

The Political Legacy of Entertainment TV

Online Appendix *

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Appendix A Additional tables and figures

Table A1: Programming schedules, Mediaset vs. RAI 1983-1987

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	total	share of total airtime				critics' reviews		MPAA parental	
	airtime	entert.	movies	news	educat.	Mymovies	Filmtv	all day	primetime
Mediaset	3.896 (0.087)	0.354 (0.005)	0.132 (0.007)	-0.183 (0.005)	-0.281 (0.005)	-0.548 (0.055)	-0.538 (0.065)	-0.025 (0.032)	-0.070 (0.037)
Constant	12.420 (0.138)	0.123 (0.014)	0.184 (0.013)	0.238 (0.008)	0.404 (0.008)	5.699 (0.131)	6.652 (0.172)	0.133 (0.076)	0.181 (0.084)
Observations	9,512	2,378	2,378	2,378	2,378	3,205	2,990	863	523
R-squared	0.541	0.610	0.248	0.367	0.654	0.041	0.035	0.026	0.058

Note: This table compares Mediaset and RAI programming schedules during the first week of each month over the period 1983-1987 by the means of OLS regressions on a dummy equal to 1 for Mediaset channels. The dependent variables in columns (1) and (2)-(5) are, respectively, the total airtime per day, in hours, and the share devoted to each type of program on each channel-day (6 channels \times 7 days \times 12 months \times 5 years = 2,378 observations). The dependent variables in columns (6) and (7) are the professional critics' ratings received by movies broadcast on the two networks on the websites Mymovies.it and Filmtv.it. Finally, the dependent variable in the last two columns is a dummy equal to 1 for movies suitable for general audiences, including children, according to the Motion Picture Association of America (MPAA). Column (8) includes all movies broadcast over the period, while column (9) movies broadcast in the afternoon and prime-time hours. All regressions include year, calendar month, and day of the week fixed effects. Standard errors clustered by day are reported in parentheses.

Table A2: Descriptive statistics

	unweighted sample				weighted by population in 1981			
	obs.	mean	st.dev.	median	obs.	mean	st.dev.	median
Actual signal strength in 1985	8010	-55.708	124.258	-32.466	7988	-6.821	104.577	-0.196
Signal strength in the free space	8010	-3.163	57.542	-13.684	7988	20.727	66.415	12.101
Signal (standardized signal strength)	8010	-0.388	1.000	-0.230	7988	0.010	0.830	0.014
SignalFree (std. signal strength in the free space)	8010	-0.055	1.000	-0.238	7988	0.360	1.154	0.210
Population in 1981 (ths.)	7988	7.061	45.654	2.317	7988	302.19	684.30	24.44
Surface area (100s sq. Km)	8010	0.372	0.500	0.217	7988	1.559	2.832	0.629
Altitude (ths. mt.)	8010	0.352	0.291	0.288	7988	0.180	0.210	0.112
Ruggedness	8000	218.50	209.44	161.80	7978	126.99	146.67	69.75
Electorate in 1994 (ths.)	8010	6.04	36.05	2.07	7988	239.01	548.47	21.80
Log of income per capita	7913	1.619	0.298	1.674	7908	1.729	0.300	1.768
Education, % higher education in 1981	7988	8.538	3.448	8.128	7988	13.261	5.857	12.035
Voluntary associations X 100 inhabitants, 1981	7584	0.099	0.134	0.056	7584	0.103	0.085	0.087

Figure A1: Vote share of the main political parties and coalitions in Italian National Elections (1994-2013)

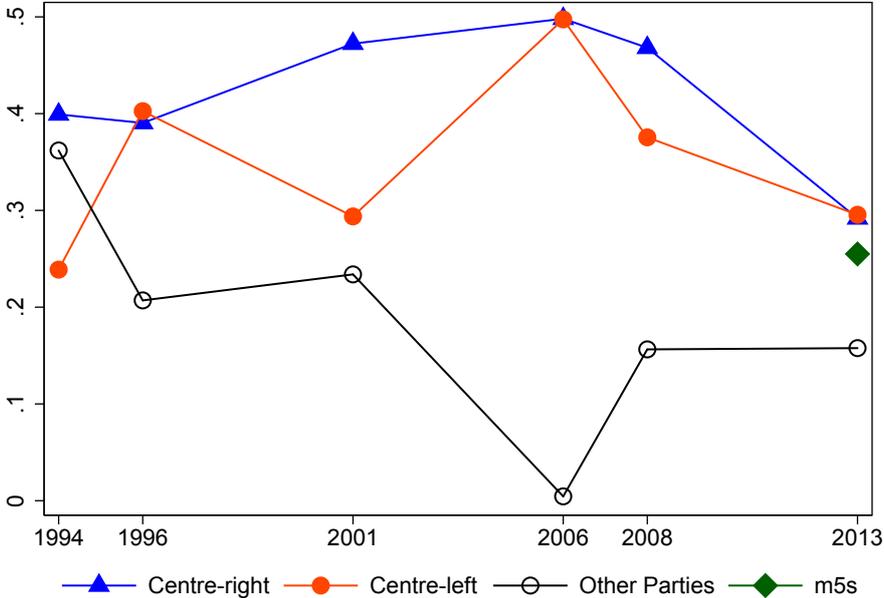


Table A3: Full baseline specification adjusting for spatial correlation in error terms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	One-way clustering		2-way clustering	Spatially-corrected standard errors (Conley, 1999)					
	District	LLM	Distr. & LLM	10km	20km	30km	40km	50km	60km
<i>Signal</i>	0.851 (0.234)	0.851 (0.223)	0.851 (0.211)	0.851 (0.197)	0.851 (0.215)	0.851 (0.246)	0.851 (0.245)	0.851 (0.235)	0.851 (0.243)
Observations	7,519	7,519	7,495	7,482	7,482	7,482	7,482	7,482	7,482

Note: This table investigates the robustness of our baseline regression to different assumptions about the correlation of residuals across observations. Column (1) reproduces the baseline regression in column (5) of Table ??, with standard errors clustered by electoral district. Column (2) cluster residuals by local labor markets, while column (3) allows for two-way clustering on both dimensions. Columns (4) to (9) allow for spatial correlation in error terms applying Conley’s (1999) approach and using different values of the reference distance.

Figure A2: Example of a technical report sheet for one of the Mediaset transmitters active in 1985

SCHEDA B IMPIANTO PRIVATO RADIOFONICO TV

ATTENZIONE Se l'impianto e' di solo collegamento al deve rispondere soltanto ai punti 36,37,38,39,40,41 ed ai punti dal 58 al 68.
 Per la 'nessa in onda' si risponde soltanto ai punti 36,37,38,39,40,41.
 Per i ripetitori di programmi esteri o nazionali non va compilata ovviamente la scheda di 'nessa in onda', ma va indicato al punto 67 per il solo primo impianto della catena, la stazione straniera o RAI ricevuta; gli impianti successivi vanno trattati normalmente.

R.F.T.E. SICILIA 36 Denominazione emittente 001 37 N. impianto

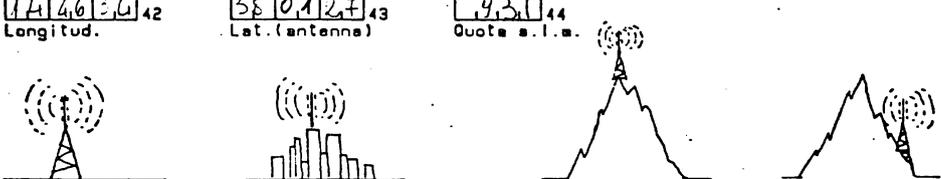
GALATI, MAMERTINO, S. JACOPO 38 Indirizzo impianto Tx o nome localita'

Centro abitato 39

HE 40 Provincia GALATI, MAMERTINO Comune

DIREZIONE CENTRALE SERVIZI RADIOELETTRICI
 31 GEN. 1985
 DCSR/SEGR/ 106064

114630 42 Longitud. 380127 43 Lat. (antenna) 931 44 Quota s.l.m.



45 46 47 48 Tipologia della ubicazione dell'impianto

63425 50 Portante 63645 51 Portante audiolper TV 41 52 Canale (TV) 53 Tipo offset 54 Posiz. offset (TV)

55 Potenza apparato EL INDUSTRIALE 56 Costruttore apparato 1962 57 Anno costruzione

58 Riceve il segnale da: 59 o da: 60 o da:

61 Mediante 62 Mediante: 63 Mediante 64 Riceve il segnale da:

65 Freq. (MHz) 511.25 66 Freq. (MHz) 67 Freq. (MHz) 68 Freq. (MHz)

HE 69 Sigla province interessate dal serv. di radiodiff. 70 Tipo di servizio

71 Localita' 1 esclusa deliberatamente dal servizio 72 Prov. 73 Metodo usato

74 Localita' 2 esclusa deliberatamente dal servizio 75 Prov. 76 Metodo usato

77 Localita' 3 esclusa deliberatamente dal servizio 78 Prov. 79 Metodo usato

Figure A3: Electoral districts, local labor markets, and provinces



Figure A4: Estimated expansion of Mediaset coverage, 1980-1990

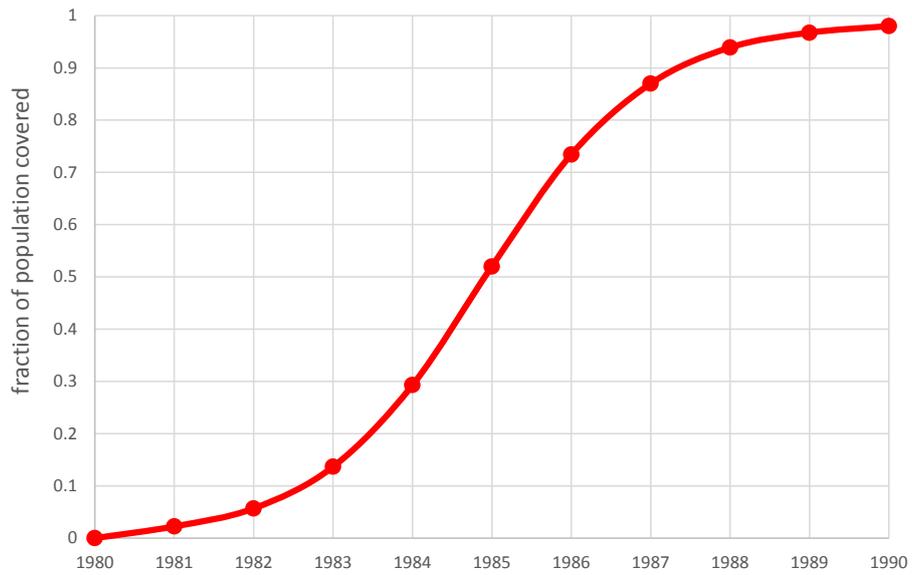


Table A4: Exposure to Mediaset and voting for the main Italian parties, 1976-1992 (balance test, matching estimates)

Party, election	(1)	(2)	(3)	(4)
	mean	matching neighbors		
		$\Delta \leq 1$	$\Delta \leq 0.5$	$\Delta \leq 0.25$
Italian Communist Party, 1976	33.332 (0.137)	-0.489 (0.331)	-0.362 (0.360)	-0.305 (0.418)
Pentapartito, 1976	54.95 (0.131)	0.249 (0.324)	0.141 (0.357)	0.043 (0.409)
Other parties, 1976	9.027 (0.082)	0.290 (0.108)	0.221 (0.127)	0.229 (0.147)
Italian Communist Party, 1979	28.966 (0.138)	-0.415 (0.309)	-0.386 (0.330)	-0.276 (0.383)
Pentapartito, 1979	55.153 (0.128)	0.341 (0.320)	0.318 (0.353)	0.243 (0.404)
Other parties, 1979	11.672 (0.081)	0.053 (0.124)	0.040 (0.148)	0.059 (0.165)
Italian Communist Party, 1983	28.003 (0.138)	-0.459 (0.321)	-0.471 (0.353)	-0.364 (0.402)
Pentapartito, 1983	53.607 (0.126)	0.462 (0.328)	0.596 (0.366)	0.490 (0.417)
Other parties, 1983	12.522 (0.082)	0.130 (0.137)	0.025 (0.161)	0.115 (0.197)
Italian Communist Party, 1987	25.223 (0.133)	-0.674 (0.305)	-0.615 (0.335)	-0.470 (0.379)
Pentapartito, 1987	54.73 (0.128)	0.484 (0.308)	0.497 (0.340)	0.451 (0.386)
Other parties, 1987	15.056 (0.088)	0.173 (0.130)	0.126 (0.142)	0.096 (0.169)
Italian Communist Party, 1992	15.171 (0.105)	-0.421 (0.231)	-0.475 (0.264)	-0.401 (0.316)
Pentapartito, 1992	50.586 (0.145)	0.455 (0.287)	0.434 (0.327)	0.571 (0.363)
Other parties, 1992	28.773 (0.136)	-0.100 (0.182)	-0.023 (0.213)	-0.162 (0.240)
Italian Communist Party, change 1979-83	-0.963 (0.026)	-0.034 (0.152)	-0.067 (0.180)	-0.089 (0.191)
Pentapartito, change 1979-83	-1.54 (0.038)	0.109 (0.173)	0.261 (0.208)	0.247 (0.219)
Other parties, change 1979-83	0.851 (0.029)	0.079 (0.092)	-0.015 (0.105)	0.056 (0.122)

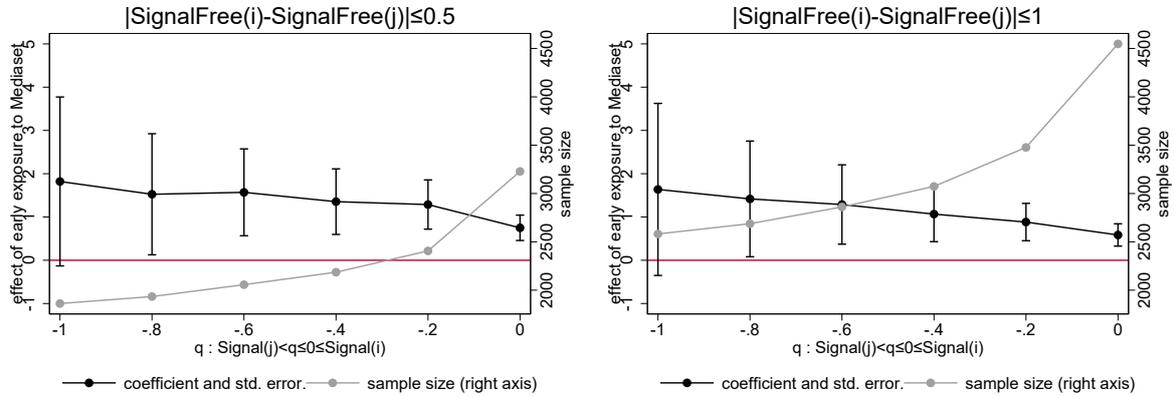
Note: The table reports the average vote shares obtained by the main parties and coalitions in each election between 1976 and 1992 (column 1) and their correlation with early exposure to Mediaset (columns 2-4). Specifically, columns (2), (3), and (4) compare vote shares between neighboring municipalities that differ in SignalFree by less than 1, 0.5, and 0.25, respectively, with one municipality having Signal above zero and the other one having Signal below zero. We form a sample of such neighbor-pairs and regress vote shares on Signal, controlling for neighbor-pair fixed effects (since each municipality can appear in more than one pair) and for terrain characteristics. Heteroskedasticity-robust standard errors clustered at the municipality level are reported in parentheses.

Table A5: Exposure to Mediaset and municipality characteristics (balance tests, matching estimates)

Variable:	(1)	(2)	(3)	(4)
	mean	matching neighbors		
		$\Delta \leq 1$	$\Delta \leq 0.5$	$\Delta \leq 0.25$
Population, thousands (1981)	6.936 (0.579)	3.431 (1.956)	2.789 (2.700)	1.911 (1.686)
Population, thousands (change 1981-2001)	-0.713 (5.258)	-0.045 (0.163)	-0.185 (0.232)	-0.182 (0.154)
Log income per capita, thousand euros (1985)	1.738 (0.024)	0.008 (0.006)	0.004 (0.007)	0.003 (0.007)
Higher education, percentage (1981)	13.183 (0.708)	0.378 (0.131)	0.123 (0.138)	0.011 (0.158)
Voluntary associations X 100 inhabitants (1981)	0.103 (0.004)	0.002 (0.005)	-0.002 (0.006)	-0.002 (0.008)
Activity rate, percentage (1991)	42.258 (0.220)	0.137 (0.114)	0.057 (0.130)	0.081 (0.155)
Employment rate, percentage (1991)	35.074 (0.419)	-0.074 (0.112)	-0.143 (0.126)	-0.146 (0.148)
Unemployment rate, percentage (1991)	6.936 (0.202)	-0.017 (0.123)	-0.050 (0.146)	0.003 (0.168)
Firms per 1,000 inhabitants (1981)	50.927 (1.125)	-1.726 (0.605)	-2.391 (0.728)	-1.431 (0.927)
Firms per 1,000 inhabitants (change 1971-81)	10.182 (0.553)	-0.985 (0.549)	-1.230 (0.675)	-0.670 (0.903)
Firms' employees, thousands (1981)	78.1 (34.715)	1.289 (0.747)	1.216 (1.099)	0.778 (0.714)
Firms' employees, thousands (change 1971-81)	2.717 (4.019)	-0.045 (0.086)	-0.161 (0.122)	-0.077 (0.081)

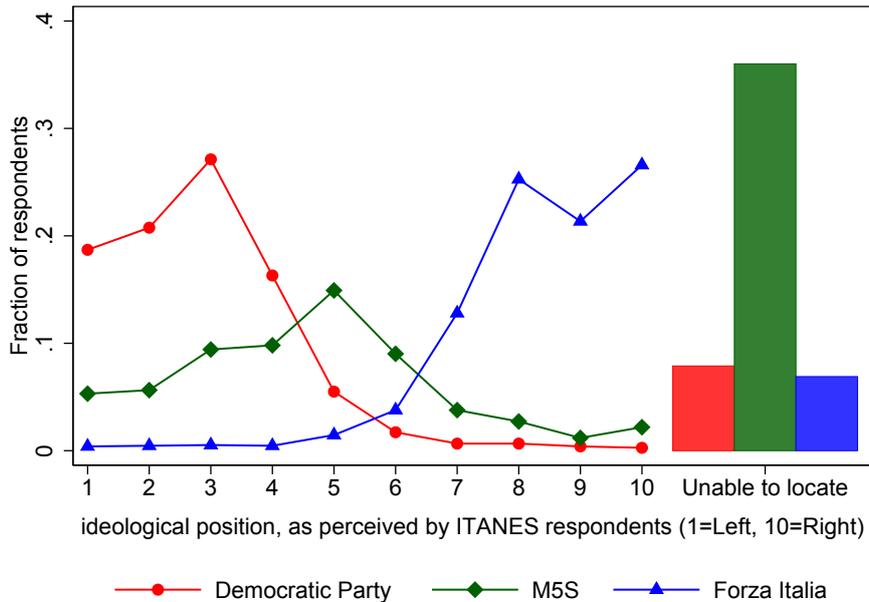
Note: The table reports the mean of municipality characteristics (column 1) and their correlation with early exposure to Mediaset (columns 2-4). Specifically, columns (2), (3), and (4) compare variables between neighboring municipalities that differ in *SignalFree* by less than 1, 0.5, and 0.25, respectively, with one municipality having *Signal* above zero and the other one having *Signal* below zero. We form a sample of such neighbor-pairs and regress each municipality characteristic on *Signal*, controlling for neighbor-pair fixed effects (since each municipality can appear in more than one pair) and for terrain characteristics. Heteroskedasticity-robust standard errors clustered at the municipality level are reported in parentheses.

Figure A5: Exposure to Mediaset and voting for *Forza Italia* in 1994, robustness



Note: This figure shows the coefficient of *Signal* (and associated confidence intervals) when including in the sample only pairs of neighboring municipalities such that $|SignalFree_i - SignalFree_j| \leq \Delta$ and $Signal_j < q \leq 0 \leq Signal_i$, for different values of q – indicated on the horizontal axis. The left and right graph show the results for $\Delta = 0.5$ and $\Delta = 1$, respectively. All regressions control on the right-hand side for all municipality-level variables in column (5) of Table ??, namely *SignalFree*, *Area*, *Altitude*, *Area²*, *Altitude²*, *Ruggedness*, *Electorate*, *Log income per capita*, *Education*, and for neighbor-pair fixed effects (each municipality can appear in more than one pair). Heteroskedasticity-robust standard errors are clustered at the municipality level. Observations are weighted by municipality population in 1981. Both graphs also show (on the right vertical axis) the sample size in each regression.

Figure A6: Perceived ideology of *Forza Italia*, M5S, and Democratic Party



Note: The figure reports the perceived ideological stance of *Forza Italia*, the M5S, and the Democratic Party, as reported by respondents of the ITANES survey.

Table A6: Exposure to Mediaset and voting for M5S (robustness to controlling for broadband Internet)

	(1)	(2)	(3)
<i>Signal</i>	0.522	0.476	0.487
	(0.243)	(0.241)	(0.241)
Broadband Access (avg 2005-2010)		0.224	
		(0.050)	
Years with full access (from 2005 to 2010)			0.078
			(0.032)
Observations	7,519	7,482	7,482
R-squared	0.866	0.868	0.867

Note: The table shows the effect of exposure to Mediaset on voting for the M5S controlling for broadband Internet access. In column (2) we control for the average share of households in the municipality with access to broadband Internet (via ADSL) between 2005 and 2010. The measure is defined on an asymmetric 6-point scale ranging from 0 (0%) to 5 (above 95%). In column (3) we control for an alternative measure of broadband access, i.e., the number of years, from 2005 to 2010, during which 95% or more of the households in the municipality had access to Internet; this measure ranges from 0 (no full access in 2010) to 6 (full access in 2005). All regressions also include on the right-hand side *SignalFree*, all municipal controls reported in column (5) of Table ??, ED and LLM fixed effects. Observations are weighted by municipality population in 1981. Standard errors clustered at the electoral district level in parentheses.

Table A7: TV consumption in 1983

	Hours of TV per day			Average num. hours
	≤ 2 hours	3-4 hours	5+ hours	
All sample (51,012 individuals)	0.39	0.47	0.15	2.86
<i>Panel A: by gender, education, and employment condition</i>				
Females	0.35	0.48	0.16	2.99
Males	0.42	0.45	0.12	2.72
High school dropout	0.36	0.48	0.16	2.95
High school or college	0.49	0.42	0.09	2.48
Not employed	0.28	0.51	0.21	3.27
Employed	0.50	0.43	0.08	2.43
<i>Panel B: by age of the respondent</i>				
Children (below 10)	0.27	0.51	0.22	3.30
Youth (10-24)	0.33	0.51	0.16	3.06
Adults (25-44)	0.45	0.45	0.10	2.61
Pre-retirees (45-54)	0.45	0.43	0.12	2.66
Retirees (55 or above)	0.37	0.45	0.17	2.96

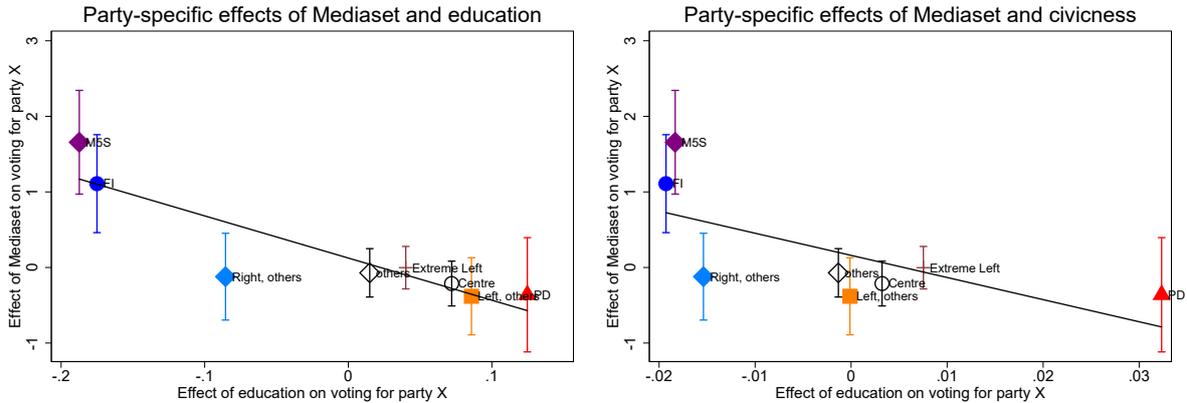
Note: The table summarizes information from a survey on the use of time by Italian households conducted by the Italian National Statistical Institute (ISTAT) in 1983, which included a set of questions on media consumption. The first 3 columns report the share of individuals in each group (rows) watching a given number of hours of TV per day. The average number of hours in column (4) is approximated by attributing 1 hour to individuals reporting up to 2, 3.5 hours to those reporting 3 to 4, 5.5 hours to those reporting 5 to 6, and 7 hours to those reporting 6 or more. Source: ?.

Table A8: The effects of Mediaset, education, and social capital on voting

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Forza Italia	Right, others	Centre	Democrat Party	Left, others	Extreme Left	M5S	other parties
<i>Signal</i>	0.672 (0.227)	-0.162 (0.192)	-0.065 (0.110)	-0.386 (0.280)	-0.134 (0.095)	-0.202 (0.103)	0.522 (0.243)	0.086 (0.071)
Education	-0.174 (0.040)	-0.086 (0.041)	0.070 (0.014)	0.128 (0.035)	0.084 (0.010)	0.042 (0.013)	-0.175 (0.030)	0.014 (0.014)
Social Capital	-1.819 (0.669)	-1.392 (0.492)	0.414 (0.308)	2.904 (0.758)	-0.069 (0.244)	0.862 (0.338)	-1.421 (0.594)	-0.167 (0.186)
R-squared	0.716	0.831	0.657	0.853	0.691	0.721	0.866	0.444
Including additional interaction terms								
<i>Signal</i>	1.134 (0.389)	-0.119 (0.344)	-0.210 (0.178)	-0.360 (0.453)	-0.388 (0.305)	-0.023 (0.170)	1.619 (0.413)	-0.082 (0.192)
Education	-0.049 (0.036)	0.001 (0.035)	0.020 (0.017)	-0.016 (0.040)	0.026 (0.026)	-0.016 (0.016)	-0.111 (0.040)	0.018 (0.017)
Social Capital	-0.249 (1.002)	-0.525 (0.655)	-0.341 (0.442)	1.071 (1.148)	0.176 (0.438)	-0.361 (0.502)	-1.059 (0.824)	0.086 (0.282)
Signal X Education	-0.178 (0.041)	-0.086 (0.042)	0.072 (0.014)	0.126 (0.035)	0.086 (0.010)	0.041 (0.013)	-0.186 (0.030)	0.015 (0.014)
Signal X Social Capital	-1.927 (0.726)	-1.547 (0.522)	0.327 (0.329)	3.212 (0.862)	0.002 (0.230)	0.744 (0.353)	-1.803 (0.654)	-0.129 (0.171)
R-squared	0.716	0.831	0.657	0.853	0.691	0.721	0.867	0.444
Observations	45,105	45,105	45,105	45,105	45,105	45,105	7,519	45,105

Note: This table reports OLS estimates of the effect of education, social capital, and early exposure to Mediaset on the vote share of the main Italian parties – reported on top of each column – between 1994 and 2013. *Signal* is Mediaset signal strength in 1985, *Education* is the share of people with secondary or tertiary education, and *Social Capital* is the number of voluntary associations for every 100,000 inhabitants. The regressions in the bottom panel also interact *Signal* with *Education* and *Social Capital*. All regressions pool together the results of all elections between 1994 and 2013, and include on the right-hand side *SignalFree*, *Area*, *Altitude*, *Area*², *Altitude*², *Ruggedness*, *Electorate*, *Log income per capita*, and election, ED and LLM fixed effects. Observations are weighted by municipality population in 1981. Standard errors clustered at the electoral district level are reported in parentheses.

Figure A7: The effects of Mediaset, education, and social capital on voting (accounting for interaction effects)



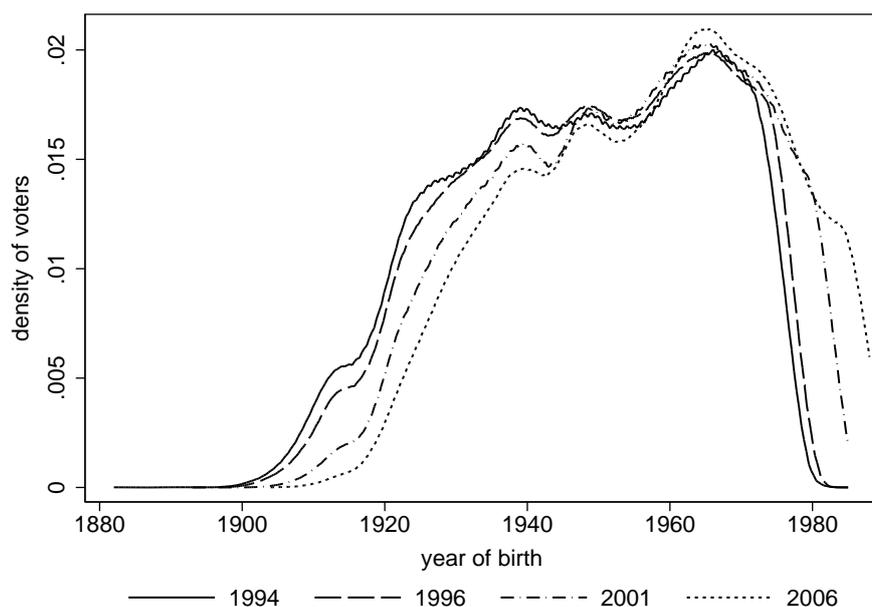
Note: The figure replicates the analysis in Figure ?? after interacting *Signal* with education and civic engagement. In particular, the left and right graphs plot the coefficient of *Signal* (vertical axis) against, respectively, the coefficients of schooling levels and civic engagement in 1981 (horizontal axis). The coefficients are obtained by estimating equation (??) separately for each party, including in addition interactions of *Signal* with education and civic engagement. All specifications pool together results of all elections and include year fixed effects.

Appendix B Age composition of voting population and persistence of the Mediaset effect

To relate the persistence of the effect of Mediaset to the age composition of the voting population, we use individual data on electoral participation available from administrative records. Specifically, we use data from the Turnout Archive assembled by the ITANES-Cattaneo Institute. The dataset includes individual data on all registered voters for a representative sample of 100 ballot stations over the period 1994-2006 (which includes four national elections). Each station includes on average 550 voters, until 1998, and 800 voters, after 1998, for a total of 55,000 and 80,000 individuals respectively. The longitudinal dimension of the data makes it possible to follow the same electors over time. Crucially, the dataset also includes information about each individual’s personal characteristics - including age, gender, education, and profession - which allows us to follow the evolution of electoral participation for different socio-demographic groups. Figure A8 shows the age distribution of the electorate in each election between 1994 and 2006.

Using these data, we explore the relationship between the persistence of the effect of Mediaset and the size of the two most affected groups, namely younger and older viewers. Indeed, while the average effect of Mediaset on the probability of voting for *Forza Italia* across all individuals is 2.9 percentage points, it is 7.8 percentage points for younger viewers (aged 10 or less in 1985), and 9.8 percentage points for older viewers (aged 55 or more in 1985). One possible explanation for the persistence of the effect over two decades is that younger cohorts, who joined the voting population in or after 1994, progressively replaced the older ones who were gradually exiting, thus leaving the overall

Figure A8: Age distribution of voters in national elections, 1994-2006



share of voters affected by Mediaset largely unaffected. Weighting the estimated effect of Mediaset for each of these age groups by their relative size in the voting population, in Table A9 we compute the implied effect of Mediaset in each election between 1994 and 2006. The table shows that, together, young and old viewers account for roughly 20 percent of total voters in 1994. This share is very stable in subsequent elections, as the increase in the number of young treated individuals almost exactly compensates for the reduction in the number of old treated ones. This back-of-the-envelope calculation indicates that the extreme persistence of the effect of Mediaset is largely consistent with the fact that the youngest and oldest cohorts, who spent more time watching TV in 1985, were more influenced by Mediaset content.

Table A9: Distribution of voting population and implied effect of Mediaset by age group and election (1994-2006)

	1994	1996	2001	2006
share of voters 55 or older in 1985 (born on or before 1930)	0.208	0.182	0.123	0.082
share of voters below 10 in 1985 (born after 1975)	0.029	0.052	0.125	0.141
share of voters below 10 or 55 or older in 1985	0.237	0.234	0.248	0.224
implied effect of Mediaset on voting for Forza Italia	0.023	0.022	0.022	0.019

Note: The table reports the distribution of voting population and the implied effect of Mediaset on voting for *Forza Italia* by age group for each election held between 1994 and 2006. The implied effect of Mediaset (last row) is computed by multiplying the share of younger and older voters (first two rows) by the coefficients estimated for such age groups (reported in the left graph of Figure ??).

Appendix C Data on adult literacy and numeracy test scores

Data on adult cognitive skills are available from the OECD Program for the International Assessment of Adult Competencies (PIAAC). PIAAC surveys were conducted in 32 countries over two rounds between 2008 and 2016 (a third round is currently ongoing). In each country, 5,000 individuals, representative of the adult population between 16 and 65 years, were interviewed with the aim of assessing their level of literacy and numeracy skills, as well as their ability to solve problems in technology-rich environments. Tests were conducted in each country's national language, but were standardized to allow for cross-national comparison. Prior to the actual assessment, the interviewer would administer a background questionnaire, which would usually take between 30 and 45 minutes. Depending on the respondent's computer skills, the assessment could be performed either in computer-based or paper-based format, and would on average take about 50 minutes. In the computer-based version, the literacy and numeracy assessments had an adaptive design, i.e., respondents were directed to more or less difficult blocks of questions based on their performance in the previous ones, so that the final score would take into account both the number of correct answers and the difficulty of the items answered. Overall score in the literacy and numeracy tests ranges between 0 and 500. For ease of interpretation, the score maps into six proficiency levels (from 0 to 5), each of which is described in terms of the types of tasks adults can successfully complete (??). The PIAAC literacy tests ask respondents to answer questions about texts that are drawn from a broad range of real life settings, including occupational, personal, community and education contexts. The numeracy tests ask respondents to answer questions about quantities and numbers, dimensions and shapes, patterns, relations, and changes. For our analysis we use data from the assessments conducted in Italy in 2012 on a sample of 4,598 individuals representative at the national level. We obtained access to a restricted-use version of the data that includes information on respondents' personal characteristics (i.e., age, gender, educational attainment, marital status) and on their municipality of residence, which allows us to assign to each respondent a level of Mediaset signal strength as of 1985.

Appendix D Exposure to Mediaset and voluntary associations across municipalities.

In Table A10 we investigate the relationship between exposure to Mediaset prior to 1985 and the evolution of civic engagement between 1981 and 2001 across municipalities, as measured by the number of civic associations. This is one of the measures of civic engagement used by ?, and the only available at the municipal level since the 1980s.

In particular, we compute the number of civic associations per capita in 1981, 1991 and 2001 from the national census. Reassuringly, signal strength in 1985 is not correlated with the number of voluntarily associations in 1981, i.e. before the expansion of Mediaset (column 1). The relation between the two variables becomes negative and statistically significant after the introduction of Mediaset (columns 2 and 3). In column (4) we pool observations for all census years and interact *Signal* with a dummy for the period after exposure; we also include municipality fixed effects, thus exploiting only differential changes over time within the same municipality. The coefficient of the interaction term suggests that civic engagement declines in exposed municipalities, relative to other municipalities, in the period after exposure.

These results corroborate the individual-level evidence presented in column (4) of Table ?. The estimated effects are also quantitatively comparable: a one standard deviation increase in *Signal* is associated with a fifth of a standard deviation decline in civic engagement at the individual level, and a third of a standard deviation decline across municipalities.

Table A10: Exposure to Mediaset and voluntary associations across municipalities

	(1)	(2)	(3)	(4)	(5)
	1981	1991	2001	diff-in-diff	1981-2001
<i>Signal</i>	0.000	-0.019	-0.021		
	(0.004)	(0.008)	(0.009)		
Post-1985				0.223	
				(0.005)	
Signal X Post-1985				-0.035	-0.035
				(0.007)	(0.007)
Observations	7,519	7,503	7,503	22,768	22,768
Municipality-level controls	YES	YES	YES	NO	NO
Municipality FE	NO	NO	NO	YES	YES
Year FE	NO	NO	NO	NO	YES
R-squared	0.514	0.531	0.736	0.549	0.788

Note: The table reports OLS estimates of the effect of early exposure to Mediaset on civic engagement across Italian municipalities. The dependent variable in columns (1)-(3) is the number of voluntary associations per capita in 1981, 1991, and 2001, respectively; in column (4), we pool all observations over the entire period. *Signal* is Mediaset signal strength in 1985, the regressions in columns (1)-(3) also control for *SignalFree*, *Area*, *Altitude*, *Area²*, *Altitude²*, *Ruggedness*, *Log income per capita*, *Education*, and *Population*, whereas the regression in column (4) includes municipality fixed effects. Regressions are weighted by municipality population in 1981. Heteroskedasticity-robust standard errors are clustered at the electoral district level in columns (1)-(3) and at the municipality level in column (4).

Appendix E Data on politician language

We compare the rhetoric of Italian politicians and parties by computing indexes of language simplicity on two types of text data: party manifestos and televised leaders' interventions.

Party manifestos are issued by political parties to communicate their electoral platform to voters, and have been widely used to infer parties' ideological position (?). We obtained from the Manifesto Project Database the electoral manifestos of all main parties running in Italian general elections since 1983. In particular, we select all manifestos issued by parties before an election in which they reached at least 5% of the votes. Table A11 reports the full list of parties and years included in our corpus. Our final sample covers 34 electoral programs from 11 different parties over the period 1983-2013, for a total of roughly 650,000 words.

We code language simplicity using the Gulpease Index, which adapts the Flesch-Kincaid index to the specific case of Italian language (?). The Flesch-Kincaid Index assesses readability based on the average number of syllables per word and the average number of words per sentence (??). Longer sentences are more likely to be complex, as more subordinate clauses and more prepositional phrases mean more mental work for the reader. So the longer a sentence, the harder it is to read. The same is true for words. The index ranges from 0 (lowest readability) to 100 (maximum readability). The main

difference between the Flesch-Kincaid and the Gulpease Index used for the analysis of Italian text is that the latter takes into account the length of a word in characters rather than in syllables, which is more appropriate for the case of Italian (?).

Turning to our second source of text data, we transcribed 43 televised interventions and electoral debates involving 16 political leaders over the period 1989-2013. For the last years of the First Republic (1989-1993), we transcribed all appearances by major political leaders that we could find available in a digitized format (3 in total). For the following years, we include appearances by the main political leaders of the Second Republic during the three months preceding each election. The vast majority of interventions come from “Porta a Porta”, the most popular political talk show in Italy, which started broadcasting in January 1996. Table A12 reports the politicians appearing in each intervention, the party they belonged to, the date and the name of the show, and an indicator for whether politicians were debating with each other or not. The final corpus comprises over 55 hours of footage and nearly 320,000 words.

When analyzing these text data, we can not use the Gulpease Index or other variations of the Flesch-Kincaid because they are very sensitive to the choice of punctuation, which is rather arbitrary when transcribing spoken language. For this reason, we compute the ratio between the number of “simple” words, as defined by the Basic Vocabulary of Italian (BVI), over the number of other words as an alternative measure of language simplicity. The BVI, originally compiled by ?, defines a set of 6,690 high-frequency and high-availability “simple” words that “are certainly known to the generality of those who have attended school at least until the eighth grade” (?). Operationally, words are included in the BVI based on their frequency in a large corpus of written and spoken Italian as well as on their dispersion (i.e., the number of different texts in which they appear). Therefore, the BVI provides a comprehensive picture of both written and spoken language. The share of high-frequency general-service words is commonly used by linguists to measure language complexity (see ? and ? for a comprehensive survey).

Table A11: Available transcripts of Party Manifestos 1983-2013

Party	Party Initials	Years
Democratic Party	PD	1992, 1994, 1996, 2001, 2006, 2008, 2013
Forza Italia	FI	1994, 1996, 2001, 2006, 2008, 2013
Communist Refoundation Party	RC	1992, 1994, 1996, 2001
Christian Democrats	DC	1983, 1987, 1992
Italian Communist Party	PCI	1983, 1987
Italian Socialist Party	PSI	1983, 1987, 1992
Lega Nord	LN	1994, 1996, 2008
Italian Popular Party	PPI	1994, 1996
National Alliance	AN	1994, 1996
The Daisy	DL	2001
Five Star Movement	M5S	2008

Note: the table reports the list of all available party manifestos between 1983 and 2013, for parties obtaining at least 5% of vote in the corresponding election. The data are used for the text analysis in Section ??.

Figure A9: Language simplicity in TV debates, 2013

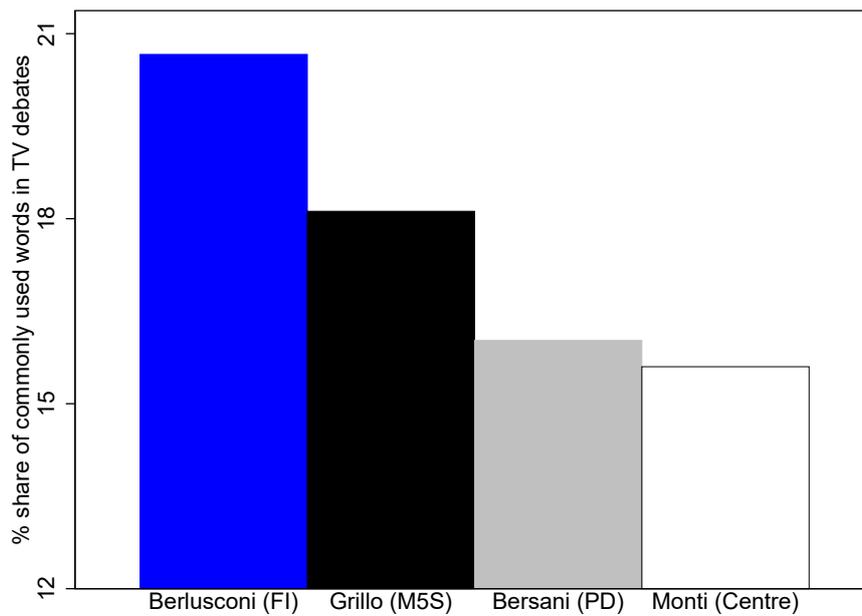


Table A12: Available transcripts of TV debates, 1989-2013

Politician(s)	Party Initials	Month	Year	Program	Debate
Craxi	PSI	May	1989	Mixer	No
Andreotti	DC	January	1993	Mixer	No
De Mita	DC	February	1993	Mixer	No
Berlusconi	FI	January	1994	Mixer	No
Berlusconi, Occhetto	FI, PD	February	1994	Braccio di Ferro	Yes
Berlusconi, Prodi	FI, PD	April	1996	Testa a Testa	Yes
D'Alema	PD	February	1996	Porta a Porta	No
Berlusconi	FI	May	2001	Porta a Porta	No
Fassino, Fini	PD, AN	May	2001	Porta a Porta	Yes
Rutelli	DL	May	2001	Porta a Porta	No
Berlusconi	FI	March	2006	Porta a Porta	No
D'Alema, Fini	PD, AN	March	2006	Porta a Porta	Yes
Prodi	PD	March	2006	Porta a Porta	No
Berlusconi, Prodi	FI, PD	April	2006	Porta a Porta	Yes
Berlusconi, Fassino	FI, PD	June	2006	Porta a Porta	Yes
Fini, Rutelli	AN, DL	June	2006	Porta a Porta	Yes
Berlusconi	FI	February	2008	Porta a Porta	No
Casini	PPI	February	2008	Porta a Porta	No
D'Alema	PD	February	2008	Porta a Porta	No
Veltroni	PD	February	2008	Porta a Porta	No
Berlusconi	FI	March	2008	Porta a Porta	No
Bertinotti	RC	March	2008	Porta a Porta	No
Bertinotti, Casini	RC, PPI	March	2008	Porta a Porta	Yes
Casini	PPI	March	2008	Porta a Porta	No
Berlusconi	FI	April	2008	Porta a Porta	No
Casini	PPI	April	2008	Porta a Porta	No
Fini	AN	April	2008	Porta a Porta	No
Veltroni	PD	April	2008	Porta a Porta	No
Berlusconi	FI	January	2013	Porta a Porta	No
Bersani	PD	January	2013	Porta a Porta	No
Monti	SC	January	2013	Porta a Porta	No
Berlusconi	FI	February	2013	Porta a Porta	No
Bersani	PD	February	2013	Porta a Porta	No
Monti	SC	February	2013	Porta a Porta	No
Grillo	M5S	May	2013	Porta a Porta	No

Note: the table reports the list of televised interventions by top Italian politicians, carried out between 1989 and 2013, used for the text analysis in Section ???. For each intervention we report: the name of the politician(s) that delivered the speech, the party affiliation, the month, year and hosting program, and an indicator for whether the intervention was in the context of a debate with another politician or not. The party initials refer to the following parties: PSI (Italian Socialist Party); DC (Christian Democrats); FI (Forza Italia); PD (Democratic Party); AN (National Alliance); DL (The Daisy); PPI (Italian Popular Party); RC (Communist Refoundation Party); SC (Civic Choice); M5S (Five Star Movement).