Appendix

Appendix for "How Education Policies Shape Political Inequality: Analysing Policy Feedback Effects in Germany"

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1 Main Results as Marginal Predictions

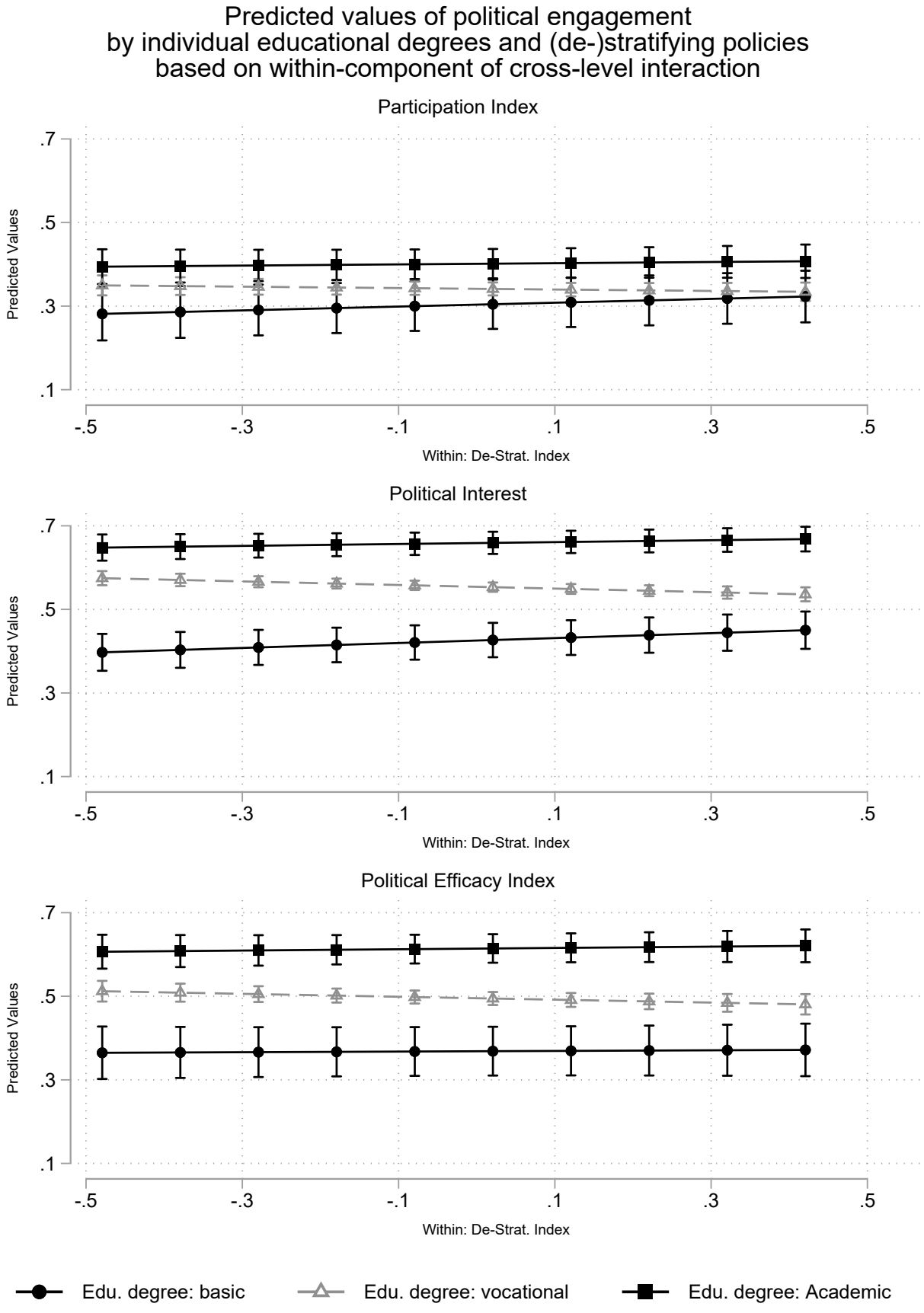


Figure A1: Predicted Values of Political Engagement by Educational Degrees with 90% CIs

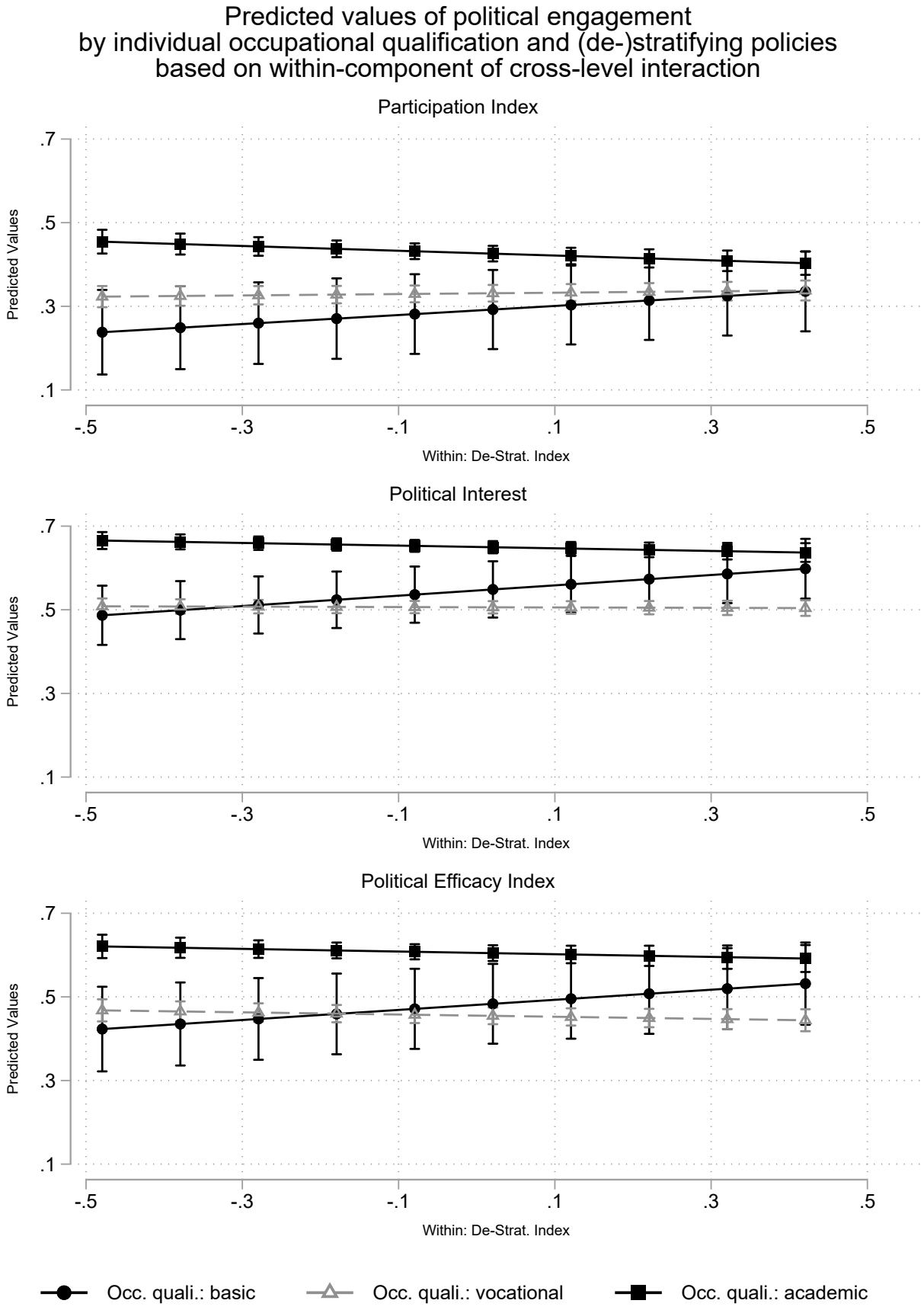


Figure A2: Predicted Values of Political Engagement by Occupational Qualification with 90% CIs

2 Descriptives

2.1 Descriptives Education Policies

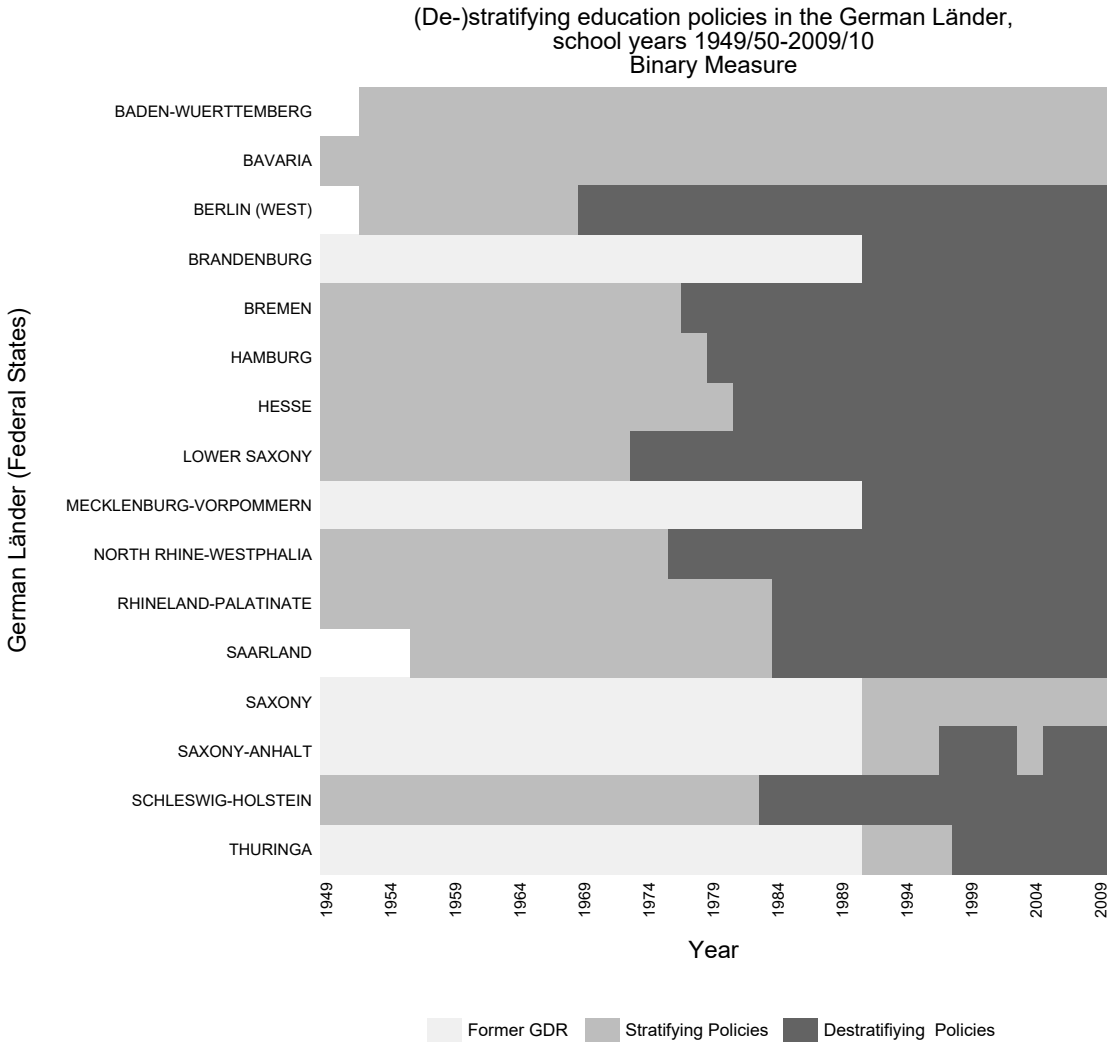


Figure A3: Over Time and Between Federal States Variation of Education Policies: Binary Stratification Index

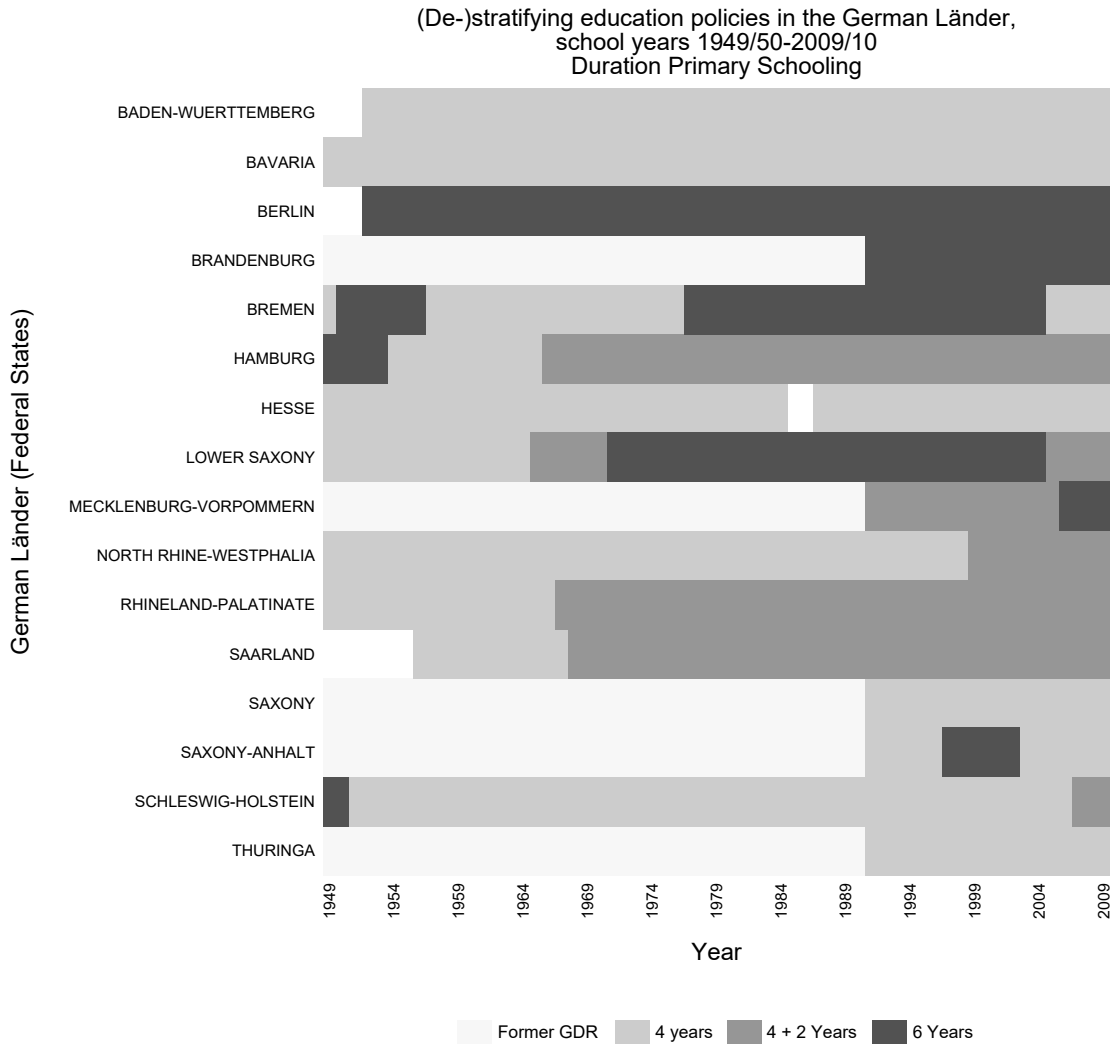


Figure A4: Over Time and Between Federal States Variation of Education Policies: Index Part 1

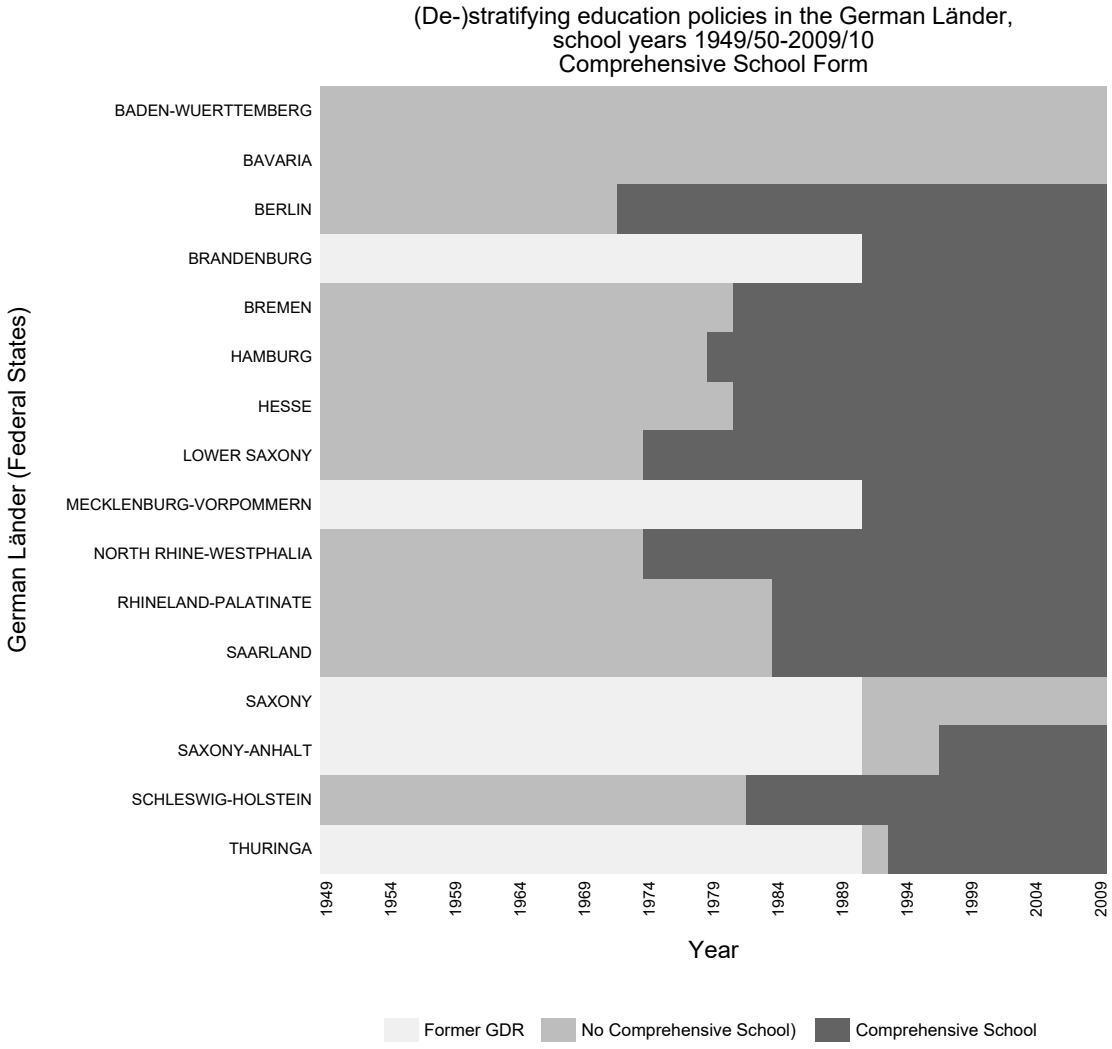


Figure A5: Over Time and Between Federal States Variation of Education Policies: Index Part 2

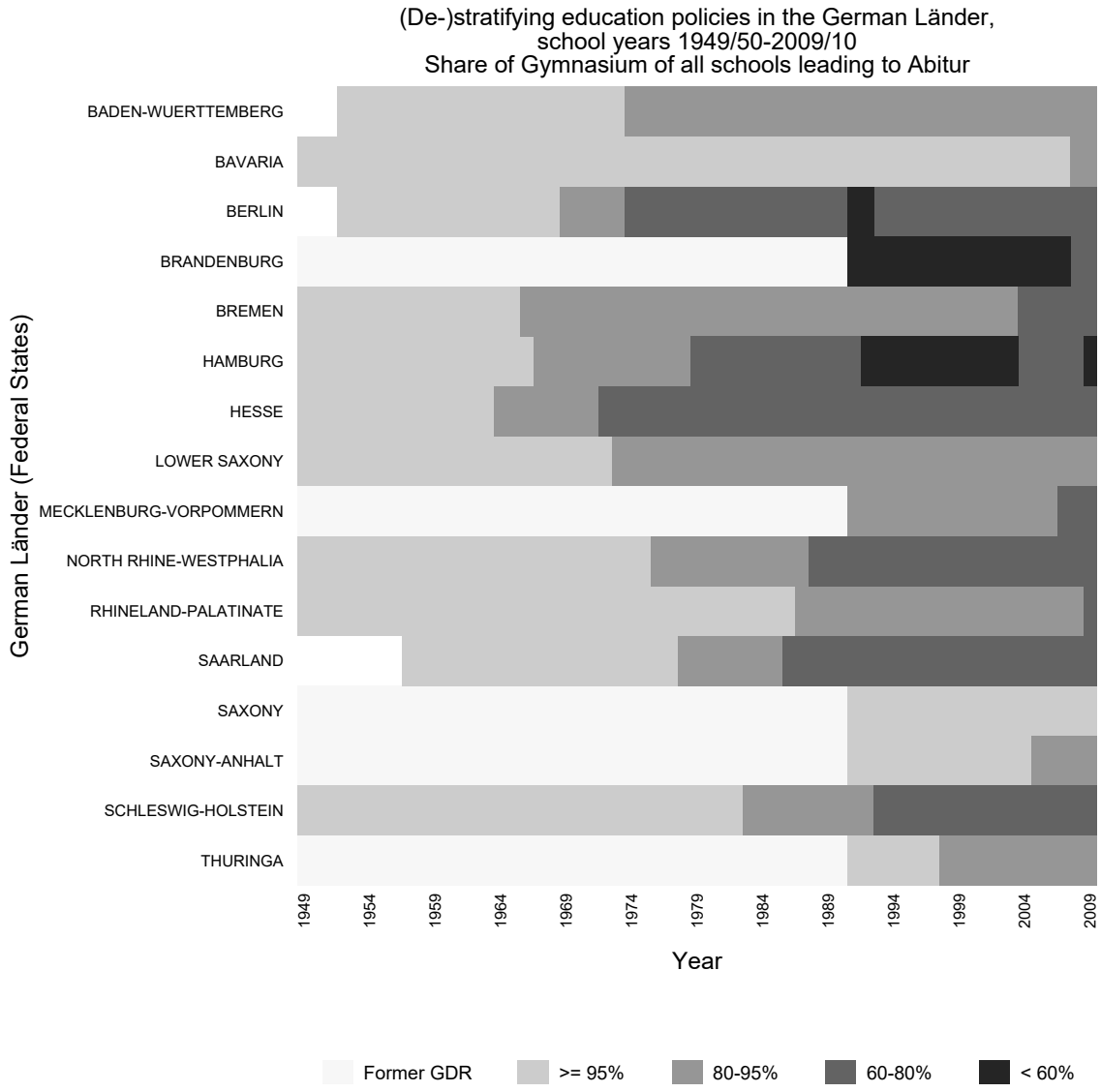


Figure A6: Over Time and Between Federal States Variation of Education Policies: Index Part 3

2.2 Descriptives Individual-Level Allbus Data

2.2.1 Descriptives Main Independent Variables

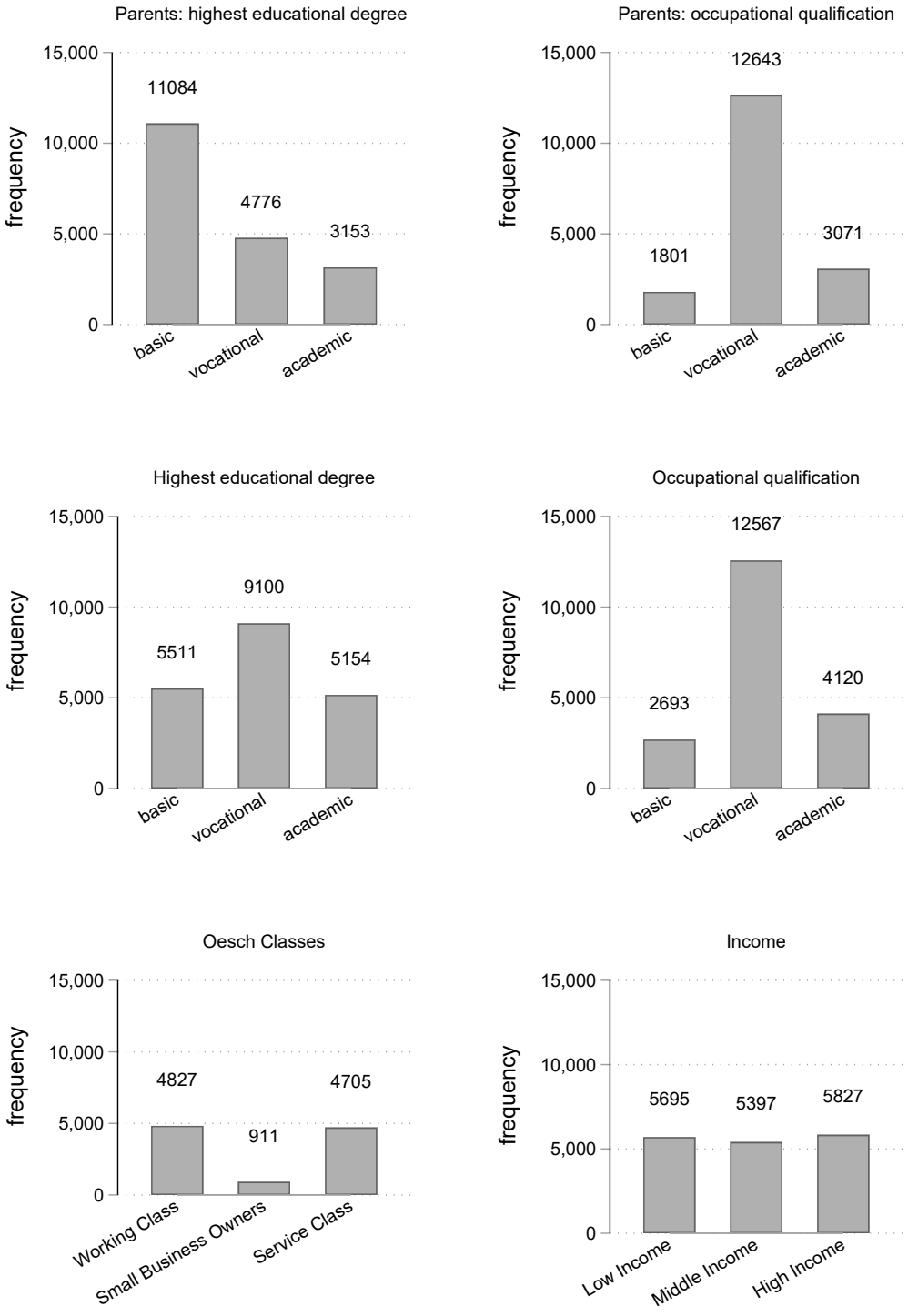


Figure A7: Univariate Distribution of the Main Independent Variables

2.2.2 Descriptives Dependent Variables

	count	mean	sd	min	max
Participation Index	5293	0.33	0.17	0	1
Political Interest	20031	0.54	0.25	0	1
Political Efficacy Index	5120	0.48	0.19	0	1
Observations	20031				

Table A1: Summary Statistics of the Main Dependent Variables

	count	mean	sd	min	max
Conventional Participation Index	5293	0.29	0.16	0	1
Participated in election	5293	0.86	0.35	0	1
Worked in party	5293	0.06	0.24	0	1
Protest voted	5293	0.17	0.38	0	1
Abstained out of protest	5293	0.08	0.27	0	1
Observations	5293				

Table A2: Summary Statistics of the Additional Dependent Variables: Conventional Political Participation

	count	mean	sd	min	max
Unconventional Participation Index	5293	0.36	0.23	0	1
Told friends opinion	5293	0.80	0.40	0	1
Participated public discussion	5293	0.33	0.47	0	1
Participated citizen initiative	5293	0.12	0.33	0	1
Participated unlawful demonstration	5293	0.05	0.21	0	1
Participated lawful demonstration	5293	0.29	0.45	0	1
Signed petition	5293	0.59	0.49	0	1
Observations	5293				

Table A3: Summary Statistics of the Additional Dependent Variables: Unconventional Political Participation

	count	mean	sd	min	max
Internal Political Efficacy Index	5214	0.54	0.25	0	1
Can assume active role in pol group	5249	0.40	0.32	0	1
Politics is too complex (higher values = disagree)	5271	0.59	0.31	0	1
Have little political knowledge (higher values = disagree)	5279	0.63	0.30	0	1
Observations	5294				

Table A4: Summary Statistics of the Additional Dependent Variables: Internal Efficacy

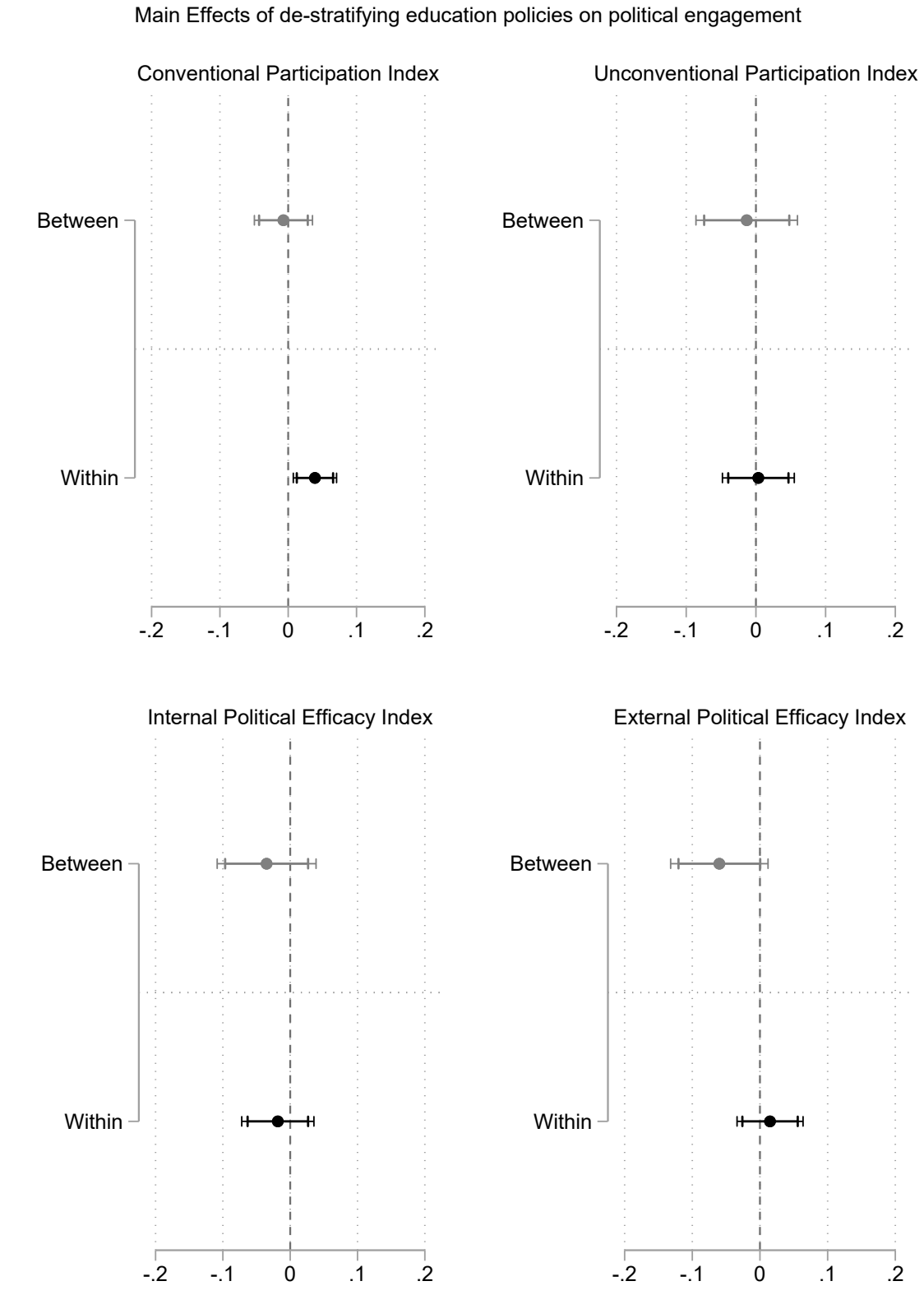
	count	mean	sd	min	max
External Political Efficacy Index	5180	0.38	0.23	0	1
Politicians don't care about people like me (higher values = disagree)	5231	0.31	0.28	0	1
Politicians try to represent interests of people	5232	0.44	0.26	0	1
Observations	5283				

Table A5: Summary Statistics of the Additional Dependent Variables: External Efficacy

3 Robutness Checks

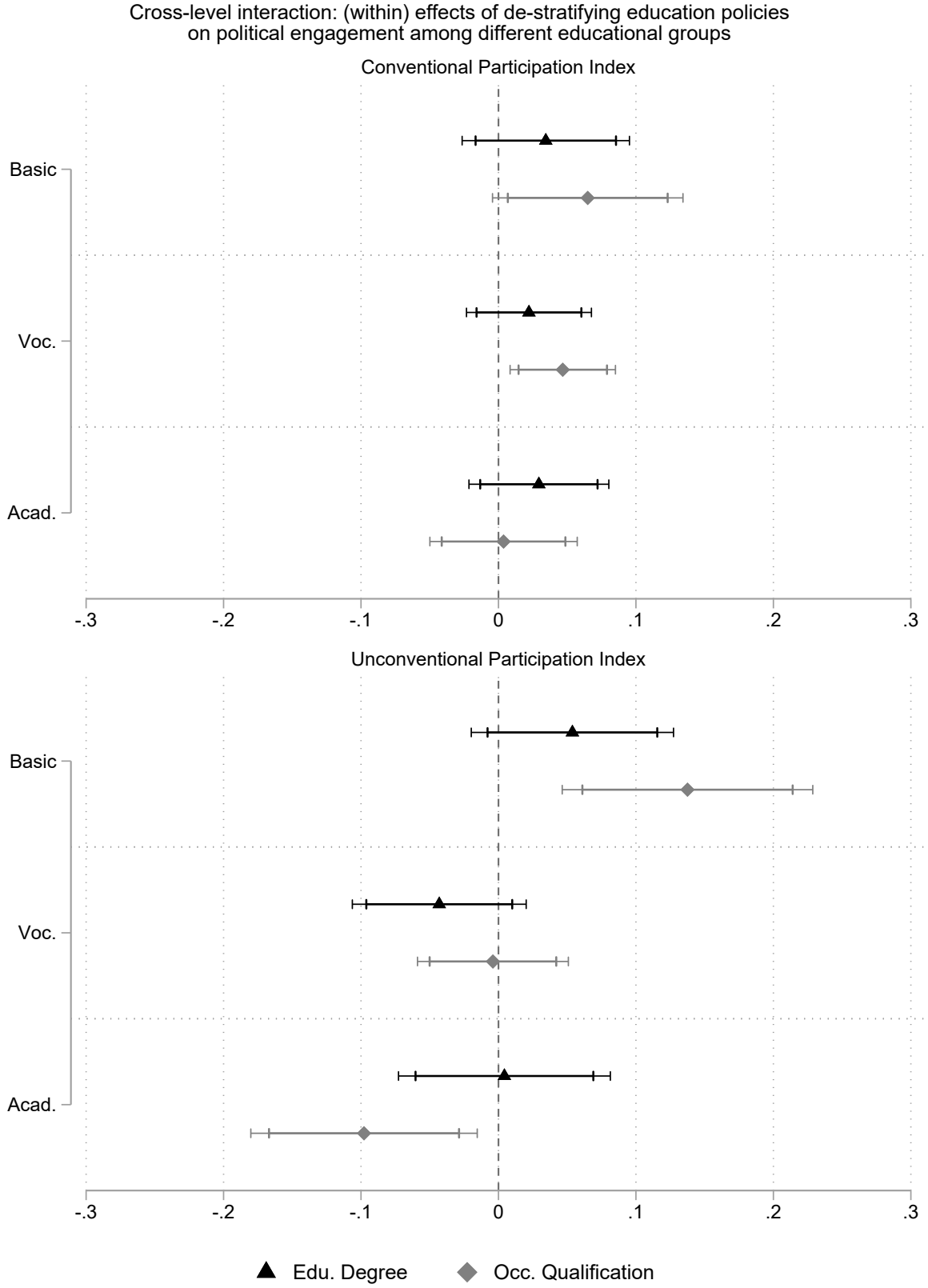
3.1 Alternative Measurement Strategies

3.1.1 Main Results with Sub-Indices



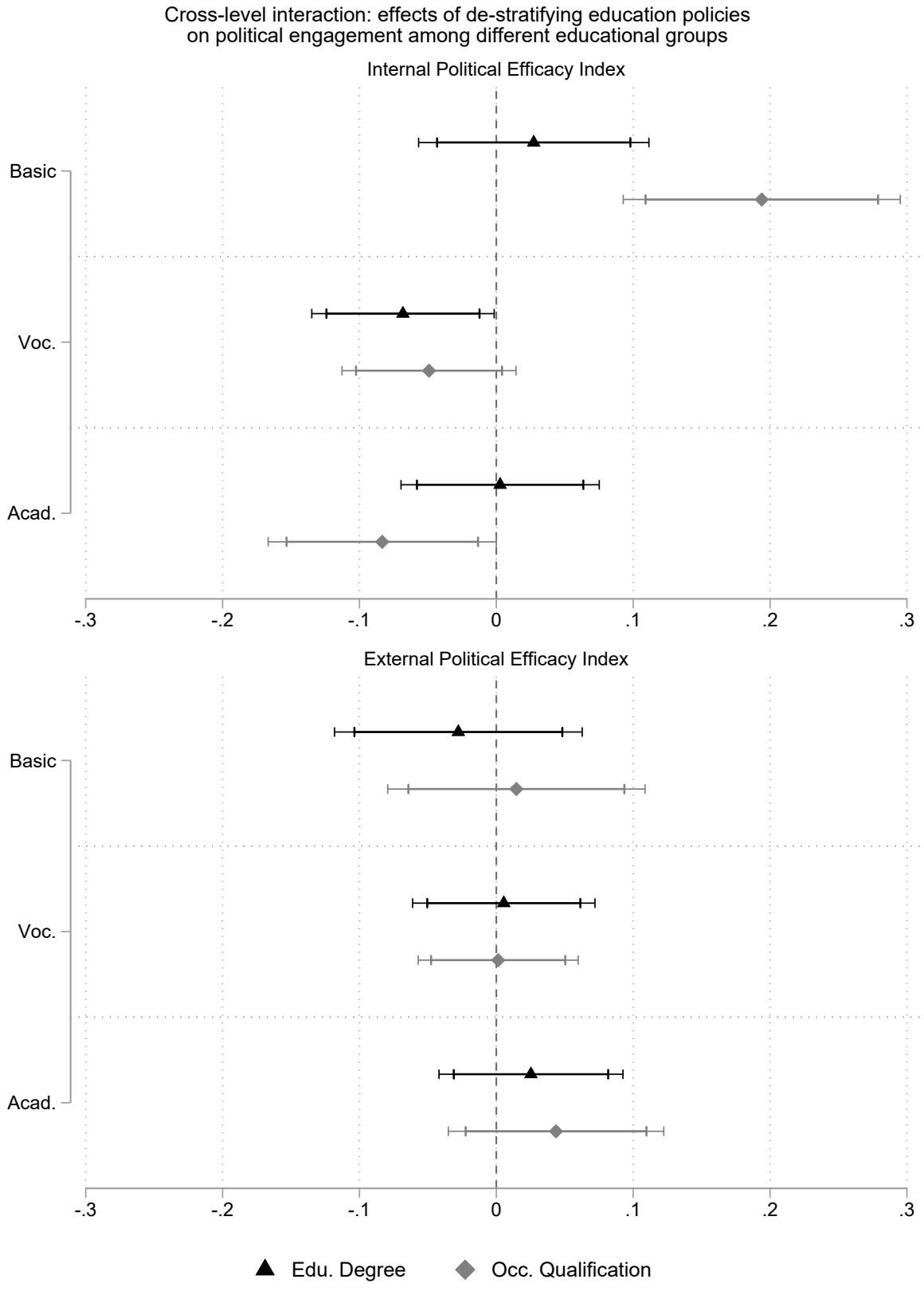
Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A8: Main Effects with Sub-Indices



Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A9: Moderation Effects with Participation Sub-Indices



Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A10: Moderation Effects with Efficacy Sub-Indices

3.1.2 Main Results with Single Variables

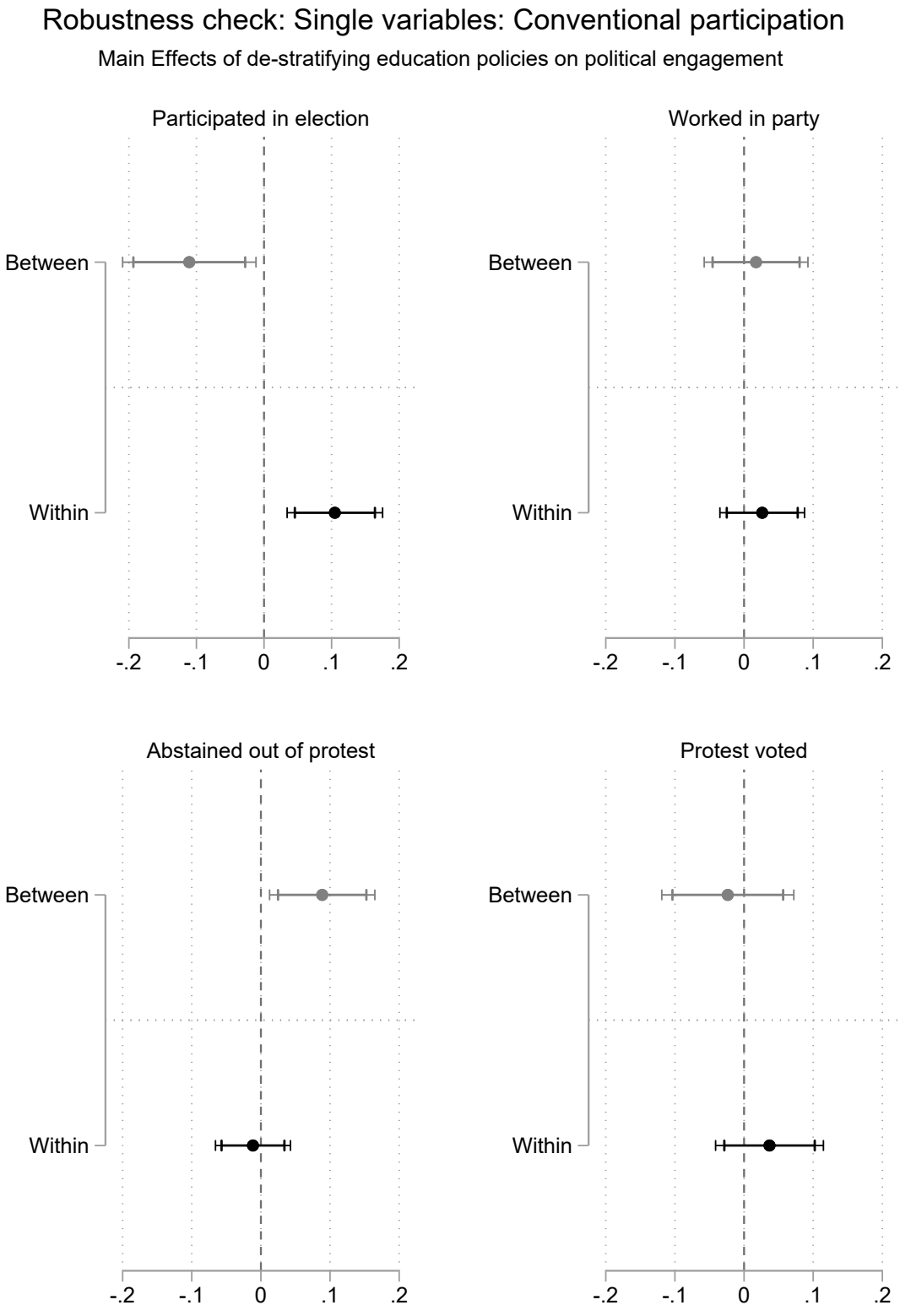


Figure A11: Main Effects of Single Variables: Conventional Participation

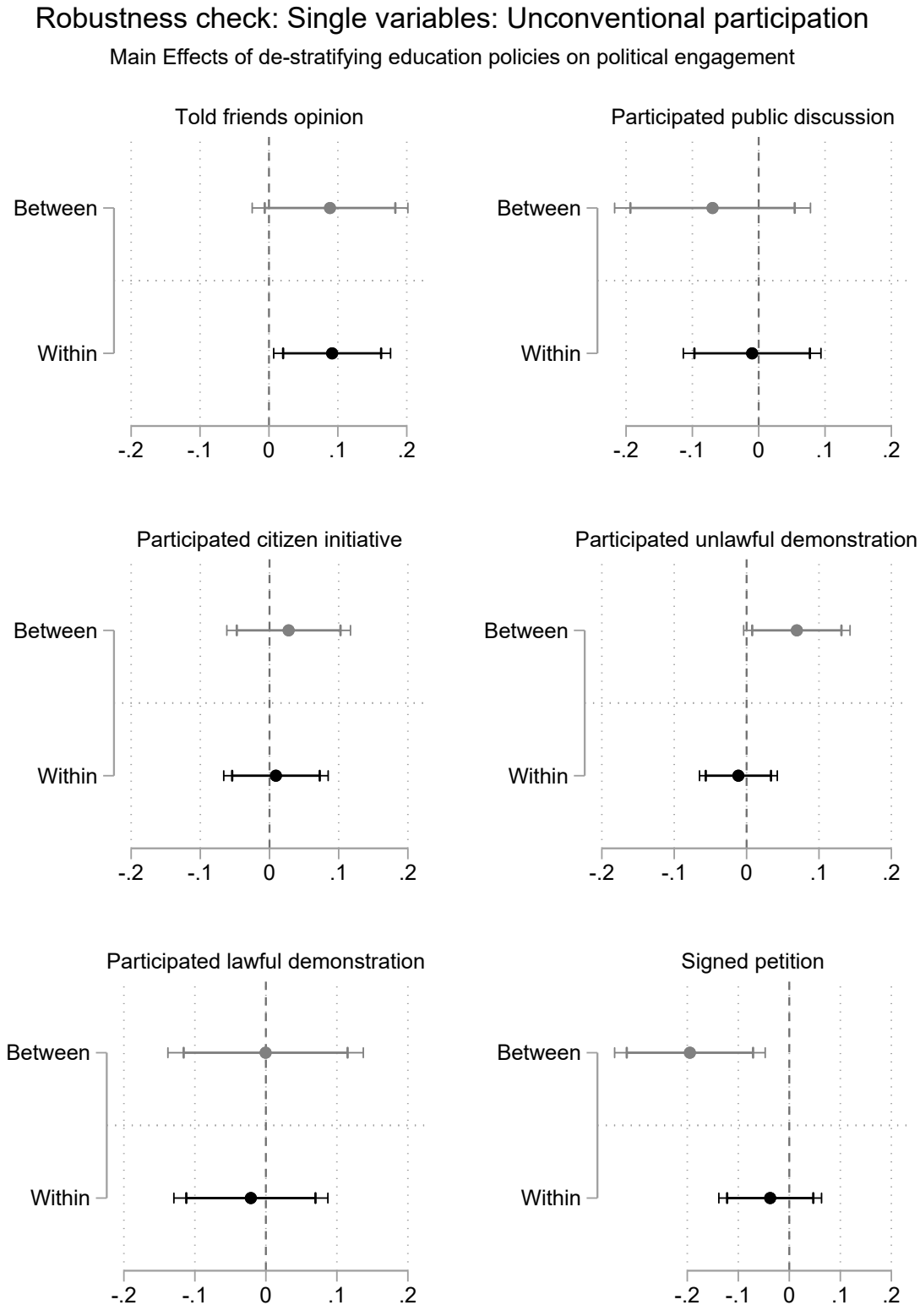


Figure A12: Main Effects of Single Variables: Unconventional Participation

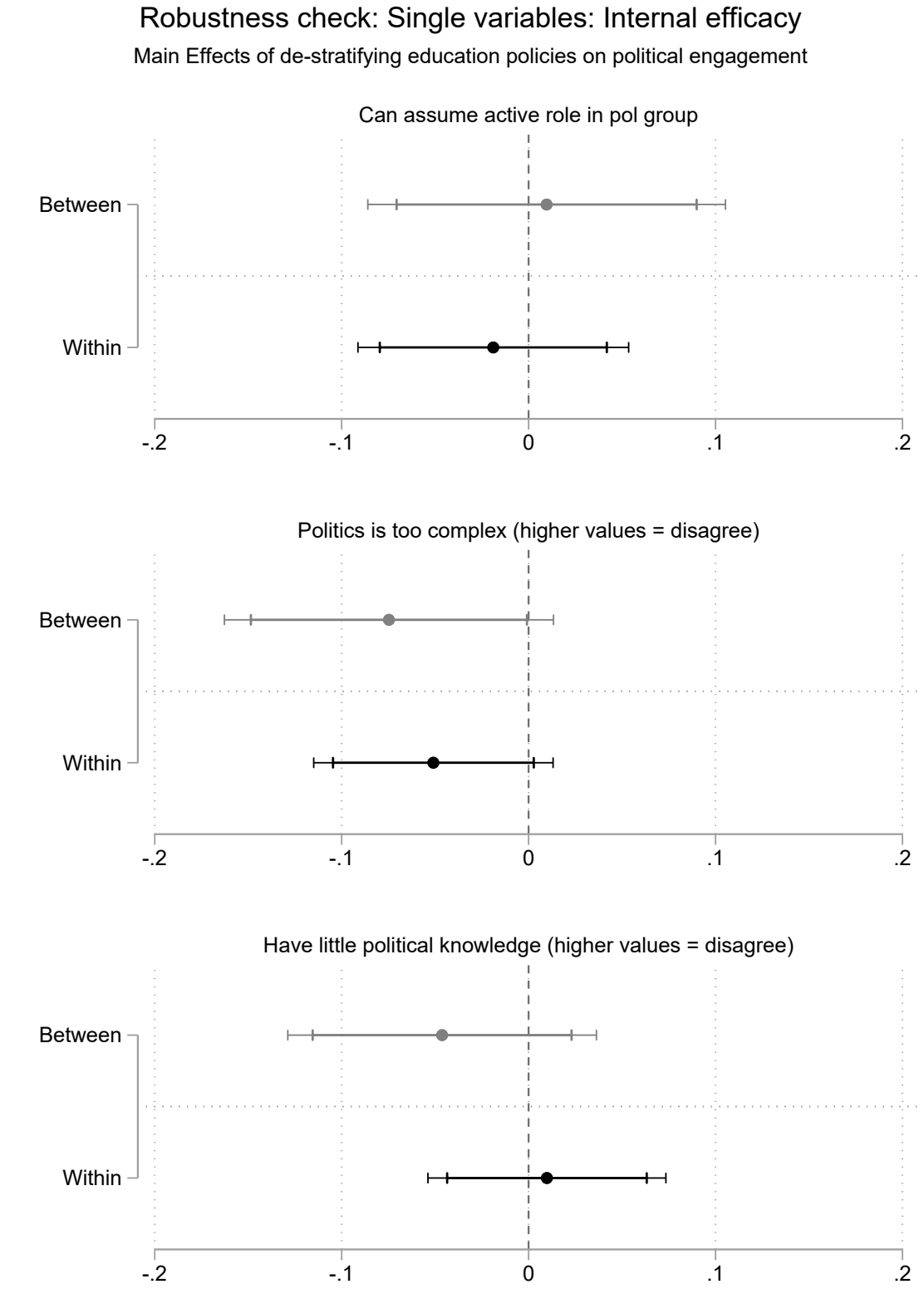
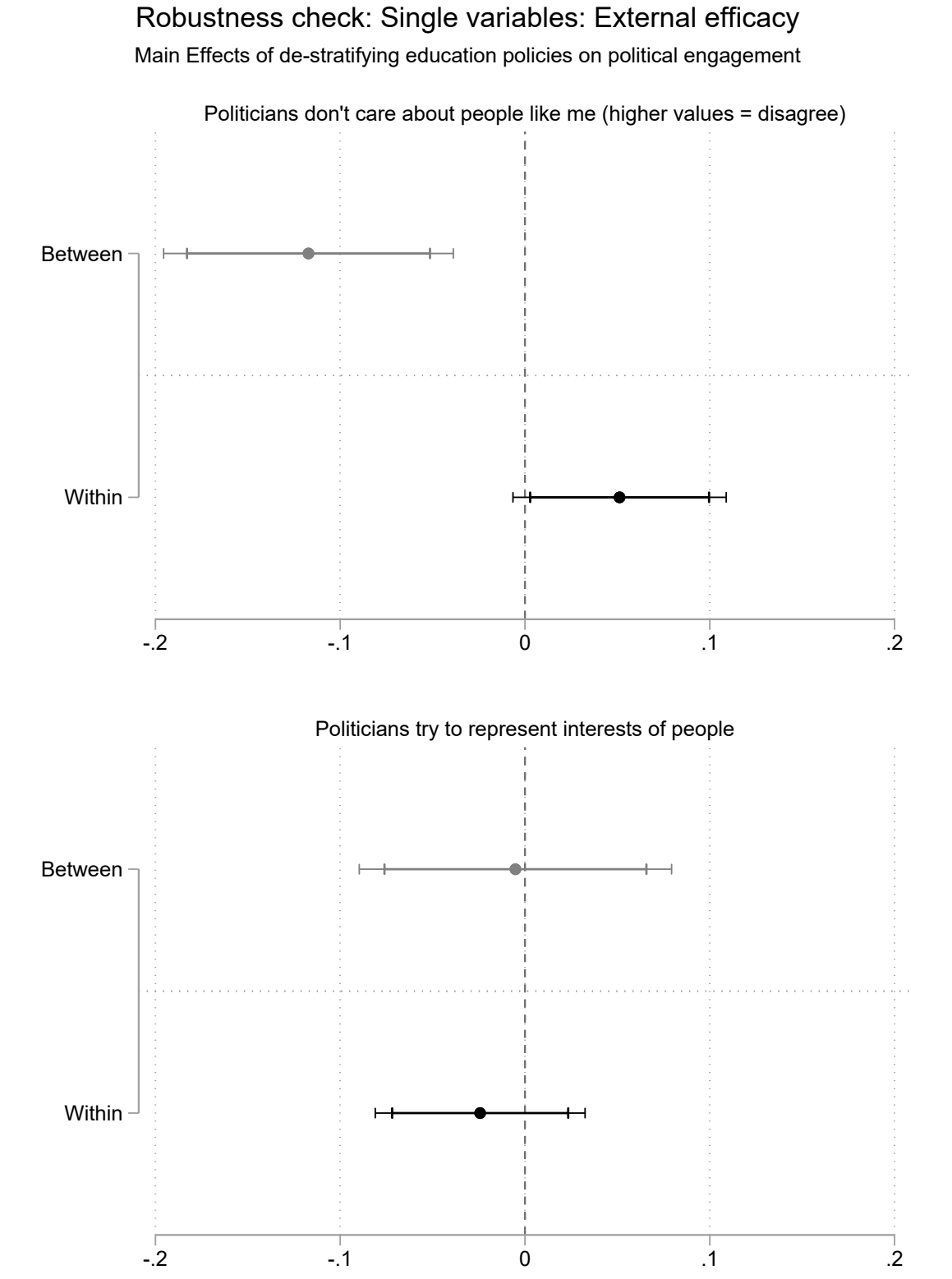
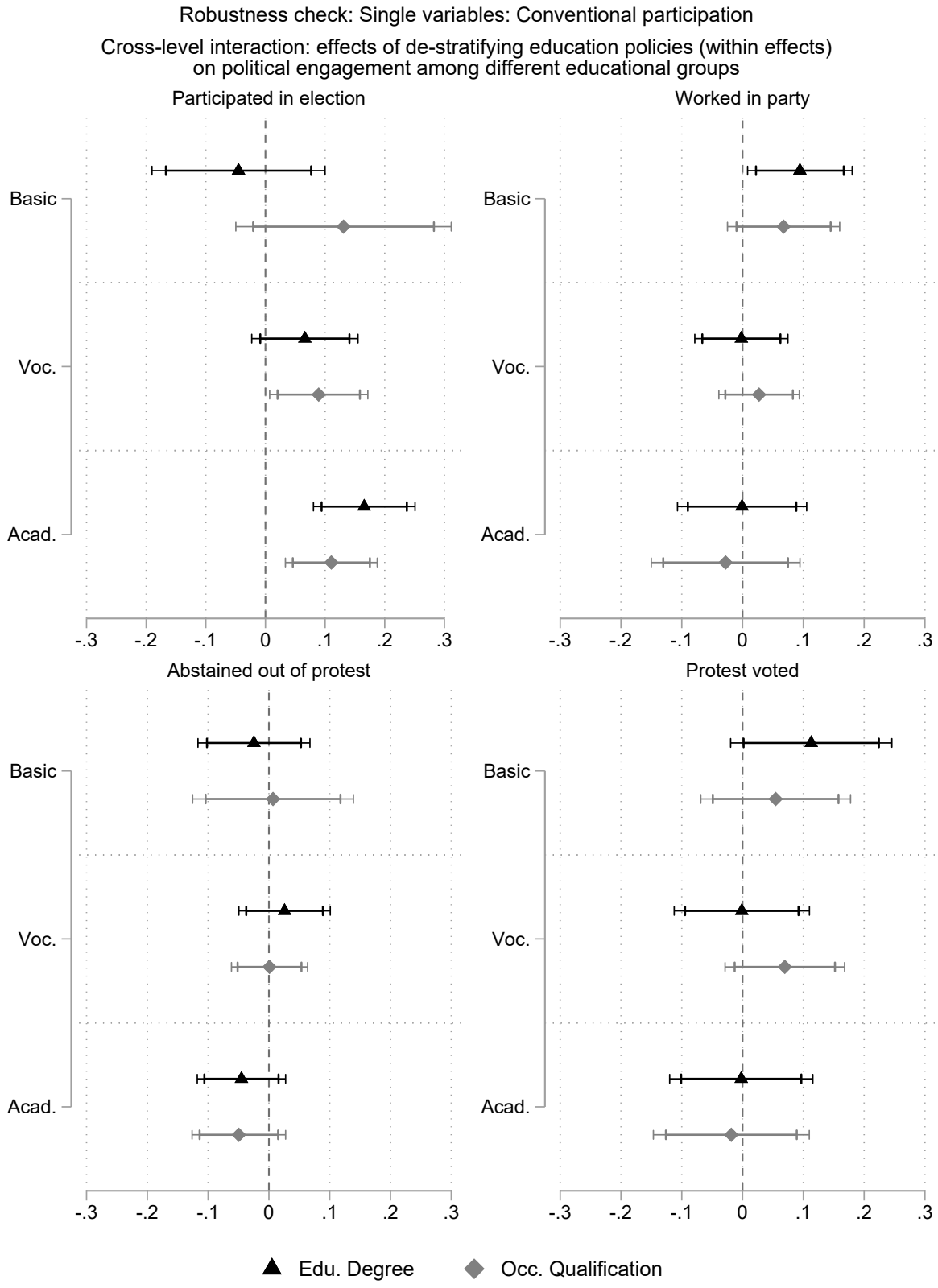


Figure A13: Main Effects of Single Variables: Internal Efficacy



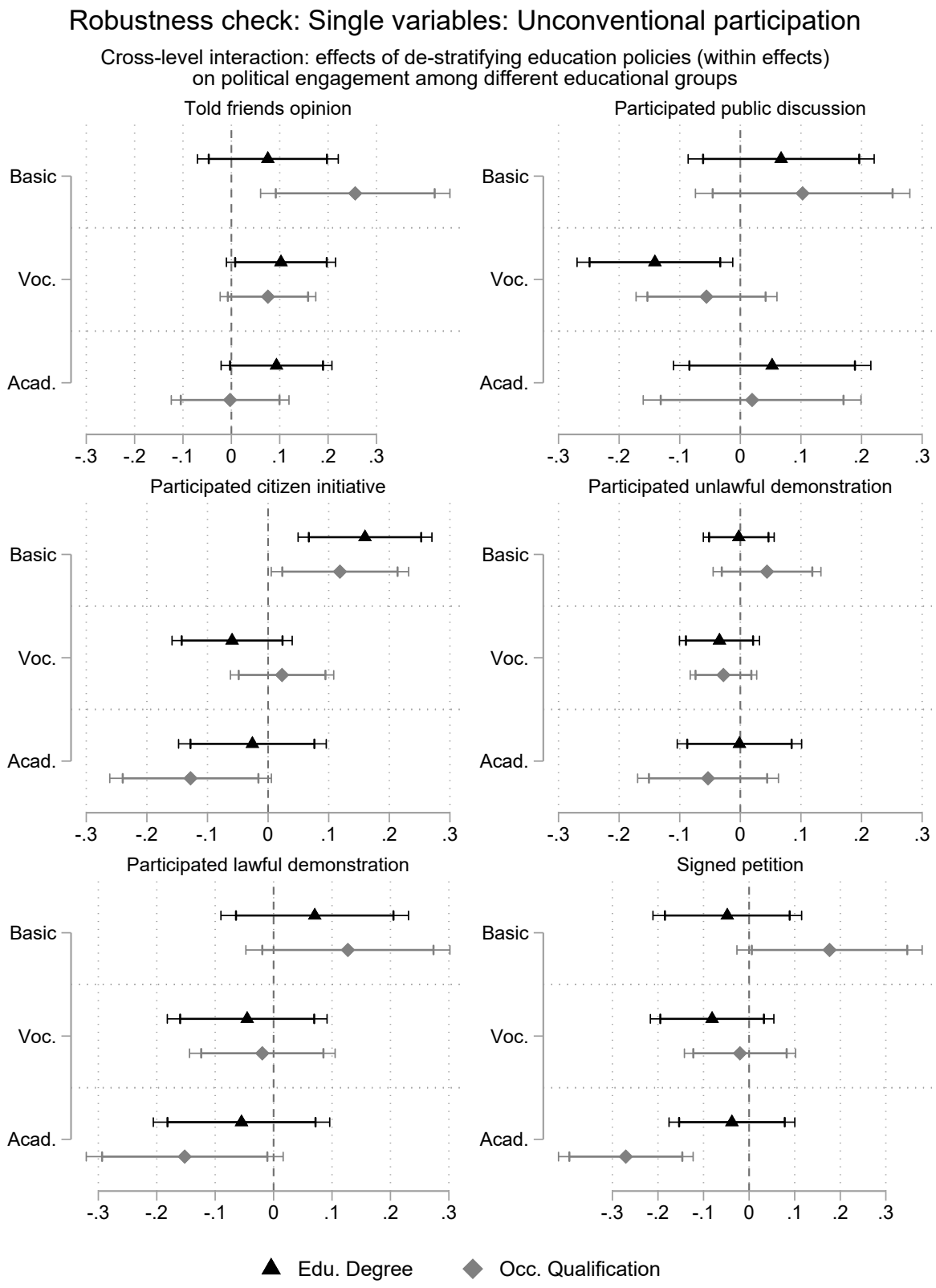
For each dependent variable positive coefficients show increased efficacy.
Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A14: Main Effects of Single Variables: External Efficacy



For each dependent variable positive coefficients show increased participation
Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A15: Moderation Effects of Single Variables: Conventional Participation



For each dependent variable positive coefficients show increased participation
Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A16: Moderation Effects of Single Variables: Unconventional Participation

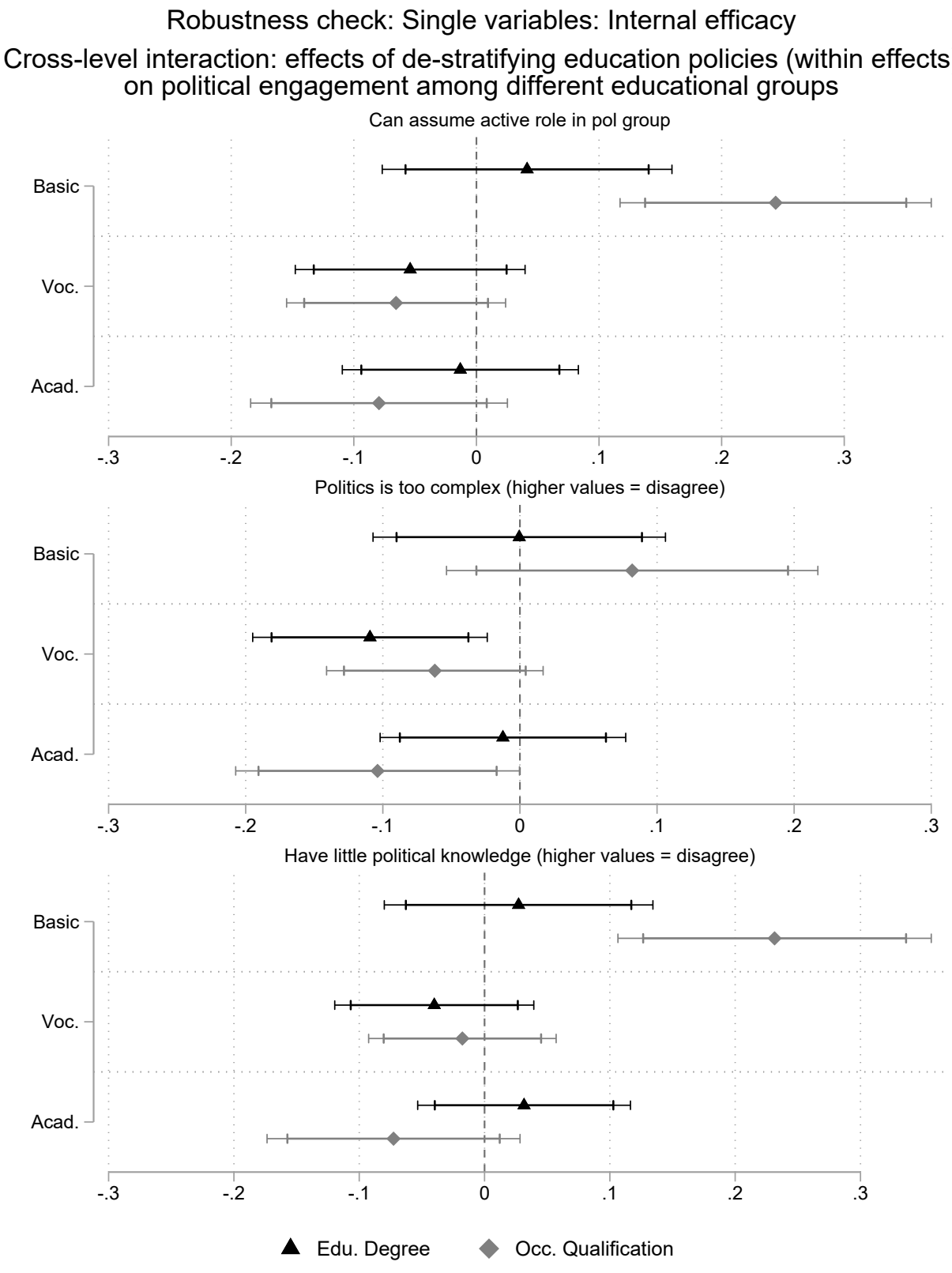


Figure A17: Moderation Effects of Single Variables: Internal Efficacy

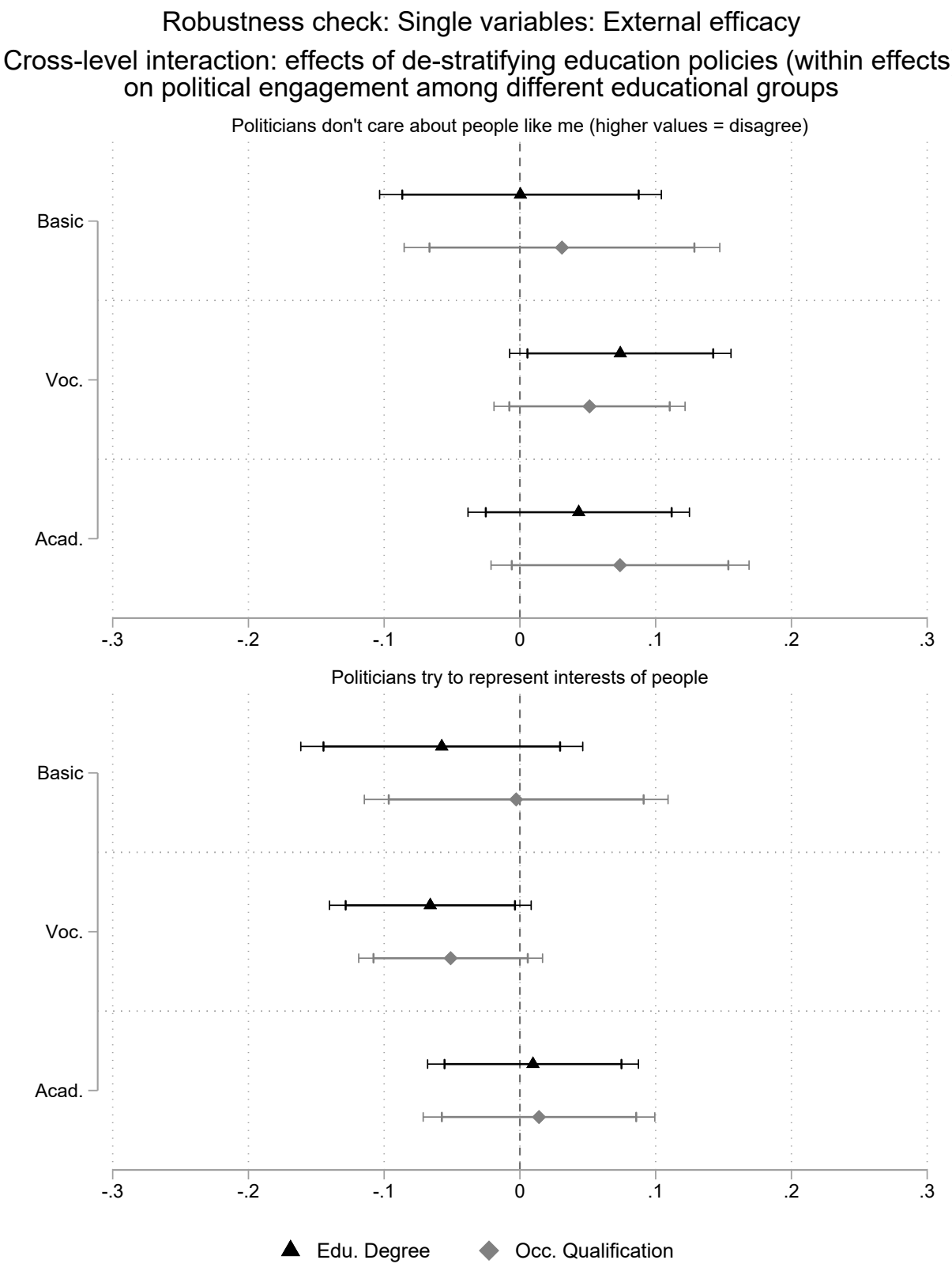
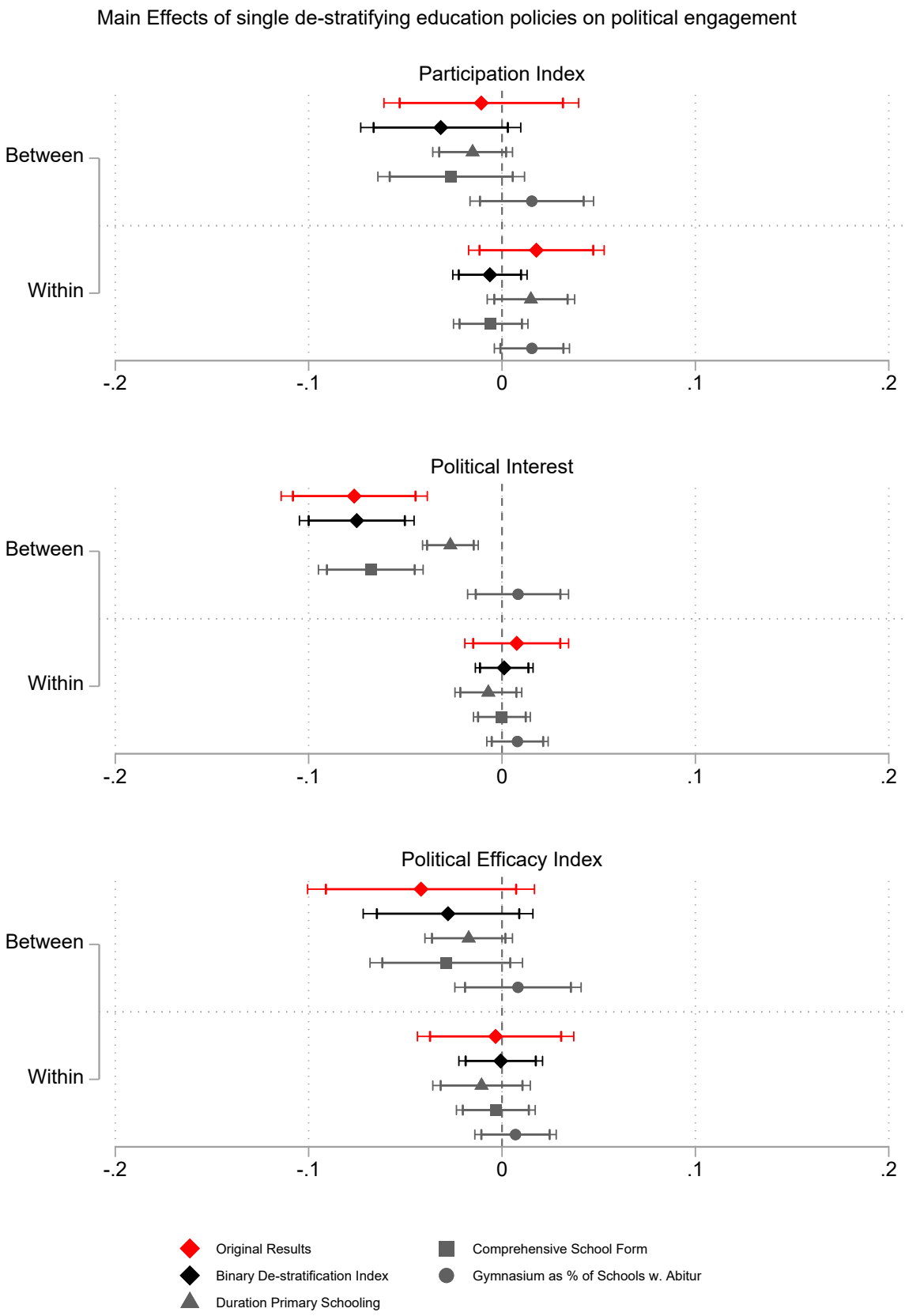


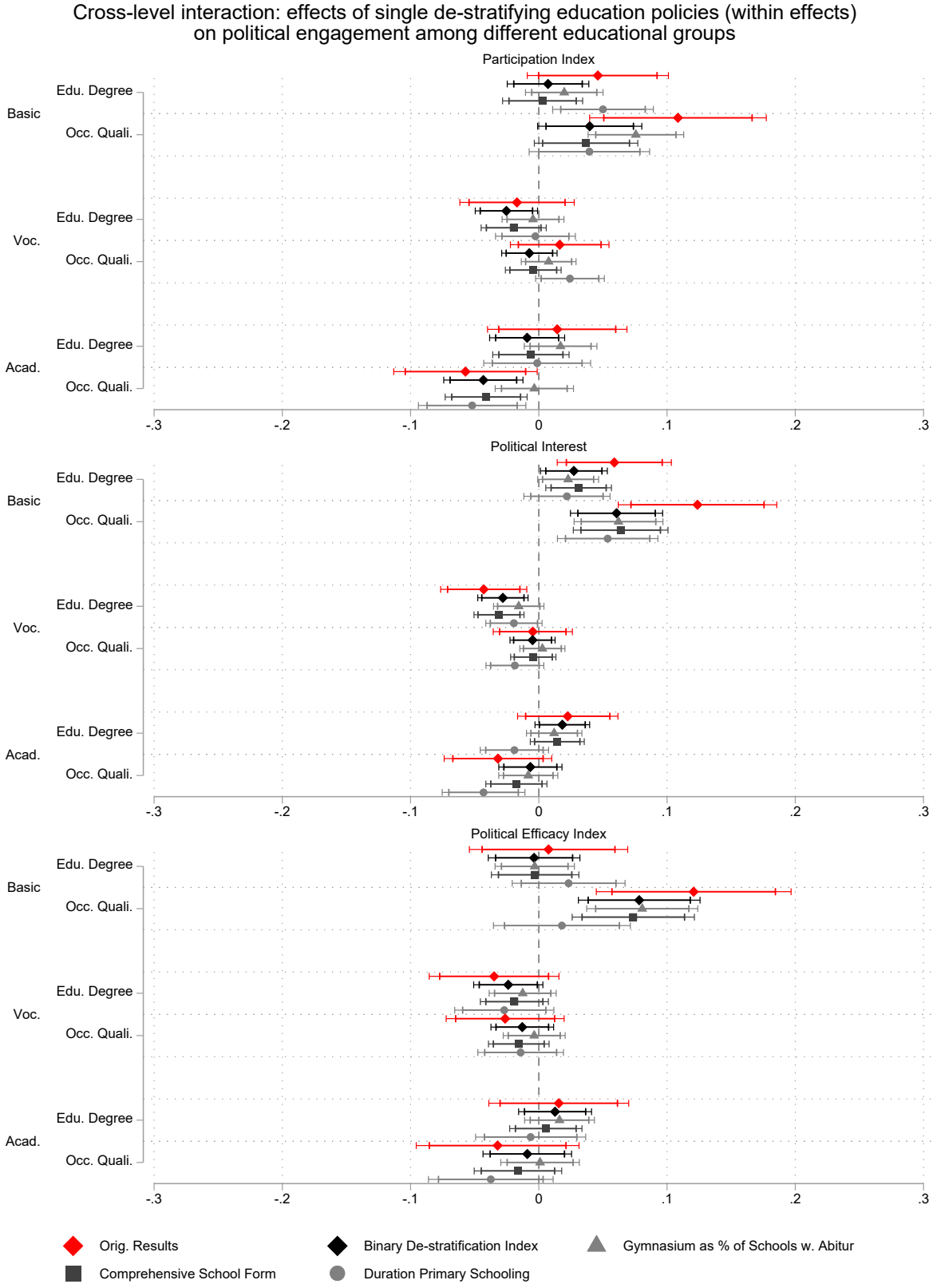
Figure A18: Moderation Effects of Single Variables: External Efficacy

3.1.3 Main Results with Single Policy Indicators and Binary Destratification Index



Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

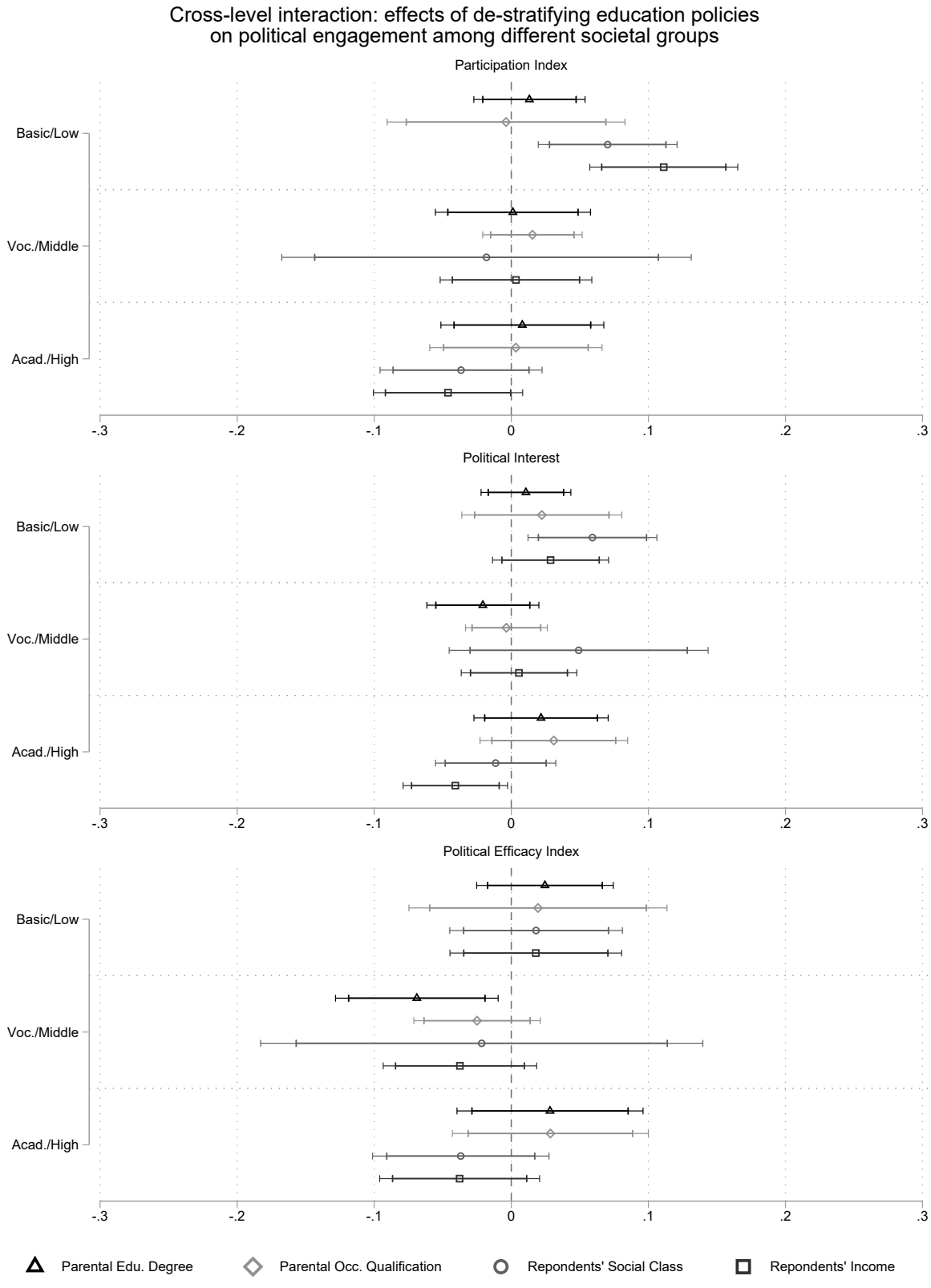
Figure A19: Main Effects of Single Policy Indicators



Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A20: Moderation Effects of Single Policy Indicators

3.1.4 Main Results (Moderation) with additional societal groups

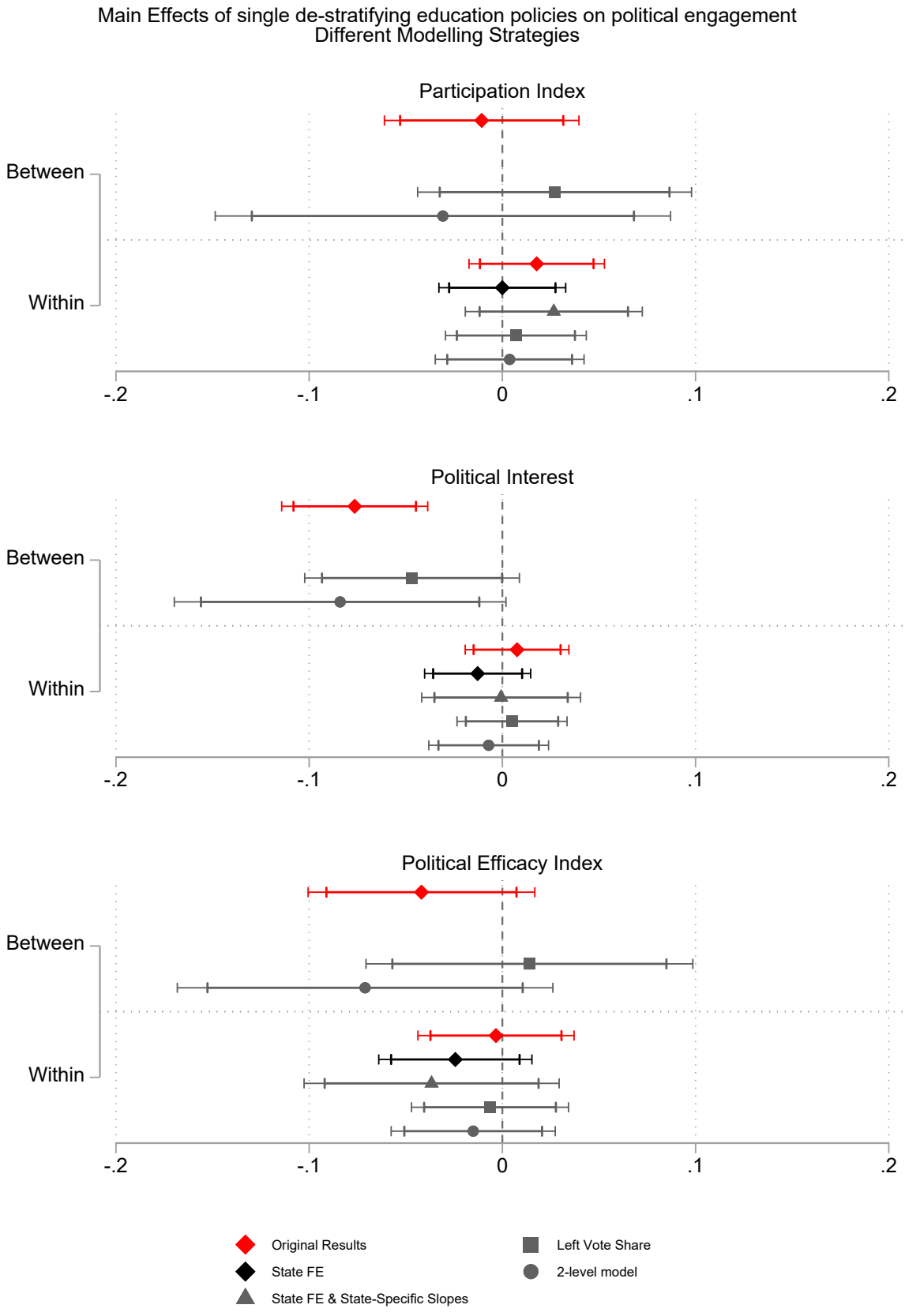


Models include age, age^2, gender and German nationalityas individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)
Models for social class also include parents' educational and occupational qualification as individual-level controls

Figure A21: Moderation Effects with additional societal groups

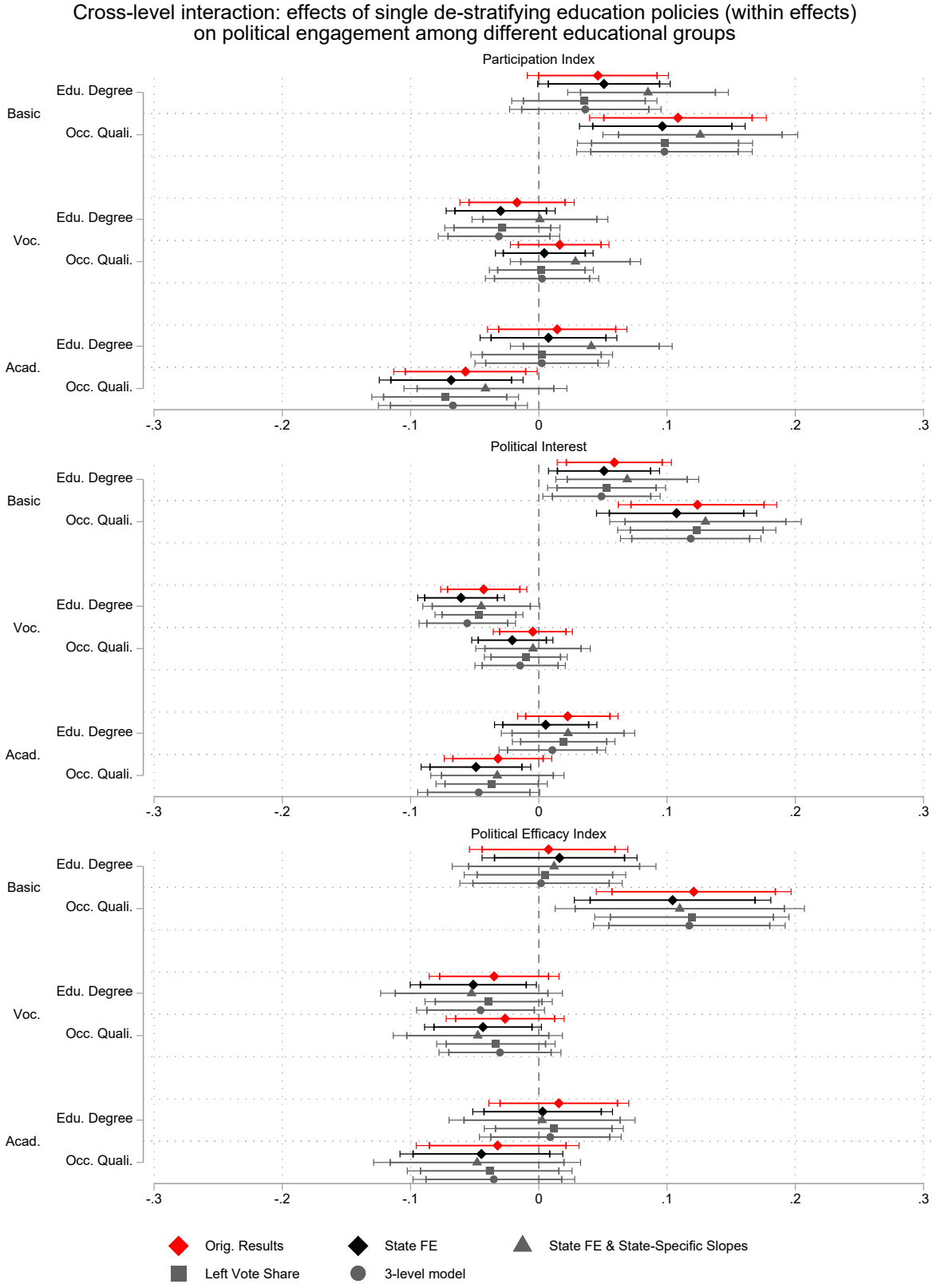
3.2 Alternative Modelling Strategies

3.2.1 Main Results with Alternative Modelling Strategies



Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A22: Main effects: alternative modelling strategies



Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A23: Cross-level interaction: alternative modelling strategies

3.2.2 Main Results for those in full-time employment

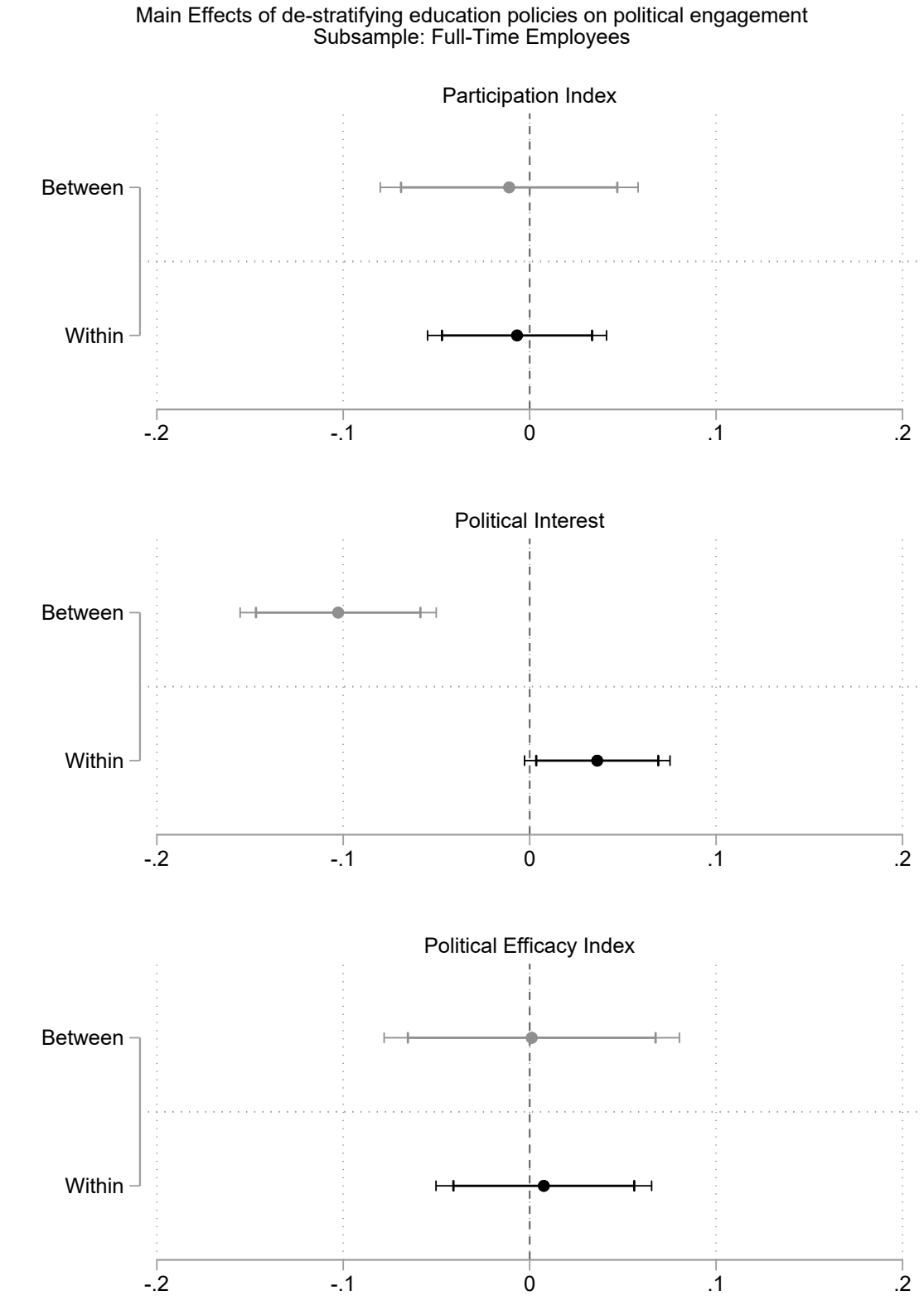
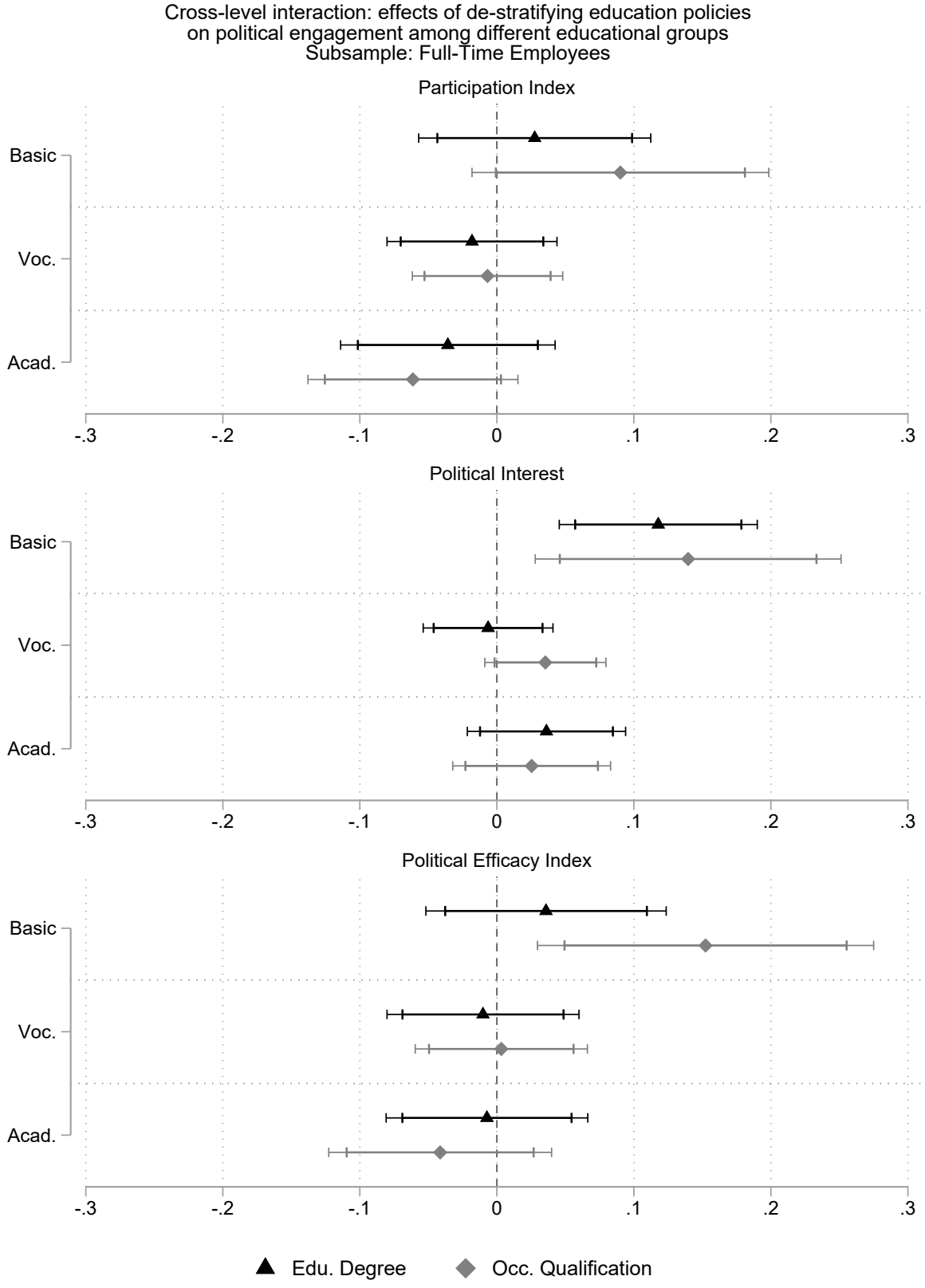


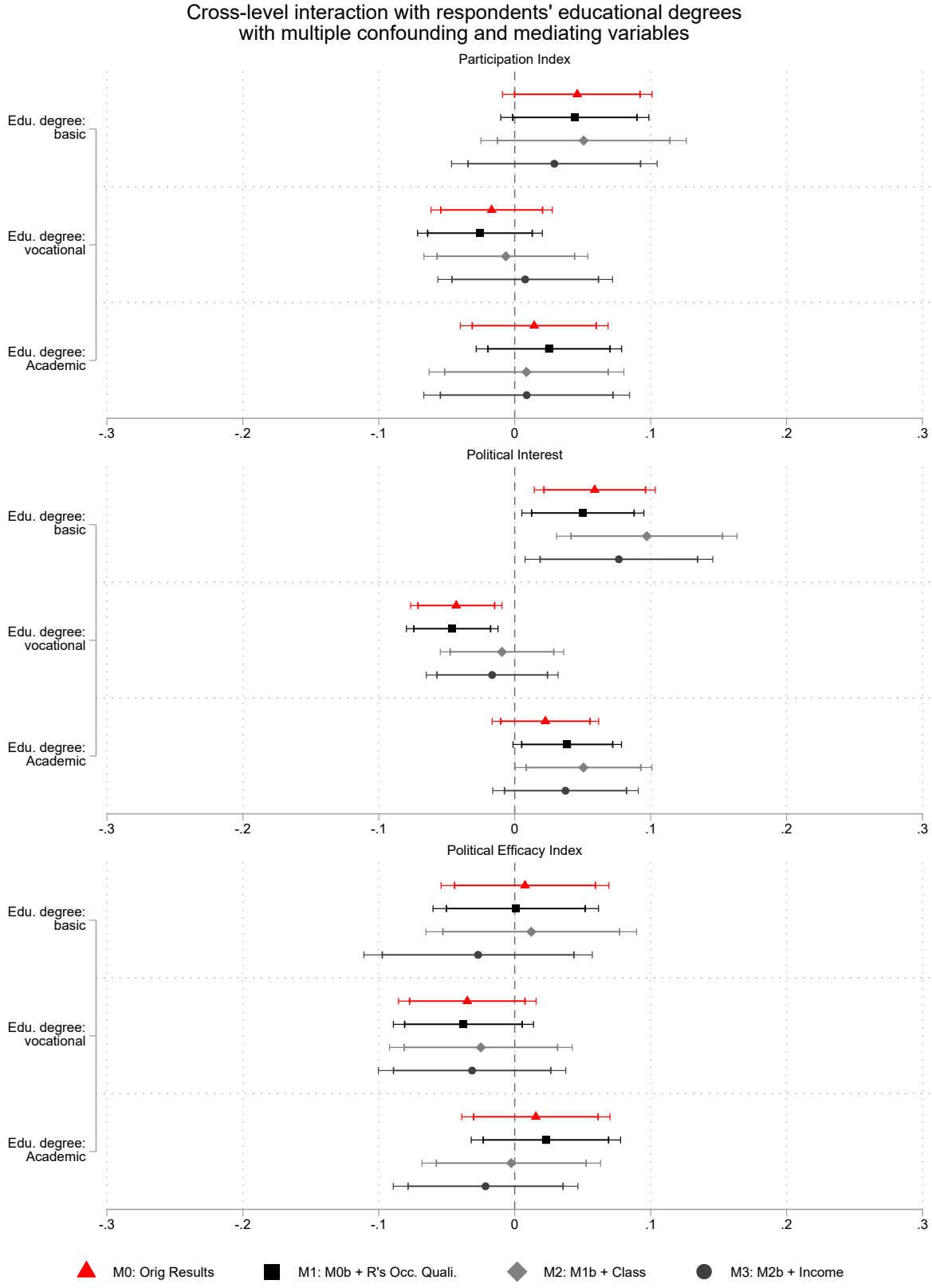
Figure A24: Main Effects in Reduced Sample (full-time employment)



Models include age, age^2, gender, German nationality, and parents' educational and occupational qualification as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

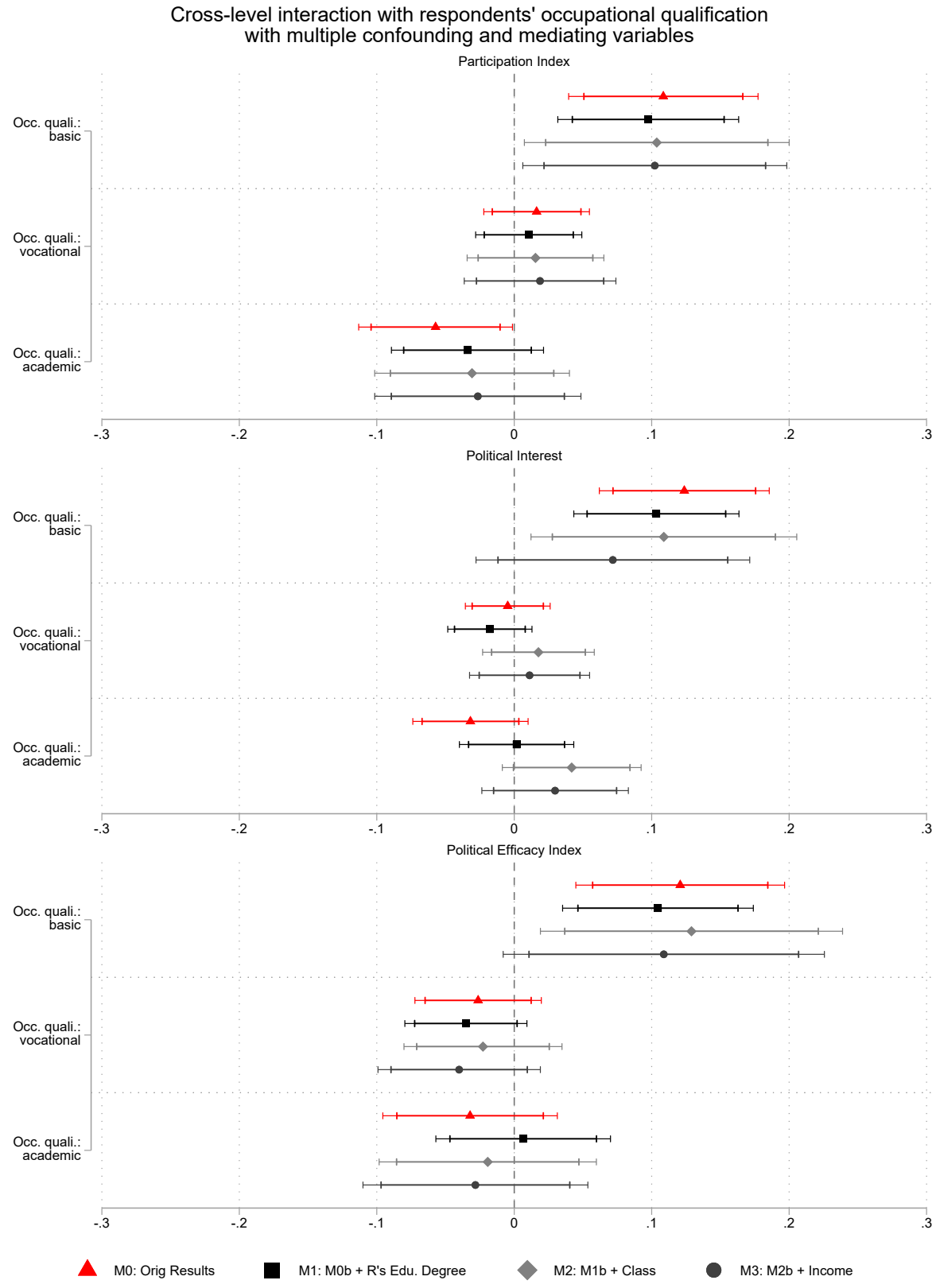
Figure A25: Cross-level interactions in reduced sample (full-time employment)

3.2.3 Cross-Level Interactions Controlling for Confounders and Mediators



Models include age, age^2, gender and German nationality as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A26: Effects of respondents' educational degrees including additional confounders and mediators



Models include age, age^2, gender and German nationality as individual-level controls
Models also control for wave and school cohort fixed effects and unemployment and left cabinet power (measured at the time of the educational policies)

Figure A27: Effects of respondents' occupational qualification including additional confounders and mediators

4 Tabular Results

	Main Effects: Political Participation
Between: De-Strat. Index	−0.011
	(0.026)
Within: De-Strat. Index	0.018
	(0.018)
Age	0.008
	(0.006)
$(Age)^2$	−0.000*
	(0.000)
female	−0.027***
	(0.005)
German Nationality	0.103***
	(0.019)
Parental edu. degree: vocational	0.045***
	(0.008)
Parental edu. degree: academic	0.082***
	(0.012)
Parental occ. quali.: vocational	0.038***
	(0.010)
Parental occ. quali.: academic	0.045**
	(0.015)
Between: Absolute Unemployed Individuals	−0.000**
	(0.000)
Within: Absolute Unemployed Individuals	0.000
	(0.000)
Between: Left parties' cabinet strength	−0.000
	(0.000)
Within: Left parties' cabinet strength	−0.000
	(0.000)
Constant	−0.015
	(0.258)
Obs.	3440
R^2	0.150

Standard errors in parentheses
School cohort and Allbus wave fixed effects included.
$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A6: Tabular Results: Political Participation Index

	Moderation Effects: Political Participation			
	Edu. Degrees		Occ. Quali.	
Between: De-Strat. Index	-0.073^{*}	(0.037)	0.038	(0.039)
Within: De-Strat. Index	0.046	(0.028)	0.108^{**}	(0.035)
Edu. degree: vocational	0.041^{***}	(0.010)		
Edu. degree: Academic	0.078^{***}	(0.013)		
Parental edu. degree: vocational	0.021^{**}	(0.008)	0.034^{***}	(0.008)
Parental edu. degree: academic	0.043^{***}	(0.012)	0.063^{***}	(0.012)
Parental occ. quali.: vocational	0.028^{**}	(0.009)	0.031^{**}	(0.010)
Parental occ. quali.: academic	0.021	(0.015)	0.023	(0.015)
Age	0.008	(0.006)	0.003	(0.006)
$(Age)^2$	-0.000^{*}	(0.000)	-0.000	(0.000)
female	-0.027^{***}	(0.005)	-0.021^{***}	(0.005)
German Nationality	0.096^{***}	(0.020)	0.099^{***}	(0.020)
Between: Absolute Unemployed Individuals	-0.000^{*}	(0.000)	-0.000^{*}	(0.000)
Within: Absolute Unemployed Individuals	0.000	(0.000)	0.000	(0.000)
Between: Left parties' cabinet strength	-0.000	(0.000)	-0.000^{+}	(0.000)
Within: Left parties' cabinet strength	-0.000	(0.000)	-0.000	(0.000)
Edu. degree: vocational × Between: De-Strat. Index	0.052	(0.034)		
Edu. degree: Academic × Between: De-Strat. Index	0.127^{**}	(0.038)		
Edu. degree: vocational × Within: De-Strat. Index	-0.063^{*}	(0.031)		
Edu. degree: Academic × Within: De-Strat. Index	-0.032	(0.034)		
Occ. quali.: vocational			0.037^{**}	(0.013)
Occ. quali.: academic			0.085^{***}	(0.015)
Occ. quali.: vocational × Between: De-Strat. Index			-0.059^{+}	(0.034)
Occ. quali.: academic × Between: De-Strat. Index			0.046	(0.045)
Occ. quali.: vocational × Within: De-Strat. Index			-0.092^{*}	(0.038)
Occ. quali.: academic × Within: De-Strat. Index			-0.166^{***}	(0.041)
Constant	-0.030	(0.257)	0.087	(0.267)
Obs.	3376		3264	
R^2	0.192		0.186	

Standard errors cluster by federal state-specific school cohorts in parentheses. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
School cohort and Allbus wave fixed effects included. Occ. Quali = Occupational Qualification

Table A7: Tabular Results: Political Participation Index: Cross-level interaction: effects of de-stratifying education policies (within effects) on political engagement among different societal groups

	Main Effects: Political Interest
Between: De-Strat. Index	−0.076***
	(0.019)
Within: De-Strat. Index	0.008
	(0.014)
Age	−0.003
	(0.004)
$(Age)^2$	−0.000*
	(0.000)
female	−0.105***
	(0.004)
German Nationality	0.054***
	(0.016)
Parental edu. degree: vocational	0.051***
	(0.005)
Parental edu. degree: academic	0.094***
	(0.008)
Parental occ. quali.: vocational	0.043***
	(0.007)
Parental occ. quali.: academic	0.080***
	(0.010)
Between: Absolute Unemployed Individuals	−0.000
	(0.000)
Within: Absolute Unemployed Individuals	0.000**
	(0.000)
Between: Left parties' cabinet strength	0.000**
	(0.000)
Within: Left parties' cabinet strength	−0.000*
	(0.000)
Constant	0.693***
	(0.176)
Obs.	11720
R^2	0.144

Standard errors in parentheses

School cohort and Allbus wave fixed effects included.

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A8: Tabular Results: Political Interest

	Moderation Effects: Political Interest			
	Edu. Degrees		Occ. Quali	
Between: De-Strat. Index	-0.092^{**}	(0.029)	-0.057^{+}	(0.031)
Within: De-Strat. Index	0.059^{**}	(0.023)	0.124^{***}	(0.032)
Edu. degree: vocational	0.089^{***}	(0.009)		
Edu. degree: Academic	0.169^{***}	(0.009)		
Parental edu. degree: vocational	0.011^{+}	(0.006)	0.031^{***}	(0.005)
Parental edu. degree: academic	0.033^{***}	(0.008)	0.068^{***}	(0.008)
Parental occ. quali.: vocational	0.022^{**}	(0.007)	0.030^{***}	(0.007)
Parental occ. quali.: academic	0.039^{***}	(0.010)	0.047^{***}	(0.010)
Age	-0.000	(0.004)	-0.005	(0.004)
$(Age)^2$	-0.000^{*}	(0.000)	-0.000	(0.000)
female	-0.110^{***}	(0.004)	-0.096^{***}	(0.004)
German Nationality	0.045^{**}	(0.015)	0.056^{***}	(0.016)
Between: Absolute Unemployed Individuals	-0.000	(0.000)	-0.000	(0.000)
Within: Absolute Unemployed Individuals	0.000^{*}	(0.000)	0.000^{*}	(0.000)
Between: Left parties' cabinet strength	0.000	(0.000)	0.000^{+}	(0.000)
Within: Left parties' cabinet strength	-0.000^{**}	(0.000)	-0.000^{*}	(0.000)
Edu. degree: vocational × Between: De-Strat. Index	0.039	(0.029)		
Edu. degree: Academic × Between: De-Strat. Index	0.029	(0.029)		
Edu. degree: vocational × Within: De-Strat. Index	-0.102^{***}	(0.025)		
Edu. degree: Academic × Within: De-Strat. Index	-0.036	(0.028)		
Occ. quali.: vocational			0.035^{**}	(0.012)
Occ. quali.: academic			0.138^{***}	(0.013)
Occ. quali.: vocational × Between: De-Strat. Index			-0.004	(0.030)
Occ. quali.: academic × Between: De-Strat. Index			0.019	(0.036)
Occ. quali.: vocational × Within: De-Strat. Index			-0.128^{***}	(0.033)
Occ. quali.: academic × Within: De-Strat. Index			-0.156^{***}	(0.038)
Constant	0.536^{**}	(0.171)	0.669^{***}	(0.175)
Obs.	11521		11225	
R^2	0.203		0.177	

Standard errors cluster by federal state-specific school cohorts in parentheses. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
School cohort and Allbus wave fixed effects included. Occ. Quali = Occupational Qualification

Table A9: Tabular Results: Political Interest: Cross-level interaction: effects of de-stratifying education policies (within effects) on political engagement among different societal groups

	Main Effects: Political Efficacy
Between: De-Strat. Index	−0.042
	(0.030)
Within: De-Strat. Index	−0.003
	(0.021)
Age	−0.005
	(0.006)
$(Age)^2$	−0.000
	(0.000)
female	−0.079***
	(0.006)
German Nationality	0.078***
	(0.023)
Parental edu. degree: vocational	0.053***
	(0.007)
Parental edu. degree: academic	0.093***
	(0.012)
Parental occ. quali.: vocational	0.059***
	(0.011)
Parental occ. quali.: academic	0.092***
	(0.016)
Between: Absolute Unemployed Individuals	0.000
	(0.000)
Within: Absolute Unemployed Individuals	0.000**
	(0.000)
Between: Left parties' cabinet strength	0.000
	(0.000)
Within: Left parties' cabinet strength	−0.000
	(0.000)
Constant	0.625*
	(0.258)
Obs.	3336
R^2	0.155

Standard errors in parentheses

School cohort and Allbus wave fixed effects included.

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A10: Tabular Results: Political Efficacy Index

	Moderation Effects: Political Efficacy			
	Edu. Degrees		Occ. Quali	
Between: De-Strat. Index	-0.081^{*}	(0.040)	-0.025	(0.050)
Within: De-Strat. Index	0.008	(0.031)	0.121^{**}	(0.039)
Edu. degree: vocational	0.065^{***}	(0.011)		
Edu. degree: Academic	0.164^{***}	(0.012)		
Parental edu. degree: vocational	0.013^{+}	(0.008)	0.031^{***}	(0.008)
Parental edu. degree: academic	0.028^{*}	(0.012)	0.060^{***}	(0.012)
Parental occ. quali.: vocational	0.042^{***}	(0.010)	0.051^{***}	(0.011)
Parental occ. quali.: academic	0.055^{***}	(0.015)	0.065^{***}	(0.015)
Age	-0.002	(0.006)	-0.004	(0.006)
$(Age)^2$	-0.000	(0.000)	0.000	(0.000)
female	-0.077^{***}	(0.006)	-0.068^{***}	(0.006)
German Nationality	0.066^{**}	(0.024)	0.073^{**}	(0.024)
Between: Absolute Unemployed Individuals	0.000^{+}	(0.000)	0.000	(0.000)
Within: Absolute Unemployed Individuals	0.000^{*}	(0.000)	0.000^{*}	(0.000)
Between: Left parties' cabinet strength	-0.000	(0.000)	-0.000	(0.000)
Within: Left parties' cabinet strength	-0.000	(0.000)	-0.000	(0.000)
Edu. degree: vocational × Between: De-Strat. Index	0.084^{*}	(0.039)		
Edu. degree: Academic × Between: De-Strat. Index	0.066^{+}	(0.040)		
Edu. degree: vocational × Within: De-Strat. Index	-0.042	(0.038)		
Edu. degree: Academic × Within: De-Strat. Index	0.008	(0.040)		
Occ. quali.: vocational			0.016	(0.017)
Occ. quali.: academic			0.136^{***}	(0.018)
Occ. quali.: vocational × Between: De-Strat. Index			0.021	(0.050)
Occ. quali.: academic × Between: De-Strat. Index			0.009	(0.054)
Occ. quali.: vocational × Within: De-Strat. Index			-0.147^{***}	(0.042)
Occ. quali.: academic × Within: De-Strat. Index			-0.153^{**}	(0.046)
Constant	0.479^{+}	(0.249)	0.487^{+}	(0.260)
Obs.	3278		3171	
R^2	0.258		0.226	

Standard errors cluster by federal state-specific school cohorts in parentheses. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
School cohort and Allbus wave fixed effects included. Occ. Quali = Occupational Qualification

Table A11: Tabular Results: Political Efficacy Index: Cross-level interaction: effects of de-stratifying education policies (within effects) on political engagement among different societal groups