Social Capital and Political Accountability
Online Appendix

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Abstract

This Appendix provides additional materials that are also discussed in the paper. In particular, in Section A1, we detail the criminal offenses included in the two types of criminal prosecution of members of Parliament analyzed in the paper (*RAP* and *serious RAP*). In Section A2, we provide robustness checks, in order to show that the baseline estimates are not sensitive to regression specifications or measurement choices in both social capital and criminal prosecution. In Section A3, we formally discuss the possible sources of self-selection bias and the conditions under which the baseline estimates can be interpreted as a lower bound of the true causal effects.

JEL codes: D72, D73, Z10.

Keywords: social capital, culture, political agency.

A1 Main offenses included in the measures of criminal prosecution (*RAP* and *serious RAP*)

List of serious offenses included in both the definition of *RAP* and *serious RAP*:

(1) corruption; (2) private interest in official acts or official duties; (3) tax evasion, tax dodging; (4) violation of the new laws on combating criminality, criminal conspiracy, confederation to commit a crime, racketeering organization; (5) trade fraud; (6) abuse, word of abuse; (7) forgery in public acts and public duties; (8) handling (receiving) stolen goods; (9) homicide, murder; (10) attempted domestic violence (brutality); violence or threat to public officer; (11) criminal damage; damage of public building; (12) defamation, insult, libel; false allegations; (13) bouncing a check; (14) embezzlement of public property or public funds.

List of other offenses included only in the definition of *RAP*:

(15) unlawful assembly; disturbance in an election meeting; (16) destruction or damage to bill-posting; unlawful bill-posting; (17) road-traffic offenses; (18) impediment, hindrance, or obstruction to free movement; (19) instigation to fascism; (20) bodily injury; (21) contempt (*oltraggio a pubblico ufficiale*); (22) publication or spreading false news; (23) (unlawful) interruption of public utility; (24) destruction of propaganda placards or notices; breach of the rules on electoral propaganda.

A2 Robustness checks

Table A1 – The impact of social capital on malfeasance – *Principal component*

	Dependent variable: RAP			Dependent variable: Serious RAP		
	(1)	(2)	(3)	(4)	(5)	(6)
Social capital	-0.029***	-0.021**	-0.041***	-0.023***	-0.015**	-0.028***
	[0.005]	[0.011]	[0.012]	[0.005]	[0.007]	[0.009]
Newspapers		-0.003			-0.003	
		[0.004]			[0.002]	
Years of schooling	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Government appointment	-0.055***	-0.055***	-0.054***	-0.022*	-0.022*	-0.022*
	[0.017]	[0.017]	[0.017]	[0.012]	[0.012]	[0.012]
Local experience	0.016	0.016	0.016	0.008	0.008	0.008
	[0.020]	[0.020]	[0.020]	[0.014]	[0.014]	[0.014]
Freshman	-0.039***	-0.039***	-0.040***	-0.014	-0.015	-0.015
	[0.013]	[0.013]	[0.013]	[0.012]	[0.012]	[0.012]
Tenure	0.007	0.007	0.006	0.005	0.005	0.004
	[0.008]	[0.008]	[0.008]	[0.007]	[0.006]	[0.007]
Majority coalition	-0.157***	-0.157***	-0.155***	-0.077***	-0.077***	-0.075***
	[0.017]	[0.017]	[0.017]	[0.013]	[0.013]	[0.013]
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Place of birth dummies	No	No	Yes	No	No	Yes
Obs.	5,755	5,755	5,755	5,755	5,755	5,755

Notes. Probit estimations; marginal effects reported. *Social capital* is measured as the principal component of: non-profit organizations per capita in 2001 (source: Istat); non-profit employees per capita in 2001 (source: Istat); electoral participation in multiple elections in the 2000s (source: Cartocci 2007). Dependent variables: dummy equal to one if the member of Parliament received a request for removal of parliamentary immunity because suspected of any criminal wrongdoing in columns (1)-(3), or because suspected of serious crimes in columns (4)-(6). *Other control variables* include: age, age squared, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands), district-specific income, education, and urbanization rate. Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A2 – The impact of social capital on absences/targeted bills – *Principal component*

	Dependent variable: Absenteeism rate			Dependent variable: Targeted bills		
	(1)	(2)	(3)	(4)	(5)	(6)
Social capital	-0.050***	-0.047**	-0.222***	-0.391***	-0.354***	-0.225**
	[0.018]	[0.019]	[0.010]	[0.116]	[0.117]	[0.098]
Social capital × proportional	0.059***	0.059***	0.189***	0.259*	0.262	0.198**
	[0.018]	[0.018]	[0.011]	[0.155]	[0.158]	[0.088]
Proportional	0.077***	0.077***	0.007	0.401***	0.401***	1.153***
	[0.020]	[0.020]	[0.014]	[0.139]	[0.135]	[0.123]
Newspapers		-0.002			-0.030	
		[0.003]			[0.025]	
Years of schooling	0.001	0.001	0.001	0.020	0.018	0.027
	[0.003]	[0.003]	[0.003]	[0.031]	[0.031]	[0.036]
National politician	0.044***	0.043***	0.049***	0.207	0.200	0.252*
	[0.014]	[0.014]	[0.015]	[0.132]	[0.131]	[0.148]
Government appointment	0.070***	0.070***	0.053**	-0.604**	-0.603**	-0.605**
	[0.024]	[0.024]	[0.026]	[0.268]	[0.267]	[0.286]
Parliament appointment	0.037**	0.038**	0.040**	0.532**	0.542**	0.460**
	[0.019]	[0.019]	[0.019]	[0.216]	[0.216]	[0.230]
Local experience	-0.025*	-0.025*	-0.028**	0.337***	0.336***	0.386***
	[0.013]	[0.013]	[0.013]	[0.111]	[0.111]	[0.116]
Freshman	-0.016	-0.017	-0.021	-0.528***	-0.532***	-0.569***
	[0.014]	[0.014]	[0.014]	[0.113]	[0.114]	[0.121]
Majority coalition	-0.167***	-0.167***	-0.173***	-0.307***	-0.308***	-0.357***
	[0.012]	[0.012]	[0.013]	[0.088]	[0.088]	[0.101]
Preelection income	0.081**	0.081**	0.079**	-0.183	-0.179	-0.169
	[0.032]	[0.032]	[0.031]	[0.122]	[0.119]	[0.127]
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Place of birth dummies	No	No	Yes	No	No	Yes
Obs.	1,465	1,465	1,465	1,465	1,465	1,465

Notes. OLS estimations; coefficients reported. *Social capital* is measured as the principal component of: non-profit organizations per capita in 2001 (source: Istat); non-profit employees per capita in 2001 (source: Istat); electoral participation in the 2000s (source: Cartocci 2007). Dependent variable: absenteeism rate in columns (1)-(3) and number of targeted bills in columns (4)-(6). *Proportional* is a dummy capturing whether the member of Parliament is elected in the proportional tier (as opposed to the majoritarian tier). *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands), district-specific income, education, and urbanization rate. Robust standard errors clustered at the province of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A3 – Social capital and electoral effect of malfeasance – *Split sample*

	Dependent variable: Log difference of votes			
	(1)	(2)	(3)	(4)
	Above-median social capital	Below-median social capital	Above-median social capital	Below-median social capital
RAP	-0.122***	-0.021	-0.093*	-0.063
	[0.038]	[0.022]	[0.054]	[0.046]
Years of schooling	0.003	-0.000		
	[0.002]	[0.002]		
Government appointment	0.143***	0.157***	0.119**	0.054
	[0.035]	[0.029]	[0.053]	[0.044]
Local experience	-0.038	0.017		
	[0.023]	[0.020]		
Freshman	0.075	0.031	0.107**	0.096**
	[0.047]	[0.036]	[0.046]	[0.042]
Tenure	-0.021	-0.018	-0.215**	-0.202***
	[0.024]	[0.013]	[0.086]	[0.075]
Majority coalition	0.110**	0.033	-0.025	-0.086
	[0.038]	[0.026]	[0.083]	[0.091]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	1,932	2,421	1,932	2,421
Wald test p-value	*0.001*		*0.562*	
Serious RAP	-0.108*	0.034	-0.210***	-0.009
	[0.052]	[0.036]	[0.064]	[0.053]
Years of schooling	0.004	-0.000		
	[0.002]	[0.002]		
Government appointment	0.147***	0.160***	0.117**	0.055
	[0.035]	[0.028]	[0.053]	[0.044]
Local experience	-0.037	0.014		
	[0.024]	[0.019]		
Freshman	0.080	0.034	0.108**	0.100**
	[0.049]	[0.037]	[0.046]	[0.042]
Tenure	-0.021	-0.018	-0.217**	-0.203***
	[0.025]	[0.013]	[0.085]	[0.075]
Majority coalition	0.122***	0.040	-0.031	-0.086
	[0.038]	[0.027]	[0.083]	[0.091]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	1,932	2,421	1,932	2,421
Wald test p-value	*0.010*		*0.002*	

Notes. OLS estimations in different subsamples (districts with social capital above/below median as specified in each column heading); social capital is measured as blood donation. Dependent variable: log difference of number of votes (between past and future election); members of Parliament who run for reelection only. *Other control variables* include: age, age squared, legislative term dummies, tenure, job dummies, district-specific income, education, newspapers, and urbanization rate. The *Wald test* evaluates whether the coefficient of either *RAP* or *serious RAP* is different in the two subsamples (above/below median). Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

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Table A4 – Social capital and electoral effect of malfeasance – *Principal component*

	Dependent variable: Log difference of votes			
	(1)	(2)	(3)	(4)
RAP × social capital	-0.046**	-0.055	-0.004	-0.006
	[0.019]	[0.033]	[0.038]	[0.066]
RAP	-0.078***	-0.475	-0.074**	0.611
	[0.026]	[0.325]	[0.037]	[0.460]
Years of schooling	0.002*	0.003*		
	[0.001]	[0.001]		
Government appointment	0.146***	0.147***	0.071**	0.074**
	[0.022]	[0.022]	[0.034]	[0.034]
Local experience	-0.006	-0.007		
	[0.015]	[0.015]		
Freshman	0.056**	0.056**	0.107***	0.106***
	[0.027]	[0.027]	[0.031]	[0.031]
Tenure	-0.017	-0.018	-0.212***	-0.211***
	[0.011]	[0.011]	[0.056]	[0.056]
Majority coalition	0.063***	0.065***	-0.041	-0.041
	[0.022]	[0.022]	[0.061]	[0.061]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
RAP × Z_j	No	Yes	No	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	4,353	4,353	4,353	4,353
Serious RAP × social capital	-0.090***	-0.132***	-0.123***	-0.093
	[0.020]	[0.044]	[0.044]	[0.074]
Serious RAP	-0.053	-0.607	-0.128***	0.344
	[0.033]	[0.414]	[0.043]	[0.518]
Years of schooling	0.003*	0.003**		
	[0.001]	[0.001]		
Government appointment	0.149***	0.150***	0.071**	0.074**
	[0.022]	[0.022]	[0.034]	[0.034]
Local experience	-0.008	-0.009		
	[0.015]	[0.015]		
Freshman	0.061**	0.061**	0.111***	0.110***
	[0.027]	[0.027]	[0.031]	[0.031]
Tenure	-0.016	-0.017	-0.210***	-0.212***
	[0.011]	[0.011]	[0.056]	[0.056]
Majority coalition	0.072***	0.073***	-0.044	-0.045
	[0.022]	[0.022]	[0.061]	[0.061]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Serious RAP × Z_j	No	Yes	No	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	4,353	4,353	4,353	4,353

Notes. OLS estimations; coefficients reported. *Social capital* is measured as the principal component of: non-profit organizations per capita in 2001 (source: Istat); non-profit employees per capita in 2001 (source: Istat); electoral participation in the 2000s (source: Cartocci 2007). Dependent variable: log difference of number of votes (between past and future election); members of Parliament who run for reelection only. *RAP* is equal to one if the member of Parliament receives a request for removal of parliamentary immunity because suspected of criminal wrongdoing. *Serious RAP* refers to a request for serious crimes. *Other control variables* include: age, age squared, legislative term dummies, job dummies. The district-specific characteristics Z_j include: income, education, newspapers, and urbanization rate. Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A5 – Social capital and electoral effect of absences/targeted bills – *Split sample*

	Dependent variable: Reelected same district			
	(1)	(2)	(3)	(4)
	Above-median social capital	Below-median social capital	Above-median social capital	Below-median social capital
Absenteeism rate (a)	-0.494***	0.152*		
	[0.136]	[0.090]		
Absenteeism rate × proportional (b)	0.773**	0.103		
	[0.302]	[0.192]		
Targeted bills			0.003	0.009
			[0.012]	[0.012]
Targeted bills × proportional			-0.035	-0.010
			[0.023]	[0.035]
Years of schooling	0.005	0.013	0.002	0.013
	[0.010]	[0.009]	[0.010]	[0.010]
National politician	0.089**	-0.090**	0.073*	-0.085**
	[0.044]	[0.040]	[0.044]	[0.041]
Government appointment	0.152*	0.042	0.141	0.050
	[0.090]	[0.075]	[0.091]	[0.076]
Parliament appointment	0.076	0.095*	0.049	0.096*
	[0.069]	[0.055]	[0.064]	[0.057]
Local experience	0.085*	0.095**	0.084*	0.092**
	[0.048]	[0.046]	[0.047]	[0.045]
Freshman	0.024	-0.086*	0.029	-0.082
	[0.047]	[0.050]	[0.047]	[0.054]
Majority coalition	-0.313***	-0.070	-0.239***	-0.094*
	[0.051]	[0.056]	[0.042]	[0.052]
Preelection income	0.113	-0.189	0.071	-0.125
	[0.137]	[0.215]	[0.089]	[0.213]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Obs.	735	730	735	730
Wald test p-value (a)	0.021		0.628	
Wald test p-value (b)	0.039		0.666	

Notes. Probit estimations in different subsamples (provinces with social capital above/below median as specified in each column heading); social capital is measured as blood donation; marginal effects reported. Dependent variable: dummy equal to one if the member of Parliament is reelected in the same district. *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Targeted bills* is the number of bills presented as main sponsor (over the legislative term) related to a specific target, such as a geographical entity (e.g., region, town, etc.) or subject (e.g., agency, museum, etc.). *Proportional* is a dummy capturing whether the member of Parliament is elected in the proportional tier (as opposed to the majoritarian tier). *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies, district-specific income, education, newspapers, and urbanization rate. Robust standard errors clustered at the province of election level are in brackets. The *Wald test* evaluates whether the coefficient of the absenteeism rate is different in the two subsamples (above/below mean). Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A6 – Social capital and electoral effect of absences/targeted bills – *Principal component*

	Dependent variable: Reelected same district			
	(1)	(2)	(3)	(4)
Absenteeism rate × social capital	-0.193**	-0.315**		
	[0.081]	[0.127]		
Absenteeism rate × social capital × proportional	0.216	0.202		
	[0.184]	[0.175]		
Absenteeism rate × proportional	0.005	-0.030	-0.004	-0.025
	[0.066]	[0.128]	[0.058]	[0.058]
Absenteeism rate	-0.165*	0.066		
	[0.090]	[0.537]		
Targeted bills × social capital			0.005	-0.010
			[0.008]	[0.014]
Targeted bills × social capital × proportional			-0.001	-0.005
			[0.022]	[0.022]
Targeted bills × proportional			-0.023	-0.032
			[0.019]	[0.020]
Targeted bills			0.008	0.100**
			[0.009]	[0.047]
Proportional × social capital	0.455**	0.448***		
	[0.206]	[0.152]		
Proportional	0.131	0.155	0.372***	0.384***
	[0.087]	[0.229]	[0.054]	[0.057]
Years of schooling	0.009	0.009	0.008	0.008
	[0.006]	[0.007]	[0.006]	[0.006]
National politician	0.001	-0.001	-0.000	0.003
	[0.033]	[0.033]	[0.033]	[0.033]
Government appointment	0.083	0.079	0.092	0.087
	[0.059]	[0.063]	[0.060]	[0.060]
Parliament appointment	0.060	0.057	0.052	0.049
	[0.043]	[0.043]	[0.042]	[0.043]
Local experience	0.091***	0.091***	0.089***	0.087***
	[0.034]	[0.028]	[0.033]	[0.033]
Freshman	-0.016	-0.014	-0.010	-0.010
	[0.033]	[0.031]	[0.034]	[0.034]
Majority coalition	-0.185***	-0.185***	-0.172***	-0.169***
	[0.040]	[0.031]	[0.034]	[0.035]
Preelection income	-0.026	-0.032	-0.027	-0.027
	[0.046]	[0.047]	[0.041]	[0.040]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Absenteeism rate × Z_j	No	Yes	No	No
Targeted bills × Z_j	No	No	No	Yes
Obs.	1,465	1,465	1,465	1,465

Notes. Probit estimations; marginal effects reported. *Social capital* is measured as the principal component of: non-profit organizations per capita in 2001 (source: Istat); non-profit employees per capita in 2001 (source: Istat); electoral participation in the 2000s (source: Cartocci 2007). Dependent variable: dummy equal to one if the member of Parliament is reelected in the same district. *Absenteeism rate* is the percentage of votes missed without any legitimate reason during the legislative term. *Targeted bills* is the number of bills presented as main sponsor (over the legislative term) related to a specific target, such as a geographical entity (e.g., region, town, etc.) or subject (e.g., agency, museum, etc.). *Proportional* is a dummy capturing whether the member of Parliament is elected in the proportional tier (as opposed to the majoritarian tier). *Other control variables* include: age, age squared, married, number of children, legislative term dummies, job dummies. The district-specific characteristics Z_j include: income, education, newspapers, and urbanization rate. Robust standard errors clustered at the province of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A7 – The impact of social capital on minor malfeasance – *First Republic*

	Dependent variable: Minor RAP		
	(1)	(2)	(3)
Social capital	-0.003**	-0.004	-0.006
	[0.002]	[0.003]	[0.003]
Newspapers		0.000	
		[0.002]	
Years of schooling	-0.001	-0.001	-0.001
	[0.001]	[0.001]	[0.001]
Government appointment	-0.032***	-0.032***	-0.031***
	[0.010]	[0.010]	[0.009]
Local experience	0.007	0.007	0.007
	[0.008]	[0.008]	[0.008]
Freshman	-0.021**	-0.021**	-0.020**
	[0.010]	[0.010]	[0.010]
Tenure	0.002	0.002	0.001
	[0.004]	[0.004]	[0.004]
Majority coalition	-0.072***	-0.072***	-0.072***
	[0.009]	[0.009]	[0.010]
Other control variables	Yes	Yes	Yes
Place of birth dummies	No	No	Yes
Obs.	5,755	5,755	5,755

Notes. Probit estimations; marginal effects reported. Dependent variable: dummy equal to one if the politician received a request for removal of parliamentary immunity because suspected of a non-serious crime (*Minor RAP*). Social capital is measured as blood donation. *Other control variables* include: age, age squared, legislative term dummies, job dummies, macro-region dummies (North-West, North-East, Center, South, Islands), district-specific income, education, and urbanization rate. Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Table A8 – Social capital and electoral effect of minor malfeasance – *First Republic*

	Dependent variable: Log difference of votes			
	(1)	(2)	(3)	(4)
Minor RAP	-0.135**	-0.433	-0.250***	-0.354
	[0.050]	[0.512]	[0.075]	[0.688]
Minor RAP × social capital	0.016	0.026	0.100***	0.111***
	[0.026]	[0.032]	[0.026]	[0.038]
Years of schooling	0.002*	0.002*		
	[0.001]	[0.001]		
Government appointment	0.146***	0.146***	0.075**	0.075**
	[0.022]	[0.022]	[0.034]	[0.034]
Local experience	-0.004	-0.004		
	[0.015]	[0.015]		
Freshman	0.055**	0.056**	0.112***	0.113***
	[0.027]	[0.026]	[0.031]	[0.031]
Tenure	-0.018	-0.018	-0.205***	-0.205***
	[0.011]	[0.011]	[0.056]	[0.056]
Majority coalition	0.066***	0.066***	-0.042	-0.041
	[0.022]	[0.022]	[0.061]	[0.061]
Other control variables	Yes	Yes	Yes	Yes
District of election dummies	Yes	Yes	Yes	Yes
Minor RAP × Z_j	No	Yes	No	Yes
Individual fixed effects	No	No	Yes	Yes
Obs.	4,353	4,353	4,353	4,353

Notes. OLS estimations. Dependent variable: log difference of number of votes (between past and future election); members of Parliament who run for reelection only. *Minor RAP* is equal to one if the member of Parliament receives a request for removal of parliamentary immunity because suspected of non-serious crimes. Social capital is measured as blood donation. *Other control variables* include: age, age squared, legislative term dummies, job dummies. The district-specific characteristics Z_j include: income, education, newspapers, and urbanization rate. Robust standard errors clustered at the district of election level are in brackets. Significance at the 10% level is represented by *, at the 5% level by **, and at the 1% level by ***.

Figure A1 – Geographical distribution of social capital and malfeasance – *First Republic*

Social capital by district

1st quintile
2nd quintile
3rd quintile
4th quintile
5th quintile

RAP by district

1st quintile
2nd quintile
3rd quintile
4th quintile
5th quintile

Serious RAP by district

1st quintile
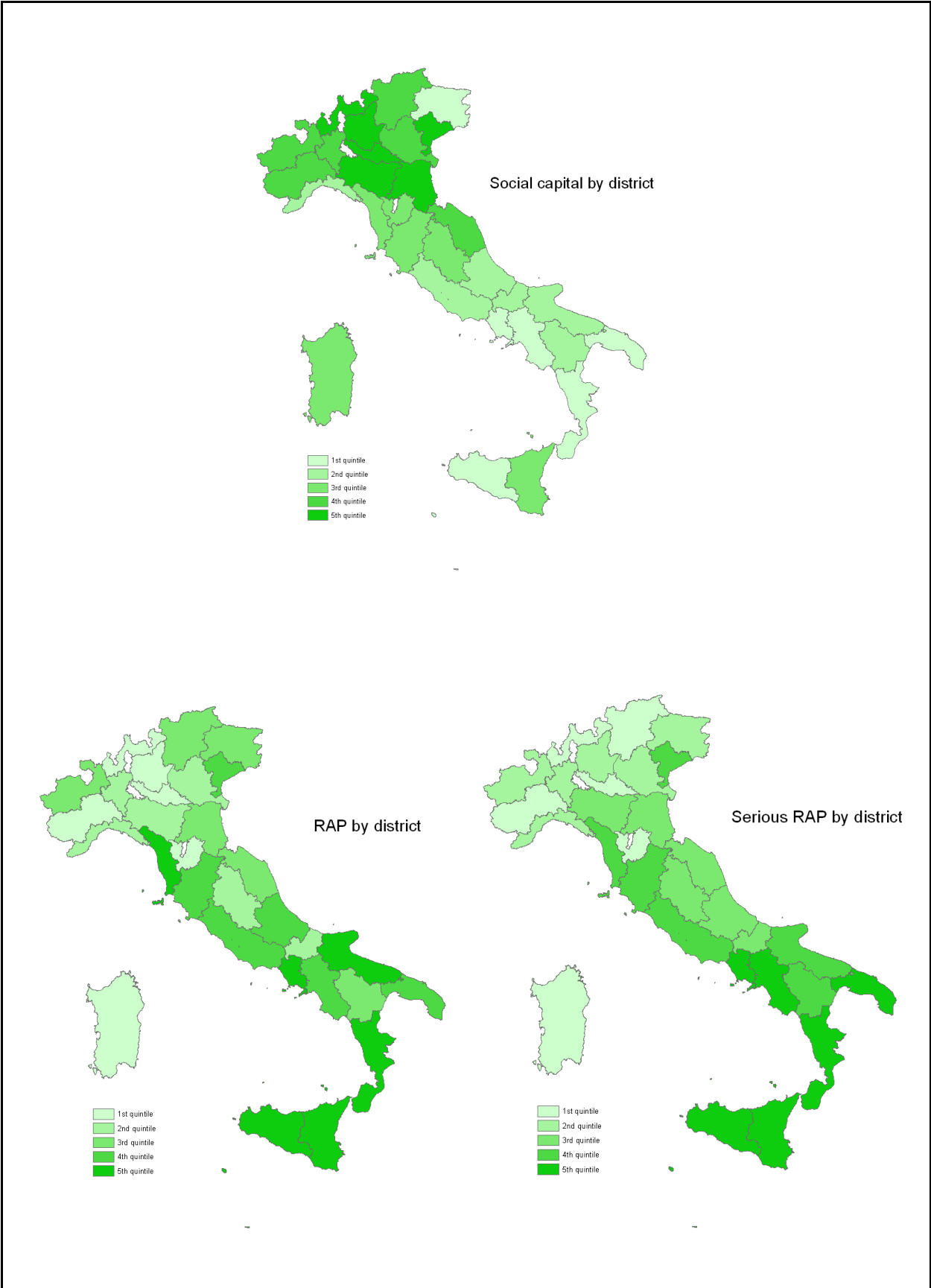2nd quintile
3rd quintile
4th quintile
5th quintile

Figure A2 – Geographical distribution of social capital and absences – *Second Republic*

Social capital by province

1st quintile
2nd quintile
3rd quintile
4th quintile
5th quintile

Absenteeism rate by province

1st quintile
2nd quintile
3rd quintile
4th quintile
5th quintile
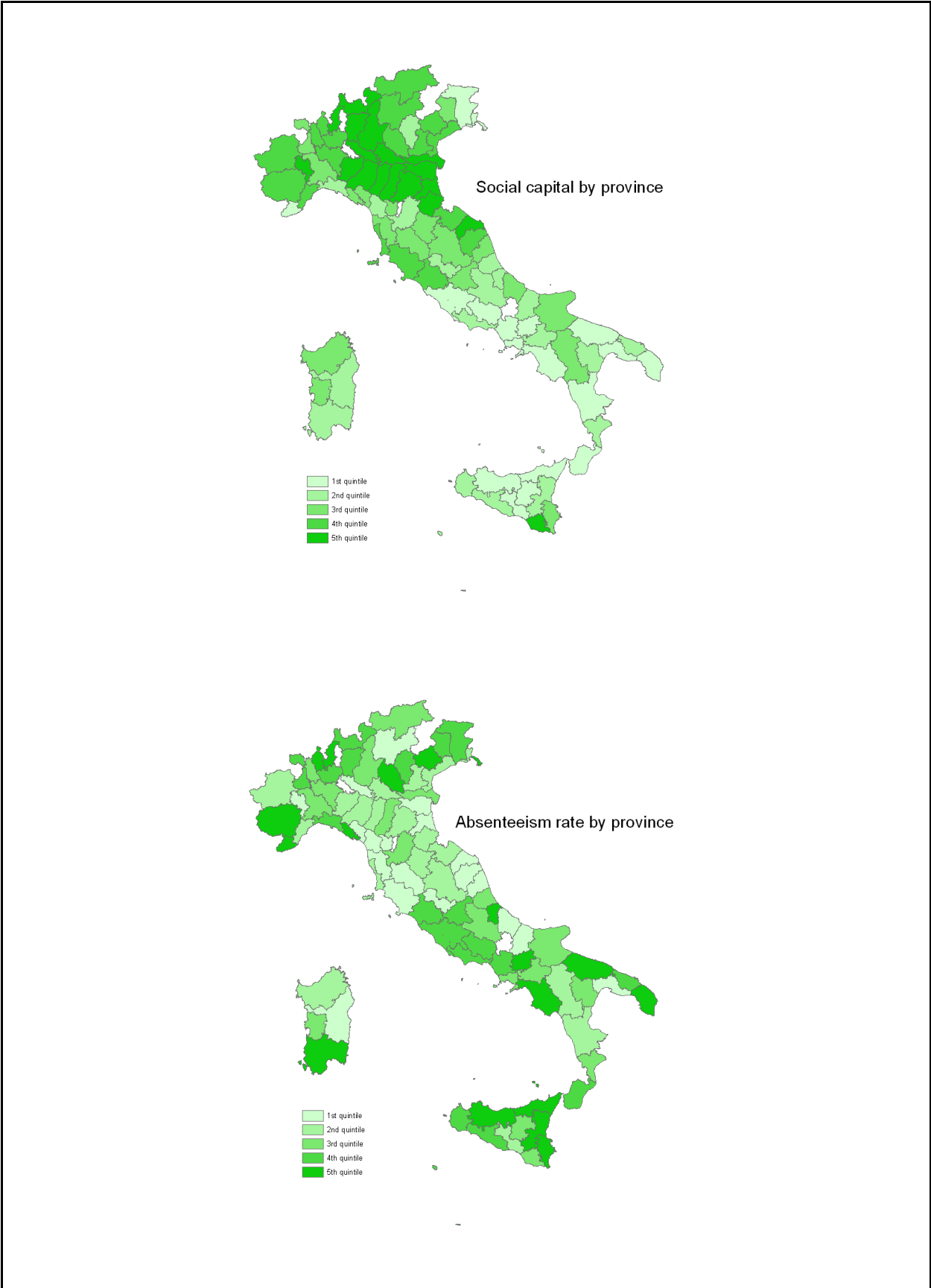
Figure A3 – RAP across areas
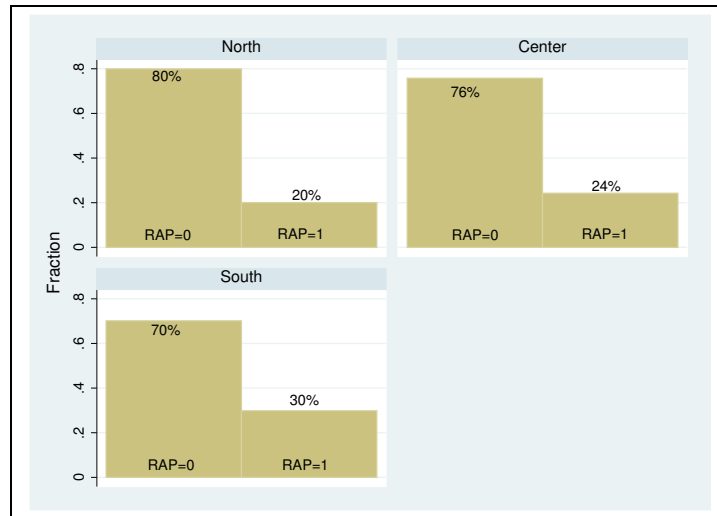
Notes. Fraction of members of Parliament receiving a RAP in the provinces of the North, Center, and South of Italy (Istat classification).

Figure A4 – Serious RAP across areas
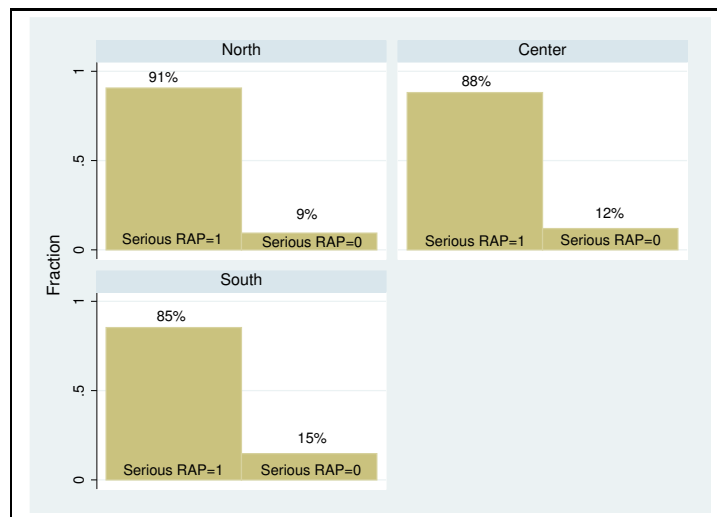
Notes. Fraction of members of Parliament receiving a RAP for serious crimes (see Appendix I) in the provinces of the North, Center, and South of Italy (Istat classification).

Figure A5 – Absenteeism rate across areas
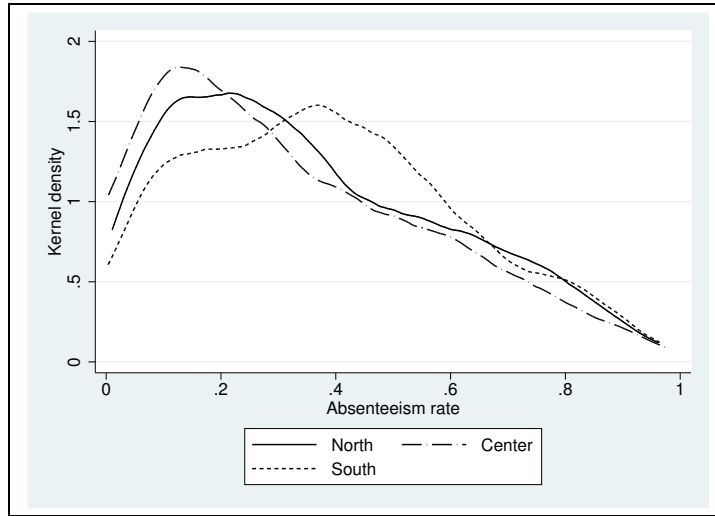
Notes. Kernel density of the absenteeism rate of the members of Parliament elected in the provinces of the North, Center, and South of Italy (Istat classification).

Figure A6 – Social capital across areas
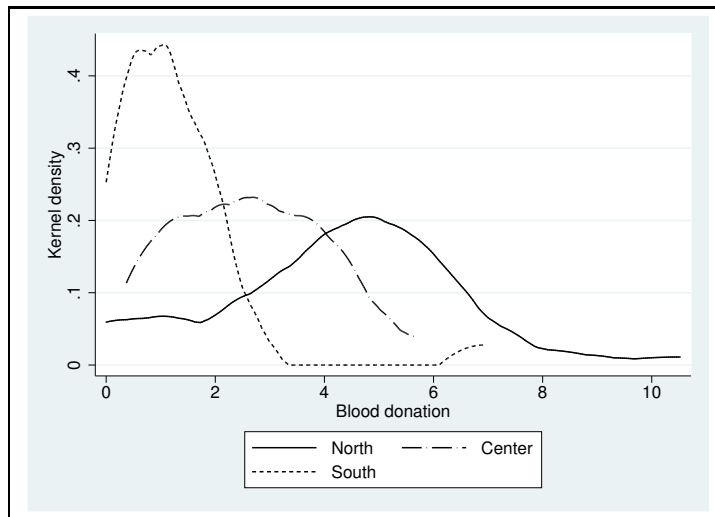
Notes. Kernel density of the social capital measure (number of blood bags every 100 inhabitants) in the provinces of the North, Center, and South of Italy (Istat classification).

A3 Nature and direction of self-selection bias

Using a potential-outcome framework, define $\Delta VOT_i(1)$ as the potential outcome of politician i in case he received a RAP, and $\Delta VOT_i(0)$ as the potential outcome in case he did not receive a RAP.[1] Conditional on the level of social capital of the district of election ($SC = k$, with $k = H, L$ and $H > L$), potential outcomes can be written as:

$$\Delta VOT_{ik}(1) = \mu_{1k} + U_{ik}(1)$$

$$\Delta VOT_{ik}(0) = \mu_{0k} + U_{ik}(0),$$

where $\mu_{1k} - \mu_{0k}$ captures the common electoral punishment for receiving a RAP in district k and $U_{ik}(1) - U_{ik}(0)$ is the idiosyncratic punishment of individual i in district k.

If we regress the observed outcome on the received RAP by OLS within every district (or we control for district fixed effects in a saturated model), the estimated coefficient provides a biased estimate of the average treatment effect on the treated in district k, which can be expressed as: $\tau_k = E[\Delta VOT_{ik}(1) - \Delta VOT_{ik}(0)|RAP = 1, SC = k]$. In particular, the mean selection bias is:

$$MSB_k = E[U_{ik}(0)|RAP = 1, SC = k] - E[U_{ik}(0)|RAP = 0, SC = k],$$

that is, the average idiosyncratic electoral outcome in the case of no treatment for politicians who end up receiving a RAP and politicians who do not receive it, respectively. A positive value of MSB_k means that, on average in district k, individuals with improved electoral prospects if they remained honest ($U_{ik}(0)$ high) are more likely to misbehave ($RAP = 1$) than individuals whose electoral prospects have worsened ($U_{ik}(0)$ low); in other words, misbehavior is more likely amongst those who can afford to lose votes because their electoral prospects are expected to improve. Conversely, $MSB_k < 0$ means that political misbehavior is more likely amongst those whose electoral prospects would have deteriorated even if they had remained honest. Note

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[1] We summarize the main identification issues in the framework of the First Republic, i.e., with the log difference of preference votes as outcome variable and RAP as treatment of interest. The reasoning easily extends to the Second Republic framework, with reelection as outcome and absenteeism as treatment.

also that the idiosyncratic error term U_{ik} refers to *changes* in preference votes relative to the previous election, since we are taking first differences.

As we are interested in the comparison between τ_k in districts characterized by different levels of social capital, assuming that the idiosyncratic electoral outcomes of each politician are constant across time, we could remove the mean selection bias in each district by including politician fixed effects within every district (or by saturating the model with a full set of interactions between politician and district fixed effects).

If we cannot do that because of data restrictions, however, we can still predict the direction of the bias when comparing the estimated treated effects in districts with high versus low social capital. In particular, the estimated difference between the electoral punishment/reward of RAP in areas with high versus low social capital is made up of both the true difference and the difference between the mean selection biases in the two areas:

$$\hat{\tau}_H - \hat{\tau}_L = (\tau_H - \tau_L) + (MSB_H - MSB_L)$$

Clearly, if MSB_k is the same in all districts k, or if it does not covary systematically with social capital, then our estimates are unbiased. Thus, we are only concerned by MSB that varies systematically with social capital. Given that we have taken first differences (i.e., as explained above, MSB refers to unobservable changes in electoral prospects between two consecutive elections), it is not obvious why there would be a specific correlation with time invariant features of the district.

If MSB covaries systematically with social capital, then we can estimate either a lower or an upper bound, depending on the patterns of correlations. Assume first that the true difference is negative, $(\tau_H - \tau_L) < 0$, meaning that the electoral punishment of RAP is higher (or the electoral reward is lower) in areas with more social capital. Then, as long as the mean selection bias is larger in districts with high social capital, $MSB_H > MSB_L$, the estimated difference in the electoral punishments is going to be a *lower bound* of the true difference in absolute value. In fact, we have either $(\tau_H - \tau_L) < 0 < (\hat{\tau}_H - \hat{\tau}_L)$ or $(\tau_H - \tau_L) < (\hat{\tau}_H - \hat{\tau}_L) < 0$. The latter is indeed our case, as $(\hat{\tau}_H - \hat{\tau}_L) < 0$ in the data.[2]

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[2]Alternatively, if $(\tau_H - \tau_L) > 0$, the punishment of RAP would be higher (or the reward lower) in areas with less social capital. In this case, as long as $MSB_H > MSB_L$, the estimated difference would be an *upper bound* of the true difference: $(\hat{\tau}_H - \hat{\tau}_L) > (\tau_H - \tau_L) > 0$. This is not the case in our data, however.

At the end of the day, to obtain a lower bound interpretation of our estimates, we need to assume that, where social capital is high, politicians with improved electoral prospects *without* RAP are more likely to self-select into RAP, compared to districts with low social capital: in other words, where the expected punishment is higher, only those who can afford the (electoral) price of receiving a RAP decide to misbehave. Of course, we would obtain an upper bound interpretation with the opposite assumption, namely that—where the expected punishment is higher—only those who are desperate and would end up not being reelected anyway decide to misbehave. We believe that the lower bound assumption is plausible in our context, where most incumbents effectively compete for reelection, although we cannot completely rule out the opposite hypothesis.