Subnational Elections and Media Freedom in Autocracies: Diffusion of Local Reputation and Regime Survival

Supplemental Materials

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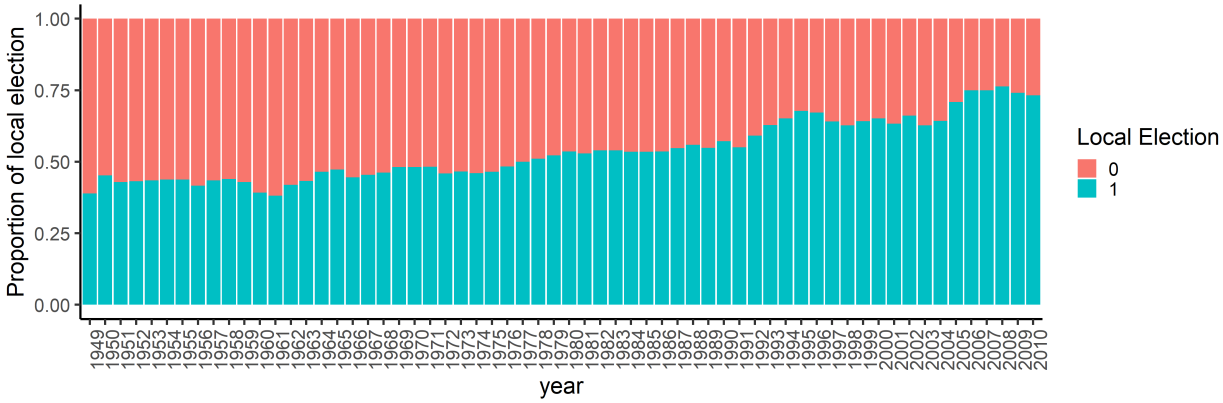
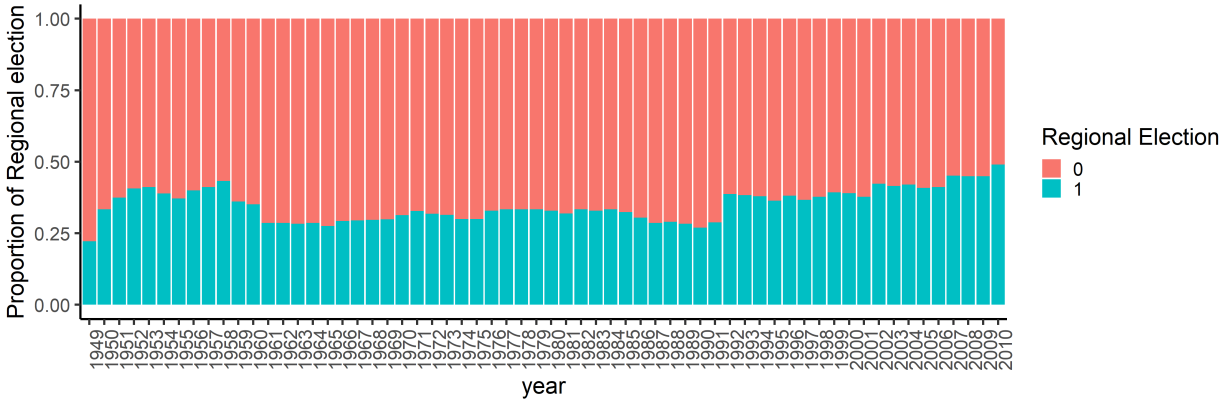
1 Proportion of Institutionalized Subnational Elections in Autocracies 1949-2010



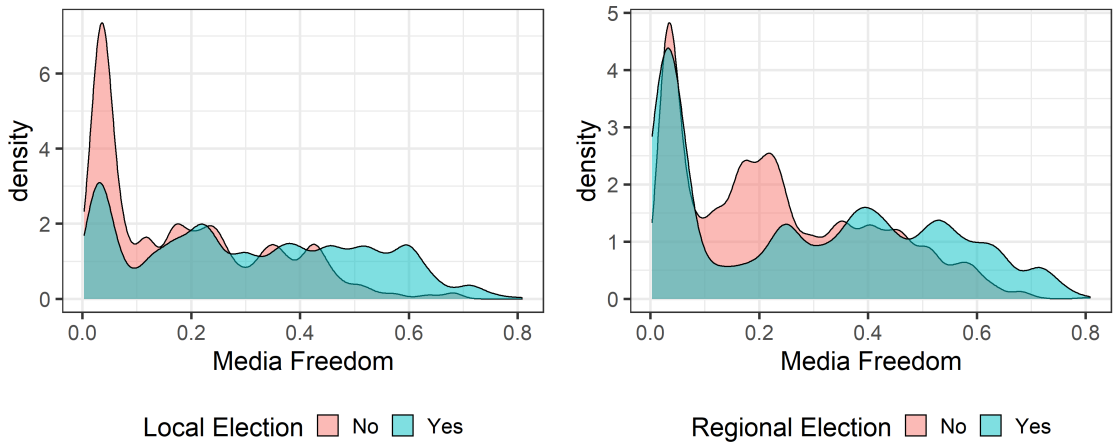
(a) Local Elections



(b) Regional Elections

Figure A1: Proportion of Institutionalized Subnational Elections in Autocracies 1949-2010

2 The density plot of media freedom varying by subnational elections

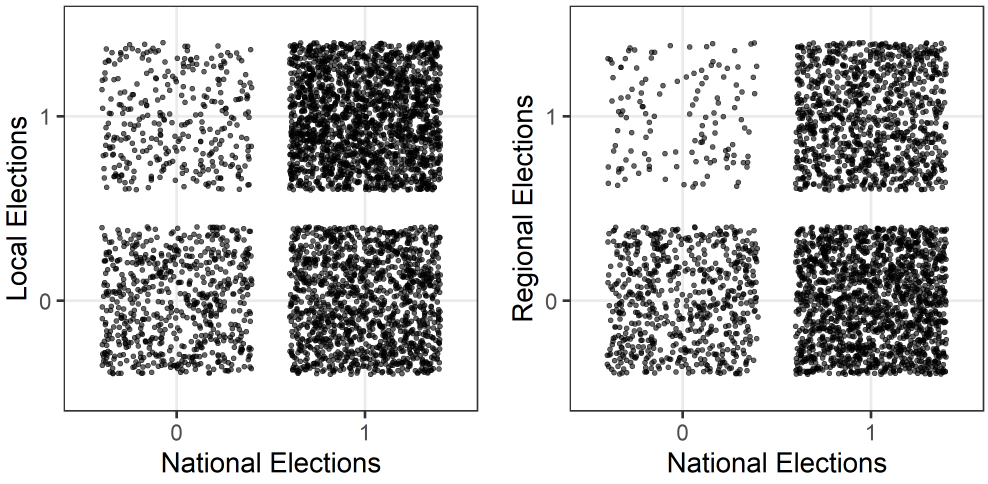


(a) Local Elections

(b) Regional Elections

Figure A2: The Density plot of media freedom varying by subnational elections

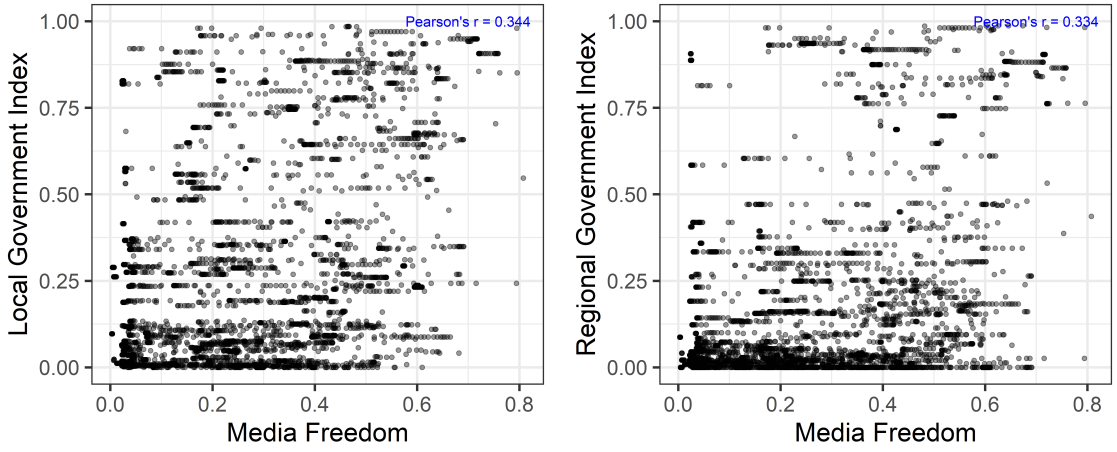
3 National Elections and Subnational Elections in Autocracies



(a) Local Elections (b) Regional Elections

Figure A3: National Elections and Subnational Elections in Autocracies (1949-2010)

4 Relationship between Media Freedom and Subnational Government Index



(a) Local Government Index

(b) Regional Government Index

Figure A4: Relationship between Media Freedom and Subnational Government Index

5 Descriptive Statistics

5.1 Summary Statistics of Main Variables

Table A1: Summary Statistics

	Variable	Mean	SD	Min	Max
1	Regime Breakdown	0.04	0.20	0.00	1.00
2	Local Election	0.53	0.50	0.00	1.00
3	Regional Election	0.34	0.47	0.00	1.00
4	Local Quality	0.28	0.29	0.00	0.98
5	Regional Quality	0.18	0.26	0.00	0.99
6	Media Freedom	0.25	0.19	0.00	0.79
7	Personalism	0.42	0.28	0.00	1.00
8	National Election	0.77	0.42	0.00	1.00
9	ln(GDP)	7.98	0.95	5.59	11.65
10	Growth	0.02	0.10	-0.68	1.54
11	ln(oil)	11.21	10.51	0.00	26.81
12	Civil War	0.98	0.13	0.00	1.00
13	Interstate War	0.97	0.17	0.00	1.00

5.2 List of regimes included in the analysis (1949-2010)

Country	Year	Country	Year	Country	Year	Country	Year
Afghanistan	2010-2010	Chile	1974-1989	Ivory Coast	2000-2000	Republic of the Congo	1969-1991
Afghanistan	1949-1973	China	1950-2010	Jordan	1949-2010	Republic of the Congo	1998-2010
Afghanistan	1974-1978	Colombia	1950-1953	Kazakhstan	1992-2010	Republic of Vietnam	1956-1963
Afghanistan	1979-1992	Colombia	1954-1958	Kenya	1964-2002	Republic of Vietnam	1964-1975
Afghanistan	1997-2001	Costa Rica	1949-1949	Kuwait	1962-2010	Romania	1949-1989
Albania	1949-1991	Cuba	1953-1959	Kyrgyzstan	2006-2010	Russia	1994-2010
Algeria	1963-1992	Cuba	1960-2010	Kyrgyzstan	1992-2005	Russia	1949-1991
Algeria	1993-2010	Czech Republic	1949-1989	Laos	1960-1960	Rwanda	1963-1973
Angola	1976-2010	Democratic Republic of the Congo	1961-1997	Laos	1961-1962	Rwanda	1974-1994
Argentina	1952-1955	Democratic Republic of the Congo	1998-2010	Laos	1976-2010	Rwanda	1995-2010
Argentina	1956-1958	Dominican Republic	1949-1962	Lesotho	1971-1986	Saudi Arabia	1949-2010
Argentina	1959-1966	Dominican Republic	1964-1965	Lesotho	1987-1993	Senegal	1961-2000
Argentina	1967-1973	Dominican Republic	1967-1978	Liberia	1949-1980	Serbia	1992-2000
Argentina	1977-1983	Ecuador	1964-1966	Liberia	1981-1990	Serbia	1949-1990
Armenia	1995-1998	Ecuador	1971-1972	Liberia	1998-2003	Sierra Leone	1968-1968
Armenia	1999-2010	Ecuador	1973-1979	Libya	1952-1969	Sierra Leone	1969-1992
Azerbaijan	1992-1992	Egypt	1949-1952	Libya	1970-2010	Sierra Leone	1993-1996
Azerbaijan	1994-2010	Egypt	1953-2010	Madagascar	2010-2010	Sierra Leone	1998-1998
Bangladesh	2008-2008	El Salvador	1949-1982	Madagascar	1961-1972	Singapore	1966-2010
Bangladesh	1972-1975	El Salvador	1983-1994	Madagascar	1973-1975	Somalia	1970-1991
Bangladesh	1976-1982	Eritrea	1994-2010	Madagascar	1976-1993	South Africa	1949-1994
Bangladesh	1983-1990	Eswatini	1969-2010	Malawi	1965-1994	South Korea	1949-1960
Belarus	1992-1994	Ethiopia	1975-1991	Malaysia	1958-2010	South Korea	1962-1987
Belarus	1995-2010	Ethiopia	1949-1974	Mali	1961-1968	South Yemen	1968-1990
Benin	1961-1963	Ethiopia	1992-2010	Mali	1969-1991	Spain	1949-1976
Benin	1964-1965	Gabon	1961-2010	Mauritania	2006-2007	Sri Lanka	1979-1994
Benin	1966-1967	Georgia	1992-1992	Mauritania	2009-2010	Syria	1950-1951
Benin	1968-1969	Georgia	1993-2003	Mauritania	1961-1978	Syria	1952-1954
Benin	1970-1970	German Democratic Republic	1950-1990	Mauritania	1979-2005	Syria	1958-1958
Benin	1973-1990	Ghana	1961-1966	Mexico	1949-2000	Syria	1963-1963
Bolivia	1949-1951	Ghana	1967-1969	Mongolia	1949-1993	Syria	1964-2010
Bolivia	1952-1952	Ghana	1973-1979	Morocco	1957-2010	Taiwan	1950-2000
Bolivia	1953-1964	Ghana	1982-2000	Mozambique	1976-2010	Tajikistan	1992-2010
Bolivia	1965-1969	Greece	1968-1974	Namibia	1991-2010	Tanzania	1965-2010
Bolivia	1970-1971	Guatemala	1955-1958	Nepal	2003-2006	Thailand	2007-2007
Bolivia	1972-1979	Guatemala	1959-1963	Nepal	1949-1951	Thailand	1949-1957
Bolivia	1981-1982	Guatemala	1964-1966	Nepal	1952-1991	Thailand	1958-1973
Botswana	1967-2010	Guatemala	1967-1970	Nicaragua	1949-1979	Thailand	1977-1988
Brazil	1965-1985	Guatemala	1971-1985	Nicaragua	1980-1990	Thailand	1992-1992
Bulgaria	1949-1990	Guatemala	1986-1995	Niger	1961-1974	The Gambia	1966-1994
Burkina Faso	1961-1966	Guinea	2009-2010	Niger	1975-1991	The Gambia	1995-2010
Burkina Faso	1967-1980	Guinea	1959-1984	Niger	1997-1999	Togo	1961-1963
Burkina Faso	1981-1982	Guinea	1985-2008	Nigeria	1967-1979	Togo	1964-2010
Burkina Faso	1983-1987	Guinea-Bissau	2003-2003	Nigeria	1984-1993	Tunisia	1957-2010
Burkina Faso	1988-2010	Guinea-Bissau	1975-1980	Nigeria	1994-1999	Turkey	1949-1950
Burma/Myanmar	1959-1960	Guinea-Bissau	1981-1999	North Korea	1949-2010	Turkey	1958-1960
Burma/Myanmar	1963-1988	Haiti	1951-1956	Oman	1949-2010	Turkey	1961-1961
Burma/Myanmar	1989-2010	Haiti	1958-1986	Pakistan	1949-1958	Turkey	1981-1983
Burundi	1963-1966	Haiti	1987-1988	Pakistan	1959-1971	Turkmenistan	1992-2010
Burundi	1967-1987	Haiti	1989-1990	Pakistan	1976-1977	Uganda	1967-1971
Burundi	1988-1993	Haiti	1992-1994	Pakistan	1978-1988	Uganda	1972-1979
Burundi	1997-2003	Haiti	2000-2004	Pakistan	2000-2008	Uganda	1981-1985
Cambodia	1954-1970	Honduras	1949-1956	Panama	1950-1951	Uganda	1987-2010
Cambodia	1971-1975	Honduras	1964-1971	Panama	1954-1955	United Arab Emirates	1972-2010
Cambodia	1976-1979	Honduras	1973-1981	Panama	1969-1982	Uruguay	1974-1984
Cambodia	1980-2010	Hungary	1949-1990	Panama	1983-1989	Uzbekistan	1992-2010
Cameroon	1961-1983	Indonesia	1950-1966	Paraguay	1949-1954	Venezuela	2006-2010
Cameroon	1984-2010	Indonesia	1967-1999	Paraguay	1955-1993	Venezuela	1949-1958
Central African Republic	2004-2010	Iran	1949-1979	Peru	1949-1956	Yemen	1949-1962
Central African Republic	1961-1965	Iran	1980-2010	Peru	1963-1963	Yemen	1963-1967
Central African Republic	1966-1979	Iraq	1949-1958	Peru	1969-1980	Yemen	1968-1974
Central African Republic	1980-1981	Iraq	1959-1963	Peru	1993-2000	Yemen	1975-1978
Central African Republic	1982-1993	Iraq	1964-1968	Philippines	1973-1986	Yemen	1979-2010
Chad	1961-1975	Iraq	1969-1979	Poland	1949-1989	Zambia	1968-1991
Chad	1976-1979	Iraq	1980-2003	Portugal	1949-1974	Zambia	1997-2010
Chad	1983-1990	Ivory Coast	2001-2010	Republic of the Congo	1961-1963	Zimbabwe	1981-2010
Chad	1991-2010	Ivory Coast	1961-1999	Republic of the Congo	1964-1968		

6 Additional Analyses

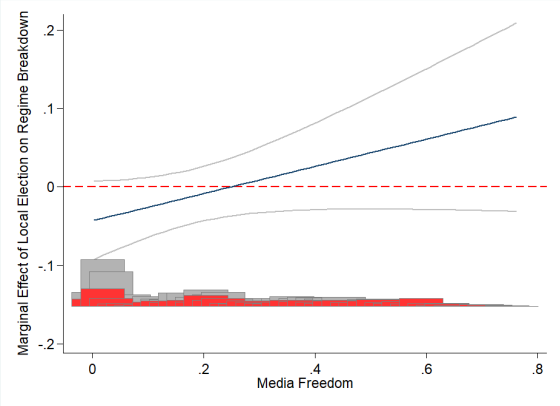
6.1 Alternative Measure of Local Election and Regional Election

In this analysis, I modify *Regional Government Elected* and *Local Government Elected* variables in a way that excludes extreme window-dressing elections. Specifically, I use 10% quantile of the *Local Government Index* and *Regional Government Index* as a threshold and change country-year observations of local(regional) election that are previously coded as 1 to 0 if local(regional) quality index is is less than or equal to 10% quantile. Results are consistent (p = 0.07, p = 0.09 respectively).

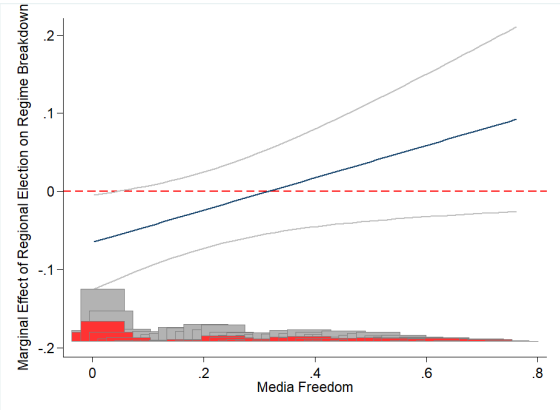
Table A2: Linear Probability Model

	DV: Regime Breakdown	
	Local	Regional
Local Election	−0.045	
	(0.027)	
Regional Election		−0.051
		(0.035)
Media Freedom	0.236**	0.276***
	(0.098)	(0.085)
Local Election * Media Freedm	0.175*	
	(0.105)	
Regional Election * Media Freedom		0.183*
		(0.100)
Regime-Fixed	Y	Y
Year-Fixed	Y	Y
Confounders	Y	Y
Poly(Duration,3)	Y	Y
Observations	3,611	2,999

Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.



(a) Local Elections



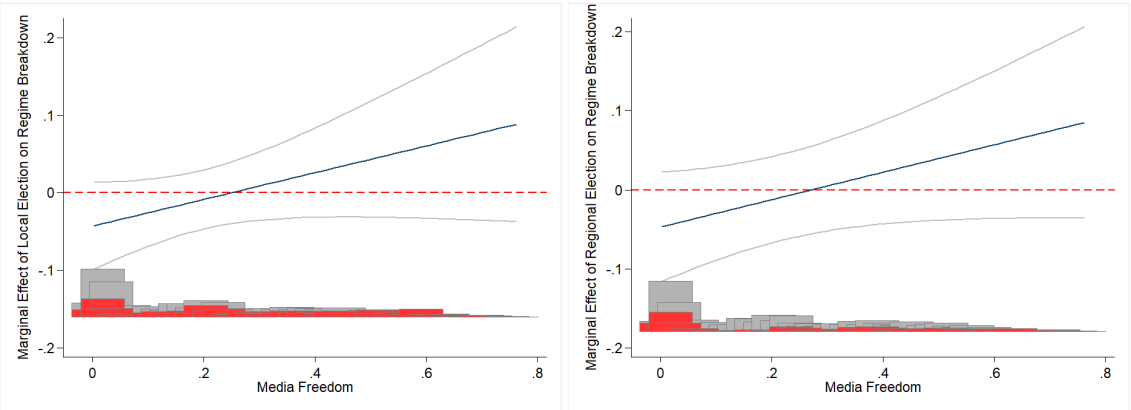
(b) Regional Elections

6.2 Dependent Variable: All regime failure cases

Table A3: Linear Probability Model

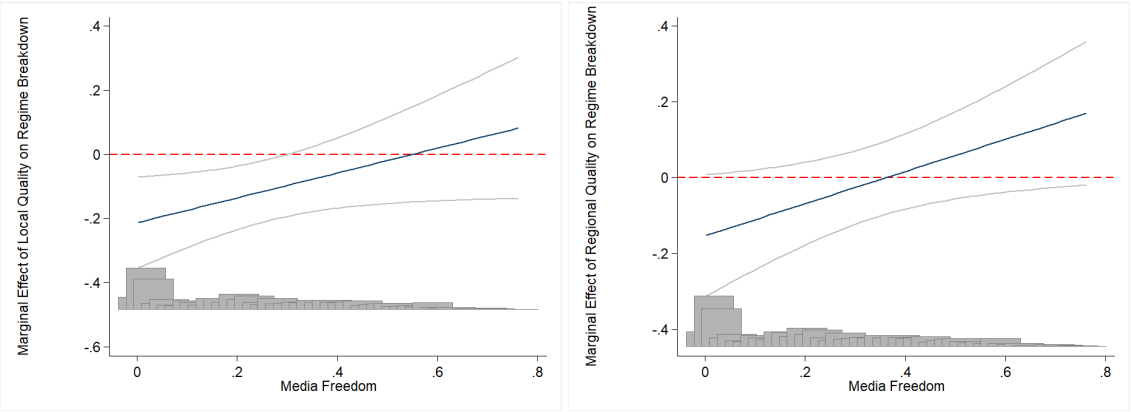
	DV: Regime Breakdown			
	Local	Regional	Loc Quality	Reg Quality
Local Election	−0.046			
	(0.028)			
Regional Election		−0.051		
		(0.035)		
Local Quality			−0.214***	
			(0.071)	
Regional Quality				−0.157**
				(0.079)
Media Freedom	0.235**	0.276***	0.288***	0.284***
	(0.099)	(0.085)	(0.095)	(0.087)
Local Election * Media Freedm	0.177*			
	(0.106)			
Regional Election * Media Freedom		0.183*		
		(0.100)		
Local Quality * Media Freedom			0.399**	
			(0.200)	
Regional Quality * Media Freedom				0.443**
				(0.193)
Regime-Fixed	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y
Confounders	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y
Observations	3,611	2,999	3,685	3,743

Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.



(a) Local Elections

(b) Regional Elections



(c) Local Government Index

(d) Regional Government Index

Figure A6: Marginal Effect of Subnational Elections on Regime Breakdown

6.3 No interaction

Table A4: Linear Probability Model

	DV: Regime Breakdown			
	Local	Regional	Loc Quality	Reg Quality
Local Election	−0.004			
	(0.020)			
Regional Election		−0.004		
		(0.026)		
Local Quality			−0.053	
			(0.047)	
Regional Quality				0.030
				(0.050)
Media Freedom	0.347***	0.326***	0.390***	0.344***
	(0.072)	(0.076)	(0.076)	(0.073)
Regime-Fixed	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y
Confounders	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y
Observations	3,611	2,999	3,685	3,743

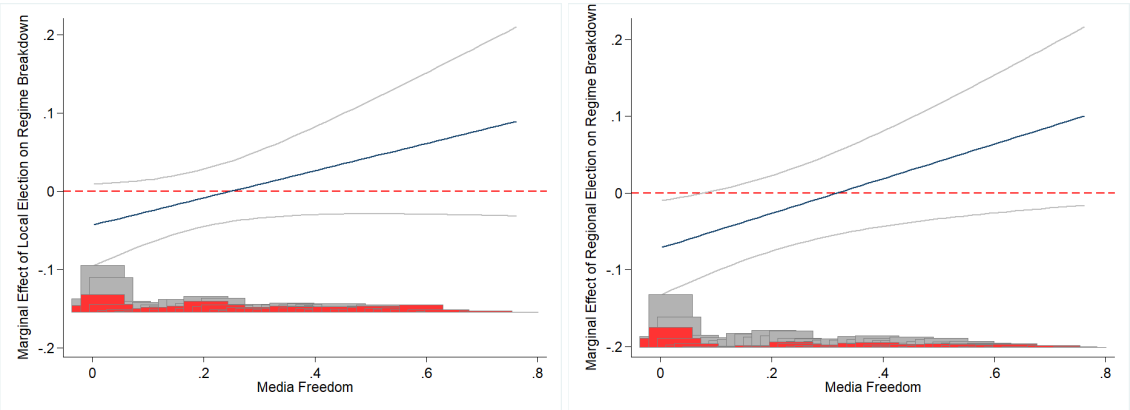
Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.

6.4 National election interaction included

Table A5: Linear Probability Model

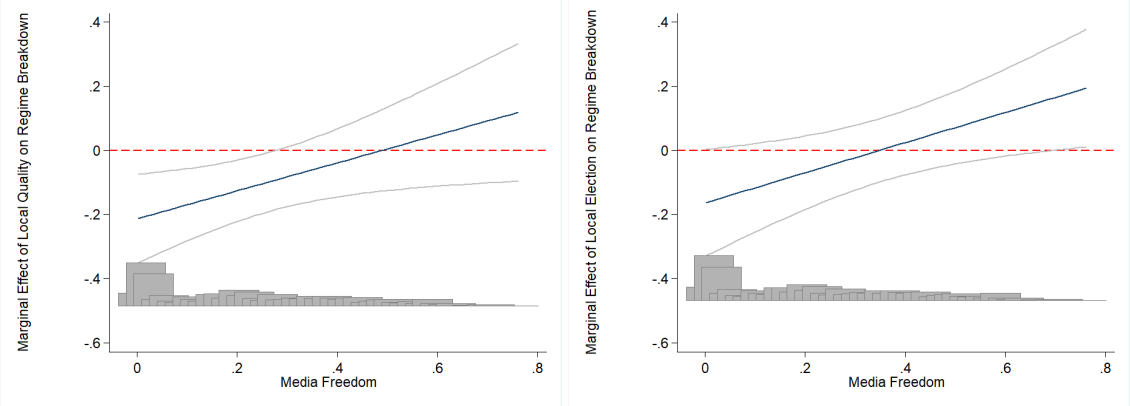
	DV: Regime Breakdown			
	Local	Regional	Loc Quality	Reg Quality
Local Election	−0.043			
	(0.026)			
Regional Election		−0.072**		
		(0.031)		
Local Quality			−0.213***	
			(0.070)	
Regional Quality				−0.164*
				(0.084)
Media Freedom	0.231*	0.352***	0.274**	0.272**
	(0.125)	(0.132)	(0.118)	(0.109)
National Election	0.004	0.022	0.005	0.005
	(0.018)	(0.023)	(0.019)	(0.019)
Local Election * Media Freedm	0.174*			
	(0.101)			
Regional Election * Media Freedom		0.226**		
		(0.094)		
Local Quality * Media Freedom			0.436**	
			(0.198)	
Regional Quality * Media Freedom				0.470**
				(0.192)
National Election * Media Freedom	−0.006	−0.112	−0.017	−0.007
	(0.075)	(0.098)	(0.077)	(0.074)
Regime-Fixed	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y
Confounders	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y
Observations	3,611	2,999	3,685	3,743

Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.



(a) Local Elections

(b) Regional Elections



(c) Local Government Index

(d) Regional Government Index

Figure A7: Marginal Effect of Subnational Elections on Regime Breakdown

6.5 Interaction with Human Rights Index

Table A6: Linear Probability Model

	DV: Regime Breakdown			
	Local	Regional	Loc Quality	Reg Quality
Local Election	0.027			
	(0.021)			
Regional Election		0.029		
		(0.038)		
Local Quality			0.061	
			(0.050)	
Regional Quality				0.116*
				(0.064)
Human Rights	−0.046***	−0.032**	−0.037***	−0.035***
	(0.014)	(0.013)	(0.014)	(0.012)
Local Election * Human Rights	0.039**			
	(0.018)			
Regional Election * Human Rights		0.035		
		(0.021)		
Local Quality * Human Rights			0.040	
			(0.033)	
Regional Quality * Human Rights				0.054*
				(0.028)
Regime-Fixed	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y
Confounders	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y
Observations	3,600	2,997	3,674	3,732

Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.

6.6 Interaction with V-Dem Liberal Democracy Index

Table A7: Linear Probability Model

	DV: Regime Breakdown			
	Local	Regional	Loc Quality	Reg Quality
Local Election	0.005			
	(0.028)			
Regional Election		−0.035		
		(0.032)		
Local Quality			−0.039	
			(0.065)	
Regional Quality				−0.057
				(0.070)
Liberalization	0.456**	0.365**	0.409**	0.349**
	(0.191)	(0.159)	(0.168)	(0.139)
Local Election * Liberalization	0.010			
	(0.177)			
Regional Election * Liberalization		0.243		
		(0.193)		
Local Quality * Liberalization			0.199	
			(0.347)	
Regional Quality * Liberalization				0.386
				(0.254)
Regime-Fixed	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y
Confounders	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y
Observations	3,591	2,979	3,665	3,723

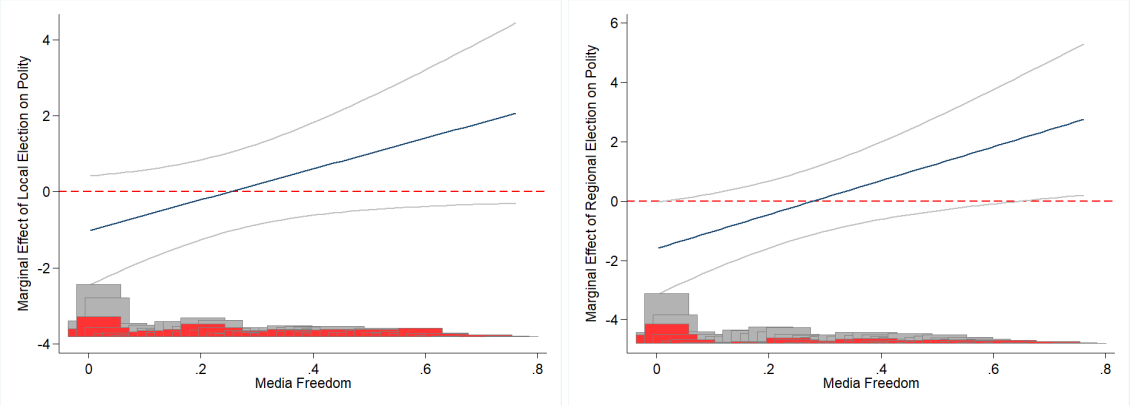
Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.

6.7 Dependent Variable: POLITY2

Table A8: Linear Regression Model

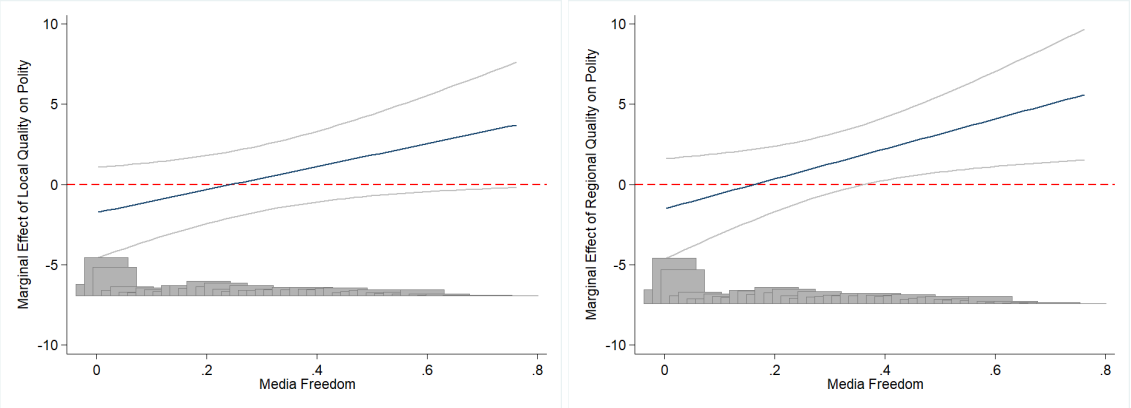
	DV: Polity2			
	Local	Regional	Loc Quality	Reg Quality
Local Election	−1.019			
	(0.730)			
Regional Election		−1.592**		
		(0.785)		
Local Quality			−1.754	
			(1.436)	
Regional Quality				−1.519
				(1.586)
Media Freedom	13.674***	14.177***	14.164***	14.690***
	(2.025)	(2.088)	(2.034)	(1.996)
Local Election * Media Freedom	4.057*			
	(2.087)			
Regional Election * Media Freedom		5.710**		
		(2.243)		
Local Quality * Media Freedom			7.180**	
			(3.517)	
Regional Quality * Media Freedom				9.348**
				(4.117)
Regime-Fixed	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y
Confounders	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y
Observations	3,585	2,975	3,659	3,717

Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.



(a) Local Elections

(b) Regional Elections



(c) Local Government Index

(d) Regional Government Index

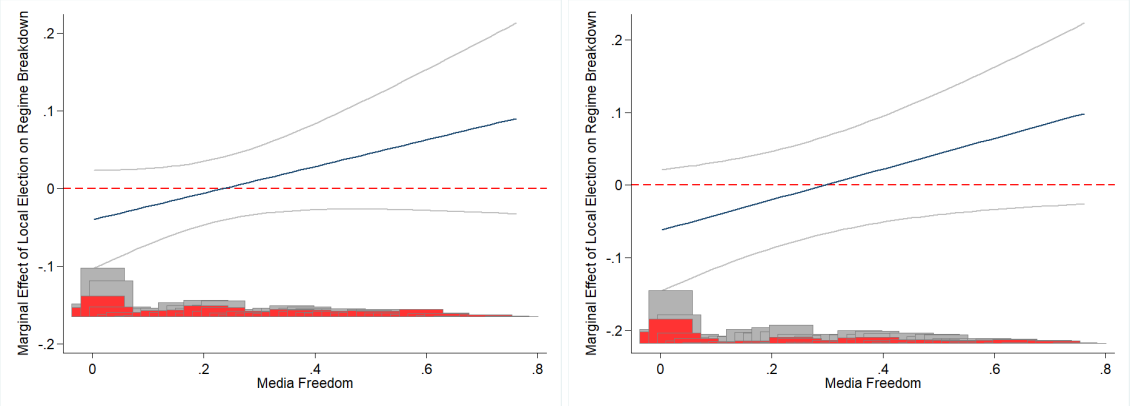
Figure A8: Marginal Effect of Subnational Elections on Regime Breakdown

6.8 Analysis with observations with institutionalized national elections

Table A9: Linear Probability Model

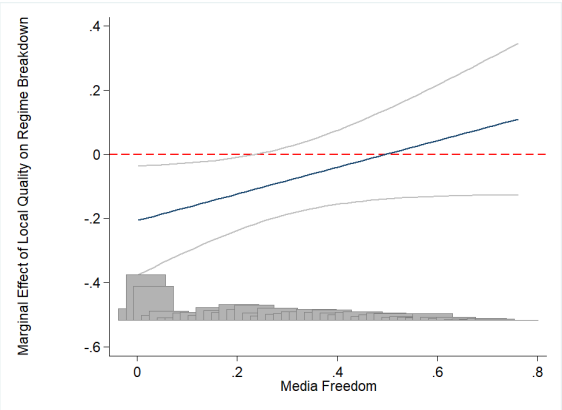
	DV: Regime Breakdown			
	Local	Regional	Loc Quality	Reg Quality
Local Election	−0.044			
	(0.032)			
Regional Election		−0.067		
		(0.042)		
Local Quality			−0.203**	
			(0.087)	
Regional Quality				−0.112
				(0.141)
Media Freedom	0.185*	0.205**	0.237**	0.239***
	(0.096)	(0.087)	(0.106)	(0.092)
Local Election * Media Freedom	0.181*			
	(0.108)			
Regional Election * Media Freedom		0.221**		
		(0.105)		
Local Quality * Media Freedom			0.416*	
			(0.229)	
Regional Quality * Media Freedom				0.448*
				(0.266)
Regime-Fixed	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y
Confounders	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y
Observations	2,808	2,336	2,896	2,919

Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.

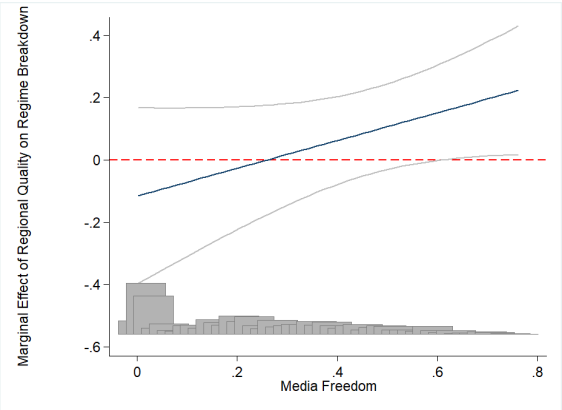


(a) Local Elections

(b) Regional Elections



(c) Local Government Index



(d) Regional Government Index

Figure A9: Marginal Effect of Subnational Elections on Regime Breakdown

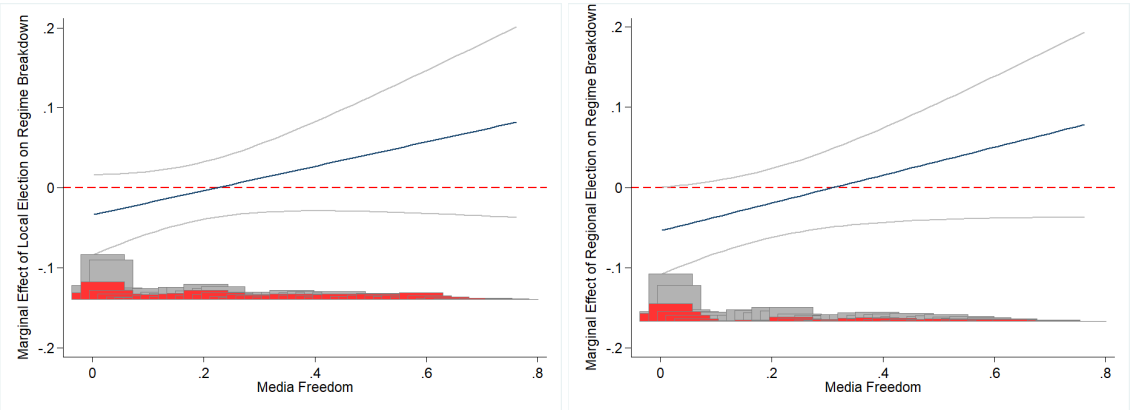
6.9 Analysis with imputed control variables

I use Amelia II by Honaker et al. (2011) to impute missing values of control variables.

Table A10: Linear Probability Model

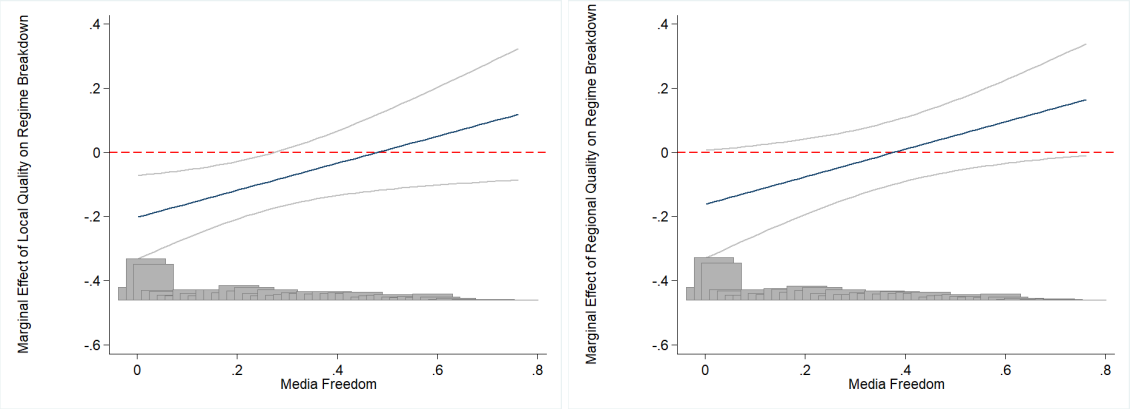
	DV: Regime Breakdown			
	Local	Regional	Loc Quality	Reg Quality
Local Election	−0.034			
	(0.025)			
Regional Election		−0.054*		
		(0.027)		
Local Quality			−0.203***	
			(0.066)	
Regional Quality				−0.162*
				(0.085)
Media Freedom	0.240***	0.271***	0.262***	0.274***
	(0.091)	(0.076)	(0.087)	(0.079)
Local Election * Media Freedom	0.152			
	(0.099)			
Regional Election * Media Freedom		0.174*		
		(0.093)		
Local Quality * Media Freedom			0.422**	
			(0.189)	
Regional Quality * Media Freedom				0.430**
				(0.186)
Regime-Fixed	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y
Confounders	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y
Observations	4,150	3,418	4,216	4,288

Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the regime in parentheses.



(a) Local Elections

(b) Regional Elections



(c) Local Government Index

(d) Regional Government Index

Figure A10: Marginal Effect of Subnational Elections on Regime Breakdown

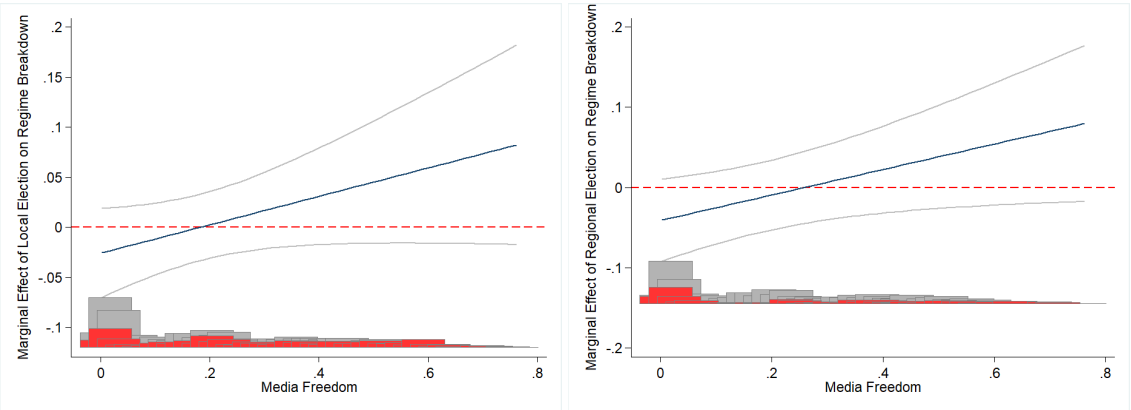
6.10 Country Fixed Effects

Table A11 replicates Table 1 and Table 2 with country fixed effects and regime type controls.

Table A11: Linear Probability Model

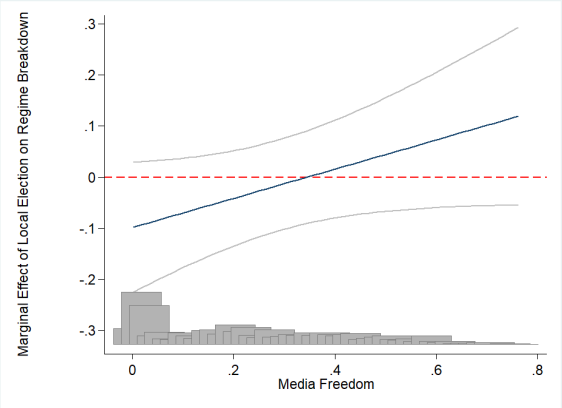
	DV: Regime Breakdown								
	Local	Regional	Loc Quality	Reg Quality	National Elec	Local	Regional	Loc Quality	Reg Quality
Local Election	−0.025					0.014			
	(0.023)					(0.028)			
Regional Election		−0.031					−0.026		
		(0.026)					(0.027)		
Local Quality			−0.111*					0.016	
			(0.064)					(0.058)	
Regional Quality				−0.167**					−0.112*
				(0.076)					(0.065)
Media Freedom	0.218***	0.285***	0.244***	0.246***	0.439***				
	(0.071)	(0.065)	(0.075)	(0.062)	(0.091)				
Liberalization						0.435**	0.424***	0.492***	0.357***
						(0.182)	(0.156)	(0.149)	(0.121)
National Election	−0.012	−0.010	−0.007	−0.007	0.012	−0.028*	−0.022	−0.025*	−0.019
	(0.013)	(0.014)	(0.013)	(0.013)	(0.017)	(0.014)	(0.015)	(0.014)	(0.014)
Local Election * Media Freedom	0.152*								
	(0.082)								
Regional Election * Media Freedom		0.149*							
		(0.076)							
Local Quality * Media Freedom			0.320**						
			(0.162)						
Regional Quality * Media Freedom				0.439***					
				(0.159)					
National Election * Media Freedom					−0.116				
					(0.076)				
Local Election * Liberalization						0.063			
						(0.178)			
Regional Election * Liberalization							0.288		
							(0.185)		
Local Quality * Liberalization								0.059	
								(0.304)	
Regional Quality * Liberalization									0.557**
									(0.235)
Country-Fixed	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year-Fixed	Y	Y	Y	Y	Y	Y	Y	Y	Y
Confounders	Y	Y	Y	Y	Y	Y	Y	Y	Y
Poly(Duration,3)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	3,611	2,999	3,685	3,743	3,763	3,591	2,979	3,665	3,723

Note: *p<0.1; **p<0.05; ***p<0.01
SE clustered at the country in parentheses.

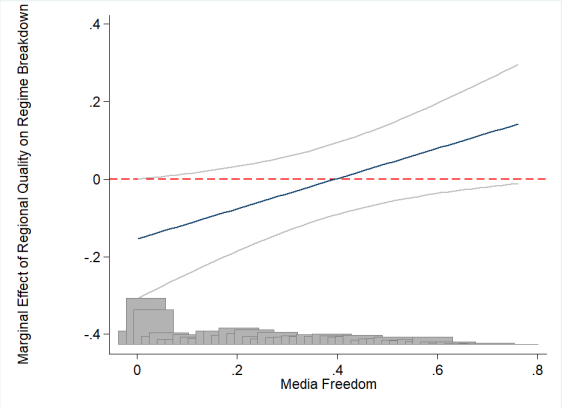


(a) Local Elections

(b) Regional Elections



(c) Local Government Index



(d) Regional Government Index

Figure A11: Marginal Effect of Subnational Elections on Regime Breakdown

References

Honaker, James, Gary King, Matthew Blackwell et al. 2011. "Amelia II: A program for missing data." *Journal of statistical software* 45(7):1–47.