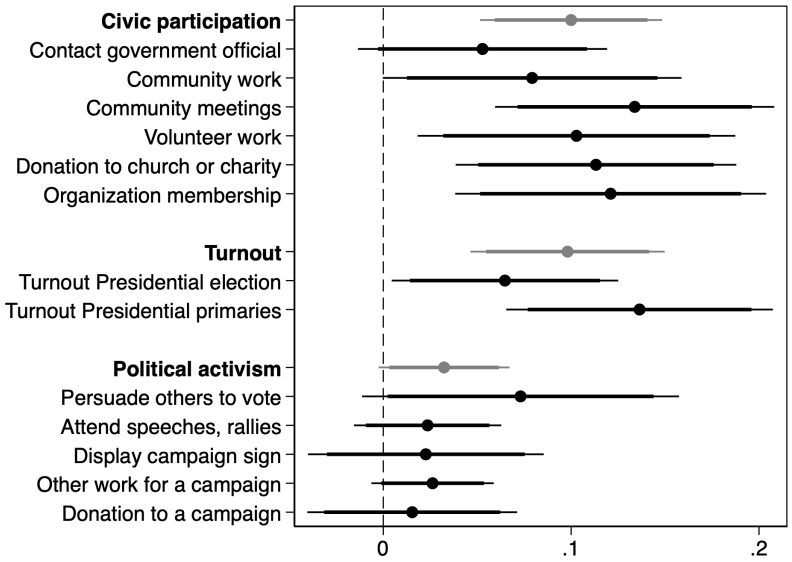

Figure C1: Estimates of the effect of gaining access to the internet on the likelihood that potential late adopters engage in thirteen participation behaviors (black markers). Gray markers show estimates of effects on indices constructed as mean scales of the binary items under the respective heading. Point estimates and confidence intervals (90 and 95%) from linear models *including as covariates the variables listed in Table C2*.

Table C3: Linear regressions of indicators of civic participation.

	Contact official	Community work	Community meetings	Volunteer work	Charity donation	Organization membership	Civic participation index
Web mode	0.07***	−0.01	0.01	−0.04	−0.05**	0.02	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Laggard	−0.06*	−0.05	−0.07**	−0.12***	−0.05	−0.11***	−0.07***
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)
Web mode × Laggard	0.05	0.08	0.13***	0.10*	0.11**	0.12**	0.10***
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.02)
Turnout 2008	0.08***	0.11***	0.09***	0.09***	0.08***	0.12***	0.10***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Age	0.00	0.00	0.00	−0.00	0.00	−0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age^2	−0.00	−0.00*	−0.00	0.00	0.00	0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Female	−0.02	−0.03	−0.00	0.04*	0.04*	−0.04*	−0.00
	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Race (ref. White)							
Black	−0.01	0.03	0.09***	−0.03	0.04	−0.05*	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Hispanic	−0.01	−0.06**	0.01	−0.06**	−0.02	−0.08**	−0.04*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Other	0.06*	0.03	0.10**	−0.01	0.04	−0.05	0.03
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)
College degree	0.09***	0.14***	0.12***	0.19***	0.10***	0.21***	0.14***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Unemployed	0.05	0.01	−0.00	0.03	−0.06*	−0.05	−0.01
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)
HH income (ln)	0.01	0.01	0.01	0.00	0.07***	0.03***	0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Partner in HH	0.01	−0.01	0.00	0.01	0.02	0.02	0.01
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Children in HH	−0.01	0.00	0.08***	−0.00	0.02	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Religious	0.01	0.05**	0.02	0.10***	0.20***	0.09***	0.08***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Region (ref. North east)							
North central	−0.03	0.00	−0.02	0.05*	0.05*	0.02	0.01
	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)
South	−0.03	−0.00	−0.04	0.04	0.02	−0.02	−0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
West	−0.05*	0.01	−0.01	0.03	0.03	−0.00	0.00
	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)
Constant	−0.10	0.07	−0.08	0.26*	−0.48***	−0.02	−0.06
	(0.09)	(0.11)	(0.10)	(0.11)	(0.10)	(0.11)	(0.06)
N	3397	3391	3399	3395	3395	3391	3400

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table C4: Linear regressions of indicators of turnout.

	Turnout 2008 Presidential election	Turnout 2012 Presidential election	Turnout 2012 Presidential primaries	Turnout 2012 index
Web mode	0.06^{***}	-0.01	0.09^{***}	0.04^{***}
	(0.02)	(0.01)	(0.02)	(0.01)
Laggard	-0.12^{***}	-0.07^{***}	-0.06^{**}	-0.07^{***}
	(0.02)	(0.02)	(0.02)	(0.02)
Web mode × Laggard	0.04	0.06^{*}	0.14^{***}	0.10^{***}
	(0.03)	(0.03)	(0.04)	(0.03)
Turnout 2008		0.52^{***}	0.28^{***}	0.39^{***}
		(0.01)	(0.02)	(0.01)
Age	0.02^{***}	-0.00^{*}	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Age^2	-0.00^{***}	0.00^{**}	0.00^{*}	0.00^{**}
	(0.00)	(0.00)	(0.00)	(0.00)
Female	0.03^{*}	-0.00	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Race (ref. White)				
Black	0.13^{***}	0.08^{***}	0.06^{**}	0.07^{***}
	(0.02)	(0.02)	(0.02)	(0.01)
Hispanic	-0.06^{**}	-0.01	0.01	-0.00
	(0.02)	(0.02)	(0.02)	(0.01)
Other	-0.00	-0.04	0.02	0.00
	(0.03)	(0.02)	(0.03)	(0.02)
College degree	0.16^{***}	0.04^{*}	0.04^{*}	0.04^{**}
	(0.02)	(0.01)	(0.02)	(0.01)
Unemployed	-0.05^{*}	-0.03	0.01	0.00
	(0.03)	(0.02)	(0.03)	(0.02)
HH income (ln)	0.03^{***}	0.02^{**}	0.00	0.01^{*}
	(0.01)	(0.01)	(0.01)	(0.01)
Partner in HH	0.03^{*}	-0.00	0.00	-0.00
	(0.01)	(0.01)	(0.02)	(0.01)
Children in HH	-0.04^{*}	0.01	-0.01	-0.00
	(0.02)	(0.01)	(0.02)	(0.01)
Religious	0.09^{***}	0.05^{**}	0.06^{**}	0.05^{***}
	(0.02)	(0.01)	(0.02)	(0.01)
Region (ref. North east)				
North central	0.03	0.03	-0.01	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
South	0.01	-0.02	0.00	-0.01
	(0.02)	(0.02)	(0.02)	(0.02)
West	0.03	0.01	0.10^{***}	0.06^{***}
	(0.02)	(0.02)	(0.02)	(0.02)
Constant	-0.42^{***}	0.21^{**}	-0.17	-0.05
	(0.09)	(0.08)	(0.09)	(0.07)
N	3619	3397	3603	3639

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table C5: Linear regressions of indicators of political activism.

	Persuade others	Attend rally	Wear sign	Other work	Campaign donation	Political activism index
Web mode	−0.03	−0.01	0.03*	−0.01	−0.00	−0.00
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.09**	−0.04**	−0.03	−0.03*	−0.05**	−0.05***
	(0.03)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Web mode × Laggard	0.07	0.02	0.02	0.03	0.02	0.03
	(0.04)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)
Turnout 2008	0.17***	0.02*	0.11***	0.02*	0.07***	0.08***
	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
Age	0.00	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age^2	0.00	0.00*	0.00	0.00*	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Female	−0.02	−0.01	−0.02	−0.01	−0.03*	−0.02**
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Race (ref. White)						
Black	−0.00	0.06***	0.16***	0.04***	0.06***	0.06***
	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Hispanic	−0.02	−0.00	0.04*	0.01	0.01	0.01
	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Other	−0.01	0.02	0.05	0.03*	0.01	0.02
	(0.03)	(0.02)	(0.03)	(0.01)	(0.02)	(0.01)
College degree	0.00	0.03**	−0.02	0.03**	0.07***	0.02*
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Unemployed	0.04	0.01	0.06**	0.02	0.04	0.03**
	(0.03)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
HH income (ln)	0.01	−0.01	−0.01	−0.01	0.03***	0.00
	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)
Partner in HH	0.00	−0.00	0.03*	−0.00	0.01	0.01
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Children in HH	−0.01	−0.01	−0.01	−0.00	−0.02	−0.01
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Religious	0.04*	0.01	0.02	−0.00	−0.02	0.01
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Region (ref. North east)						
North central	−0.05	0.02	−0.01	0.00	0.01	−0.01
	(0.03)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
South	−0.04	0.01	−0.02	0.00	0.00	−0.01
	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
West	−0.07*	0.02	−0.03	0.01	0.00	−0.01
	(0.03)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Constant	0.20	0.09	0.14	0.10*	−0.23**	0.06
	(0.11)	(0.05)	(0.08)	(0.04)	(0.07)	(0.05)
N	3397	3398	3399	3399	3399	3400

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

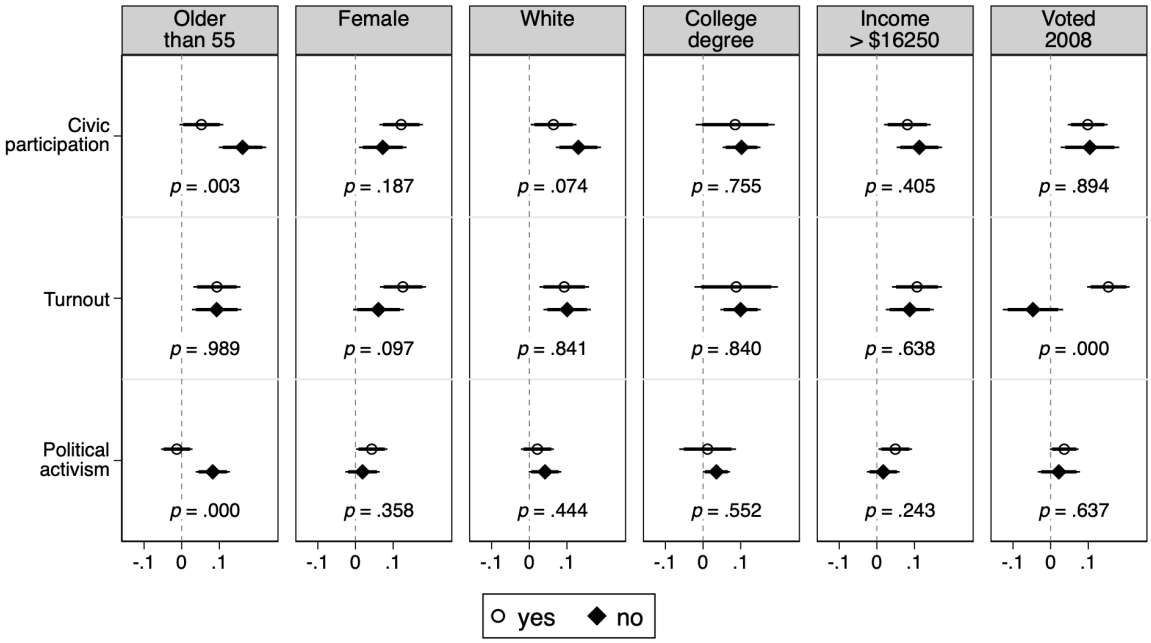

Figure C2: Estimates of the effect of internet access on civic participation, turnout, and political activism, separate for different groups of potential late adopters. Point estimates, confidence intervals (90 and 95%), and p-values for the difference between the groups from linear models *including as covariates the variables listed in Table C2*.

Appendix D: Exploration of mechanisms

This appendix provides details on the analysis reported in the section "Exploration of mechanisms" of the paper. It provides (1) additional information on the measurement of potential mediators, (2) tables showing the full results of the regressions discussed in the section "Exploration of mechanisms" (Tables D1 to D4), and (3) analysis results that show that the results discussed in that section of the paper do not change at the 5% significance level if control variables are *not* included to the regressions (Tables D5 to D8).

Political interest was measured using two variables of the question block "Campaign interest", namely, (1) the question about the frequency of paying attention to what is going on in government and politics and (2) the question that asked about interest in the political campaigns of this year. The former question had five answer categories while the latter question had three answer categories. We, therefore, divided the answer score on each question by the maximum score before creating a z-standardised index of the average score across the two questions. *Political efficacy* is a z-standardised average score of all four questions of the block "Efficacy". We combined 'standard' and 'revised' versions of the questions, neglecting the difference in the precise wording, and averaged for each respondent over answers in the pre- and post-election questionnaire. *Political knowledge* was measured using all seventeen available questions testing knowledge about political affairs (see the replication package for the complete list).

Table D1: Linear regressions of possible mediators, including control variables.

	Political interest	Political efficacy	Political knowledge	Mobilization contact
Web mode	−0.08*	−0.07*	0.46***	−0.02**
	(0.03)	(0.04)	(0.03)	(0.01)
Laggard	−0.21***	−0.24***	−0.25***	−0.07***
	(0.05)	(0.05)	(0.04)	(0.01)
Web mode × Laggard	0.24**	0.27**	0.09	0.04*
	(0.08)	(0.08)	(0.07)	(0.02)
Turnout 2008 Presidential election	0.58***	0.41***	0.37***	0.05***
	(0.04)	(0.04)	(0.03)	(0.01)
Age	0.00	−0.01	0.01*	−0.00
	(0.01)	(0.01)	(0.00)	(0.00)
Age^2	0.00	0.00	−0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Female	−0.22***	−0.16***	−0.29***	−0.00
	(0.03)	(0.03)	(0.03)	(0.01)
Race (ref. White)				
Black	0.23***	0.37***	−0.26***	0.01
	(0.04)	(0.05)	(0.04)	(0.01)
Hispanic	−0.03	0.11*	−0.35***	−0.03**
	(0.04)	(0.05)	(0.04)	(0.01)
Other	0.01	0.01	−0.23***	−0.02
	(0.06)	(0.07)	(0.05)	(0.01)
College degree	0.18***	0.35***	0.50***	0.06***
	(0.04)	(0.04)	(0.03)	(0.01)
Unemployed	0.06	−0.00	0.01	0.01
	(0.06)	(0.06)	(0.05)	(0.01)
HH income (ln)	0.02	0.06***	0.16***	0.01
	(0.02)	(0.02)	(0.01)	(0.00)
Partner in HH	0.05	−0.06	0.00	0.01
	(0.03)	(0.03)	(0.03)	(0.01)
Children in HH	−0.00	−0.05	−0.09**	−0.00
	(0.04)	(0.04)	(0.03)	(0.01)
Religious	0.11**	0.09*	−0.05	0.01
	(0.04)	(0.04)	(0.03)	(0.01)
Region (ref. North east)				
North central	−0.13*	−0.16**	−0.08	−0.01
	(0.05)	(0.05)	(0.04)	(0.01)
South	−0.04	−0.09*	0.03	−0.00
	(0.04)	(0.05)	(0.04)	(0.01)
West	−0.04	−0.09	−0.05	0.01
	(0.05)	(0.05)	(0.04)	(0.01)
Constant	−0.94***	−0.67**	−2.30***	0.04
	(0.20)	(0.21)	(0.17)	(0.05)
N	3641	3638	3400	3390

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table D2: Linear regressions of civic participation, with mediators added. Control variables included in the estimation but not reported in the table.

	(1)	(2)	(3)	(4)	(5)
Web mode	0.00	0.01	0.00	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	-0.07^{***}	-0.06^{***}	-0.06^{***}	-0.05^{**}	-0.04^{*}
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Web mode × Laggard	0.10^{***}	0.08^{***}	0.09^{***}	0.09^{***}	0.07^{**}
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Political interest		0.07^{***}			0.05^{***}
		(0.01)			(0.01)
Political efficacy			0.05^{***}		0.02^{***}
			(0.00)		(0.01)
Mobilization contact				0.37^{***}	0.31^{***}
				(0.02)	(0.02)
Constant	−0.06	0.00	−0.03	−0.08	−0.01
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
N	3400	3400	3400	3400	3400
Change in the coefficient of Web mode × Laggard relative to model (1):					
Change in %		-17%	-15%	-15%	-30%
p-value		0.63	0.67	0.67	0.38

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table D3: Linear regressions of turnout, with mediators added. Control variables included in the estimation but not reported in the table.

	(1)	(2)	(3)	(4)	(5)
Web mode	0.04***	0.05***	0.05***	0.04***	0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.07***	−0.05**	−0.06**	−0.06***	−0.05**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Web mode × Laggard	0.10***	0.08**	0.08**	0.09***	0.07**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Political interest		0.08***			0.06***
		(0.01)			(0.01)
Political efficacy			0.06***		0.03***
			(0.01)		(0.01)
Mobilization contact				0.14***	0.05
				(0.03)	(0.03)
Constant	−0.05	0.03	−0.01	−0.05	0.03
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
N	3639	3639	3639	3639	3639
Change in the coefficient of Web mode × Laggard relative to model (1):					
Change in %		-19%	-15%	-6%	-26%
p-value		0.62	0.68	0.88	0.49

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table D4: Linear regressions of political activism, with mediators added. Control variables included in the estimation but not reported in the table.

	(1)	(2)	(3)	(4)	(5)
Web mode	−0.00	0.00	0.00	0.00	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.05***	−0.03**	−0.03**	−0.02	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Web mode × Laggard	0.03	0.02	0.02	0.02	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Political interest		0.07***			0.05***
		(0.00)			(0.00)
Political efficacy			0.05***		0.02***
			(0.00)		(0.00)
Mobilization contact				0.33***	0.27***
				(0.02)	(0.02)
Constant	0.06	0.12**	0.09*	0.05	0.11**
	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)
N	3400	3400	3400	3400	3400
Change in the coefficient of Web mode × Laggard relative to model (1):					
Change in %		-53%	-44%	-41%	-89%
p-value		0.48	0.57	0.59	0.23

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The results discussed in the section "Exploration of mechanisms" of the paper are robust to the omission of control variables: None of the discussed results changes at the 5% significance level if the controls are *not* included to the regressions. Tables Tables D5 to D8 present the results that are obtained if the controls are not included.

Table D5: Linear regressions of possible mediators, without control variables.

	Political interest	Political efficacy	Political knowledge	Mobilization contact
Web mode	0.07^{*}	-0.03	0.73^{***}	-0.01
	(0.04)	(0.04)	(0.03)	(0.01)
Laggard	-0.18^{***}	-0.35^{***}	-0.45^{***}	-0.10^{***}
	(0.05)	(0.05)	(0.05)	(0.01)
Web mode × Laggard	0.17^{*}	0.23^{**}	-0.02	0.04^{*}
	(0.09)	(0.09)	(0.08)	(0.02)
Constant	-0.01	0.07^{**}	-0.23^{***}	0.13^{***}
	(0.02)	(0.02)	(0.02)	(0.01)
N	3641	3638	3400	3390

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table D6: Linear regressions of civic participation, with mediators added, without control variables.

	(1)	(2)	(3)	(4)	(5)
Web mode	0.03*	0.02*	0.03**	0.03**	0.03**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.13***	−0.12***	−0.11***	−0.09***	−0.08***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Web mode × Laggard	0.10***	0.08**	0.08**	0.08***	0.07**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)
Political interest		0.09***			0.06***
		(0.00)			(0.01)
Political efficacy			0.07***		0.03***
			(0.00)		(0.01)
Mobilization contact				0.46***	0.35***
				(0.02)	(0.02)
Constant	0.40***	0.40***	0.39***	0.34***	0.35***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	3400	3400	3400	3400	3400
Change in the coefficient of Web mode × Laggard relative to model (1):					
Change in %		-19%	-20%	-17%	-34%
p-value		0.61	0.59	0.64	0.35

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table D7: Linear regressions of turnout, with mediators added, without control variables.

	(1)	(2)	(3)	(4)	(5)
Web mode	0.10***	0.09***	0.10***	0.10***	0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.10***	−0.07***	−0.06**	−0.07***	−0.05**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Web mode × Laggard	0.10**	0.07*	0.07*	0.09**	0.06*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Political interest		0.14***			0.12***
		(0.01)			(0.01)
Political efficacy			0.10***		0.04***
			(0.01)		(0.01)
Mobilization contact				0.30***	0.10**
				(0.03)	(0.03)
Constant	0.49***	0.49***	0.49***	0.45***	0.48***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	3639	3639	3639	3639	3639
Change in the coefficient of Web mode × Laggard relative to model (1):					
Change in %		-25%	-25%	-11%	-35%
p-value		0.57	0.59	0.82	0.43

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table D8: Linear regressions of political activism, with mediators added, without control variables.

	(1)	(2)	(3)	(4)	(5)
Web mode	0.01	0.01	0.01	0.02*	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Laggard	−0.03**	−0.02	−0.01	0.00	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Web mode × Laggard	0.03	0.01	0.01	0.02	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Political interest		0.08***			0.06***
		(0.00)			(0.00)
Political efficacy			0.06***		0.02***
			(0.00)		(0.00)
Mobilization contact				0.36***	0.26***
				(0.02)	(0.02)
Constant	0.15***	0.15***	0.15***	0.11***	0.12***
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
N	3400	3400	3400	3400	3400
Change in the coefficient of Web mode × Laggard relative to model (1):					
Change in %		-59%	-57%	-46%	-98%
p-value		0.50	0.53	0.60	0.26

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$