

Appendix A: Additional information on measures

TABLE A1 *Course objectives for Social Studies A*

The students should:

1. Have knowledge about the evolution and function of democracy and be able to apply democratic working
2. Be able to understand how political, economic, geographical and social conditions have formed and continue to form our own society as well as the international community
3. Have knowledge about the function of the political system on the local, regional and national level as well as in the EU
4. Be able to understand how one can influence political decisions on the local, regional and national level as well as in the EU and internationally
5. Be able to formulate, understand and reflect upon social issues using historical as well as future perspectives
6. Be able to apply ethical and environmental perspectives on different social issues
7. Be able to use different sources of knowledge and methods when working with social issues
8. Understand how opinions and attitudes come about and be aware of how values and stances are formed

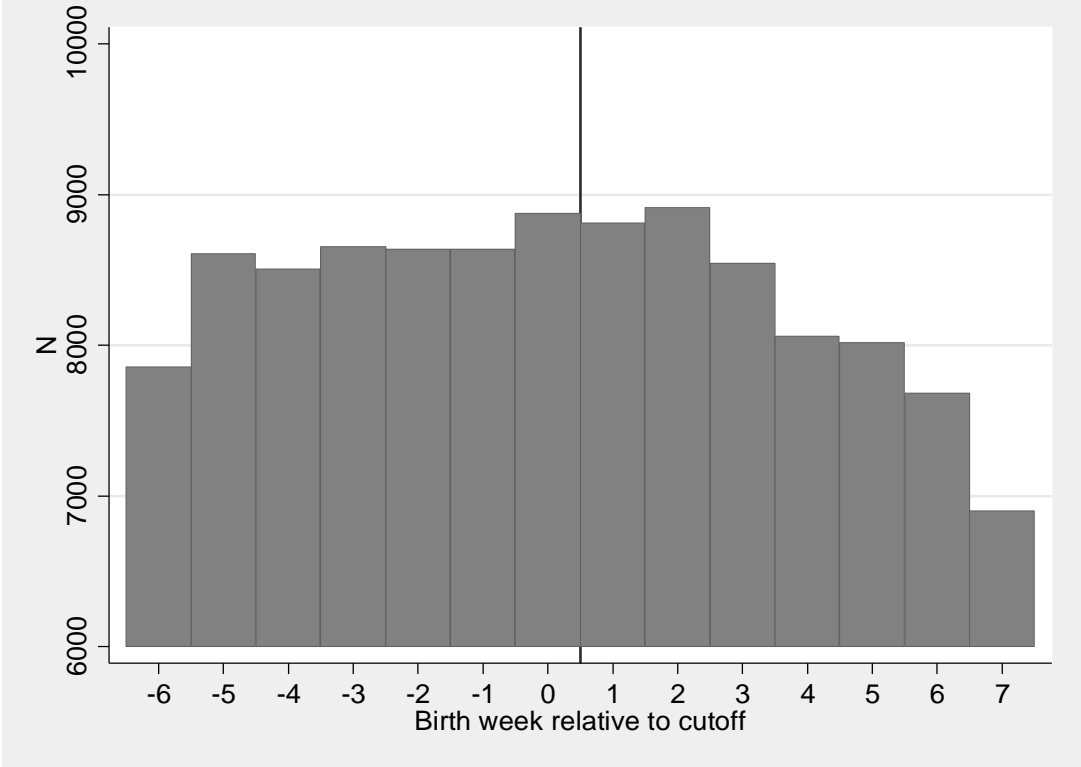
Notes: This information comes from The Swedish National Agency for Education (2015).

Points 1, 3 and 4 in Table A1 are most closely connected to common measures of political knowledge. Point 1 is relevant since it is concerned with a general

understanding of what a democracy is and what it is supposed to accomplish (i.e. letting the will of the people come through in concrete policies). Delli Carpini and Keeter (1993) argue that a politically knowledgeable person should know facts about the exact nature and function of government which corresponds well to point 1. Point 3 is also related to this definition of political knowledge since it requires that the students know about the structure of different political bodies and what they can decide upon. Points 3 and 4 also require that the students understand what political parties that are active on the different levels and what they stand for. This kind of knowledge is important for the ability of voting competently. Boudreau and Lupia (2013) discuss the relationship between being able to answer fact-based survey question and being able to vote competently and suggest that even though competent voting is what ultimately is important we know little about if survey results can predict this ability. In that sense the students' performance in relation to points 3 and 4 might come closer to the core of political knowledge, i.e. the ability of voting competently, than the performance on fact-based survey questions. The other points in Table A1 are more loosely connected to the concept of political knowledge. Points 2 and 5, however, can to some extent be said to be concerned with the history and ideological roots of different movements in society. This can be important in order to understand the ideological positions of current parties, which is a measure of political knowledge that Wagner, Johann and Kritzingler (2012) employ.

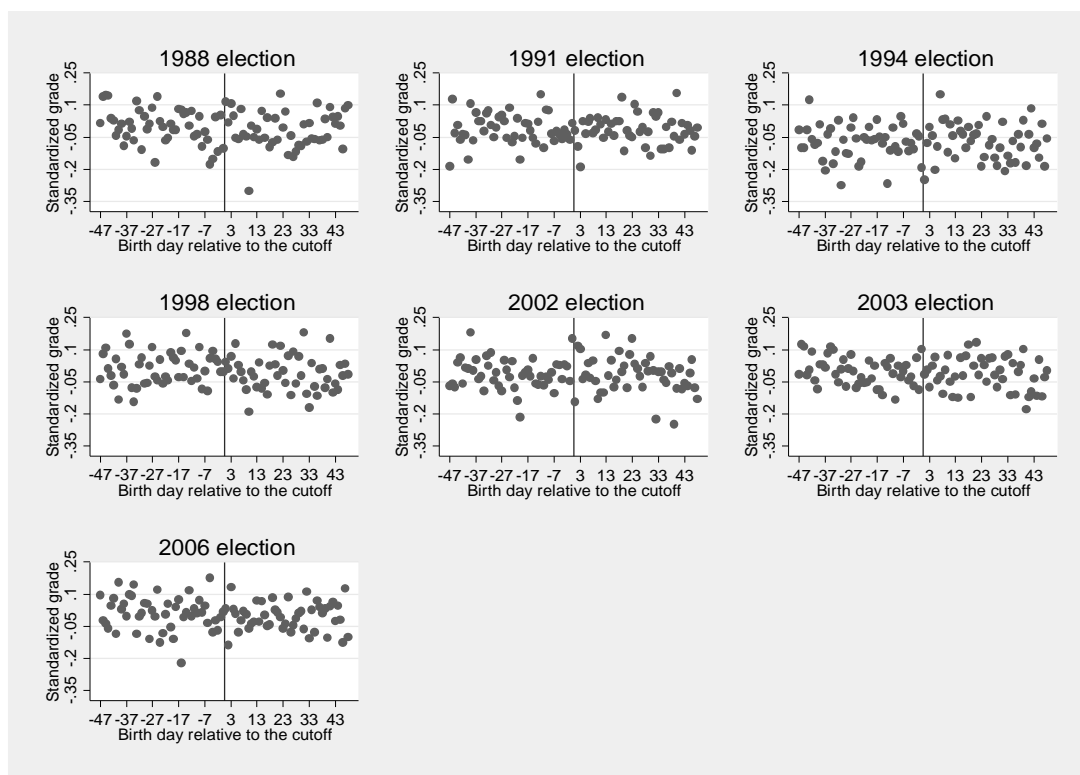
Appendix B: Additional results

FIGURE B1 *Distribution of the running variable*



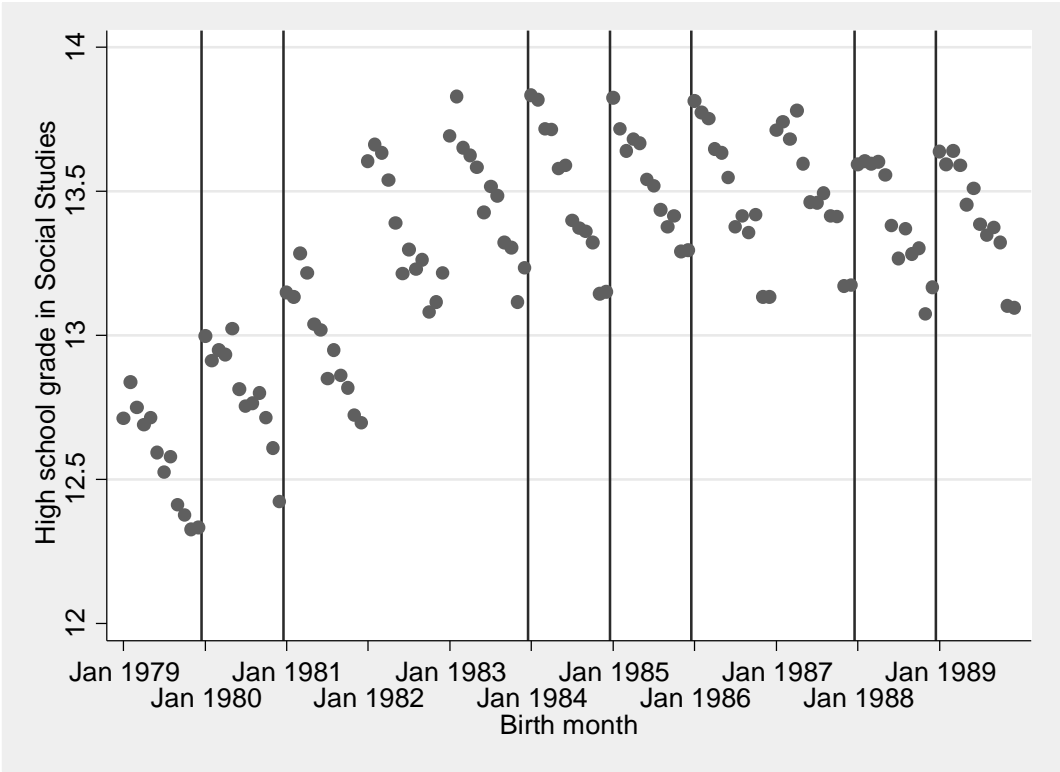
Notes: The figure is based on individuals with valid information on the high school grade in Social Studies. The sample amounts to 116,713 observations.

FIGURE B2 *Scatterplots of standardized high school grade in Social Studies by day of birth for the seven different elections*



Notes: The figure is based on individuals with valid information on the high school grade in Social Studies. A dot represents the raw mean value of the high school grade in Social Studies of individuals born on a certain day relative to the cutoff date.

FIGURE B3 *Scatterplot of high school grade in Social Studies by month of birth for the period 1979–1989*



Notes: Individuals who were born in the included years (1979–1989) received grades that reflected how well they had performed in relation to the course objectives (i.e. not in relation to their peers). Therefore, it should in principle be possible to make inter-cohort comparisons of grades. In earlier birth cohorts the students were graded relative to their peers making inter-cohort comparisons uninformative. There were four grading steps: Failed (with the numerical value 0), Passed (with the numerical value 10), Passed with distinction (with the numerical value 15) and Passed with superb distinction (with the numerical value 20). Note that the grades have not been standardized by examination year as in the main RD analysis, instead the raw grades are used to enable inter-cohort comparisons. Cohorts that turned 18 during election years (i.e. the birth cohorts 1980, 1984, 1985 and 1988) are confined by vertical lines in the figure.

TABLE B1 *Regression discontinuity estimates for the predetermined variables*

Column:	(1)	(2)	(3)	(4)	(5)	(6)
Outcome:	JHS overall GPA	JHS grade Social Studies	Mother highly educated	Father highly educated	Mother employed	Father employed
A. Linear control, full sample [-6,7]						
Voting right	-0.0064 (0.0095)	-0.0037 (0.0117)	-0.0001 (0.0052)	0.0043 (0.0055)	-0.0031 (0.0041)	-0.0050 (0.0037)
Observations	102,191	102,191	115,321	111,904	115,405	112,437
B. Linear control, reduced sample [-5,6]						
Voting right	-0.0112 (0.0101)	-0.0080 (0.0126)	-0.0005 (0.0058)	0.0043 (0.0060)	-0.0033 (0.0044)	-0.0051 (0.0039)
Observations	89,227	89,227	100,736	97,757	100,811	98,229
C. Linear control, reduced sample [-4,5]						
Voting right	-0.0086 (0.0112)	-0.0097 (0.0135)	-0.0037 (0.0064)	0.0041 (0.0068)	-0.0046 (0.0048)	-0.0026 (0.0041)
Observations	74,958	74,958	84,636	82,146	84,701	82,554
D. Linear control, reduced sample [-3,4]						
Voting right	-0.0038 (0.0109)	-0.0072 (0.0143)	-0.0087 (0.0070)	0.0032 (0.0076)	-0.0047 (0.0056)	-0.0059 (0.0044)
Observations	60,453	60,453	68,307	66,259	68,364	66,589
Panel E. Quadratic control, full sample [-6,7]						
Voting right	-0.0102 (0.0144)	-0.0138 (0.0190)	-0.0096 (0.0091)	0.0012 (0.0094)	-0.0040 (0.0068)	-0.0024 (0.0051)
Observations	102,191	102,191	115,321	111,904	115,405	112,437

Notes: The results are based on individuals with valid information on the high school grade in Social Studies and non-missing data on the relevant variable. Standard errors are clustered on week * election level (in parentheses). JHS=Junior High School.

TABLE B2 *Regression discontinuity estimates for the high school grade in Social Studies, model specification checks*

Dependent variable: The high school grade in Social Studies, whole period			
Column:	(1)	(2)	(3)
Bandwidth:	[-5,6]	[-4,5]	[-3,4]
Voting right	-0.0108 (0.0124)	-0.0058 (0.0136)	0.0008 (0.0153)
Mean of dep.	-0.0153	-0.0167	-0.0149
Observations	101,955	85,668	69,140
Linear control	Yes	Yes	Yes
Election FE	Yes	Yes	Yes
Quadratic control	No	No	No
Predetermined var.	No	No	No
Day of birth as RV	Yes	Yes	Yes
Weekday FE	Yes	Yes	Yes

Notes: HC2 robust standard errors are used (in parentheses). RV=running variable.

FE=fixed effects.

TABLE B3 *RD-estimates for the high school grade in Social Studies, HC2 robust standard errors*

Dependent variable: The high school grade in Social Studies, whole period							
Column:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Bandwidth:	[-6,7]	[-5,6]	[-4,5]	[-3,4]	[-6,7]	[-6,7]	[-6,7]
Voting right	-0.0131 (0.0116)	-0.0094 (0.0125)	-0.0058 (0.0138)	0.0036 (0.0157)	0.0010 (0.0191)	-0.0095 (0.0096)	-0.0141 (0.0115)
Mean of dep.	-0.0147	-0.0153	-0.0167	-0.0149	-0.0147	-0.0147	-0.0147
Observations	116,713	101,955	85,668	69,140	116,713	116,713	116,713
Linear control	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Election FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quad. control	No	No	No	No	Yes	No	No
Predet. var.	No	No	No	No	No	Yes	No
DOB as RV	No	No	No	No	No	No	Yes
Weekday FE	No	No	No	No	No	No	Yes

Notes: HC2 robust standard errors are used (in parentheses). RV=running variable.

DOB=day of birth. FE=fixed effects.