Online Appendix Tables and Graphs

"The Effect of Schooling on Cognitive Skills"

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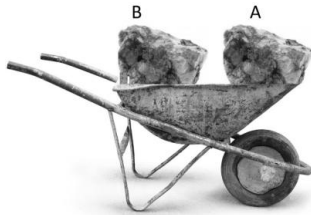
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A. Synonyms

HOPFOGNING   SKRÄP   VÅGKAM   GRENUTTAG

○   ○   ○   ○

Ett av de ord som står här ovanför betyder ungefär samma sak som BRÅTE. Klicka i rutan vid det ordet.

Translation: *One of the words above is a synonym for BRÅTE. Select the circle below that word.*

B. Technical Comprehension
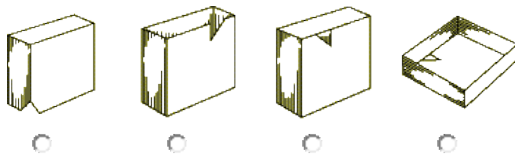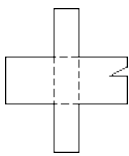

A   B   C

○   ○   ○

På vilket stätt är det lättast att köra stenblocket I skottkärran, A eller B? Om det är lika lätt, sätt ett streck under C.

Translation: *Which position for the stone block makes it easiest to push the wheelbarrow, A or B? If equally easy, select C.*

C. Spatial

○   ○   ○   ○

Här ser du en utvikt papperfigur. Den streckade linjen visar hur den ska vikas. Din uppgift är att tänka ut vilken av de fyra bilderna här ovan som är en bild av samma pappersfigur, fast hopvikt. Klicka i rutan under den bild som visar pappersfiguren hopvikt.

Translation: *On top is an unfolded paper figure. The dashed lines show how it should be folded. Your task is to figure out which of the four pictures is a picture of the same paper figure on top, but folded. Choose the box under the picture that shows the correct folded figure.*

D. Logic

Om summan av antalet ord i denna mening är större än antalet bokstäver i det fjärde ordet i meningen, markera då rutan med nej. Markera i annat fall tredje rutan.

blå   nej   röd   ja

○   ○   ○   ○

Translation: *If the sum of the number of words in this sentence is greater than the number of letters in the fourth word in the sentence, select the circle which says no ("nej"). Otherwise, select the third circle.*

Figure A.1. Sample test questions.

Note: Taken from http://rekryteringsmyndigheten.se/trmPublic/IProvet/inskrivningsprovet.htm.
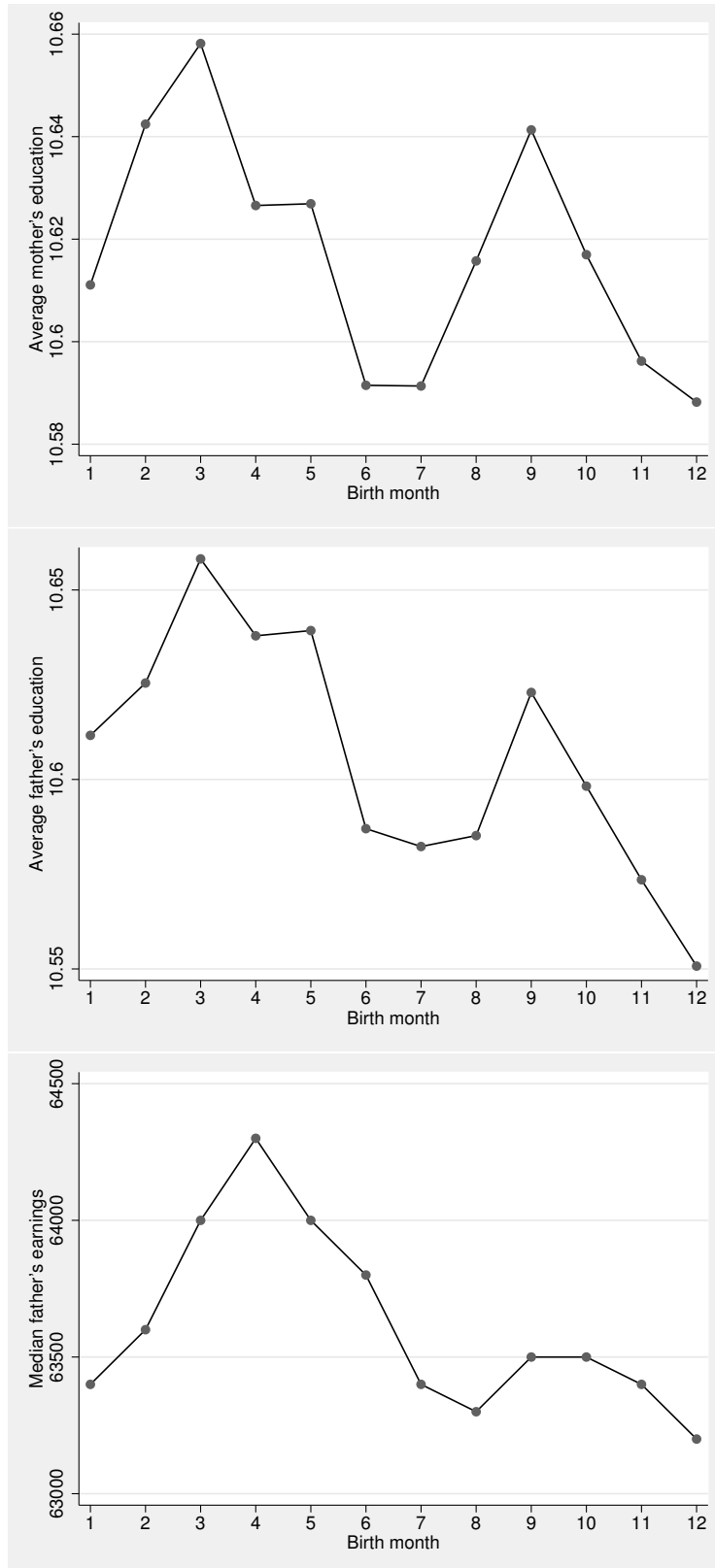
Figure A.2. Socioeconomic background and month of birth.

Notes: Sample includes the universe of all enlistees (not just those individuals attending school at the time of enlistment). Father's annual earnings are measured in year 1980 Swedish Krona (the exchange rate was 4.155 Swedish Krona to 1 U.S. dollar on July 1, 1980). N=964,471 in the top graph, N=827,550 in the middle graph, and N=1,018,724 in the bottom graph.
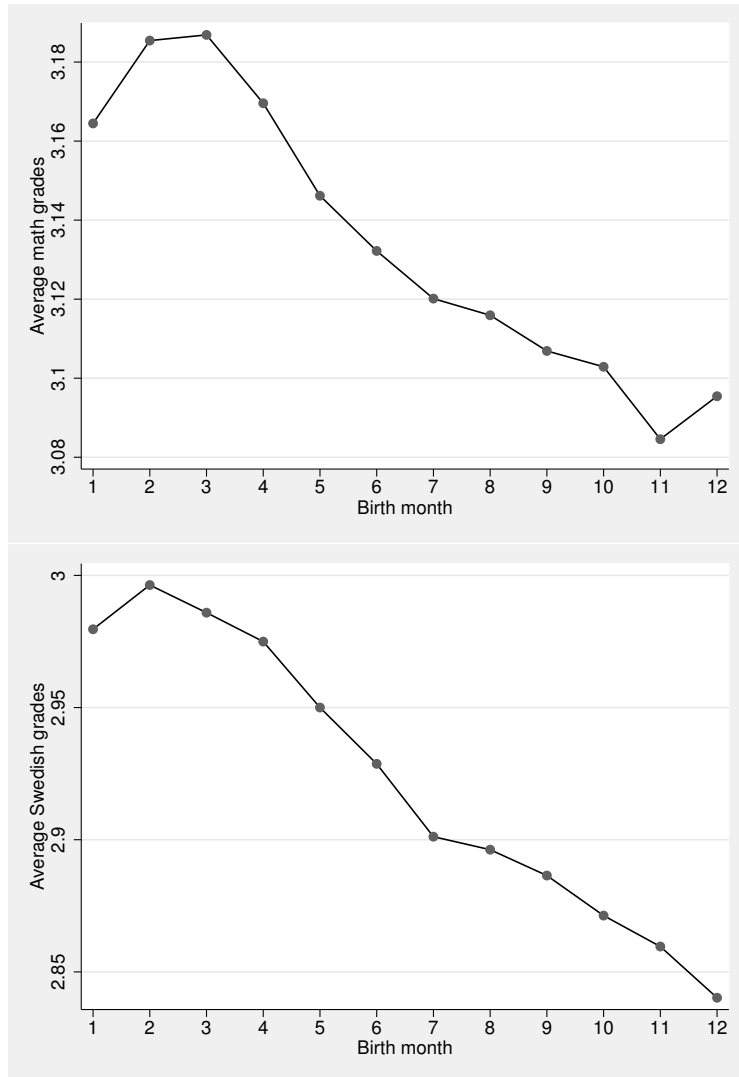
Figure A.3. Grades in 9th grade and month of birth.

Notes: Sample includes the universe of all enlistees (not just those individuals attending school at the time of enlistment). Data on grades only available for the 1972 to 1976 birth cohorts. N=335,836 in the top graph and N=340,155 in the bottom graph.

Table A.1. Summary statistics by type of education.

	Academic track (1)	Vocational program (2)	9th grade compulsory (3)
9th Grade grades			
High math grades	0.56	0.26	0.13
High Swedish grades	0.56	0.06	0.03
	[48,669]	[56,583]	[9,908]
Highly educated mother	0.47	0.18	0.11
	[121,673]	[179,421]	[49,163]
Highly educated father	0.60	0.25	0.15
	[113,152]	[162,581]	[41,890]
Father's earnings in 1980	82,286	62,271	56,803
	[128,617]	[191,623]	[54,567]
Family size	2.5	2.7	3.0
	[128,614]	[191,615]	[54,564]
Cognitive tests			
Synonyms	0.83	-0.21	-0.66
Technical comp.	0.31	-0.38	-0.78
Spatial	0.85	0.08	-0.39
Logic	0.87	-0.25	-0.83
	[128,617]	[191,623]	[54,567]

Notes: Number of observations in brackets. See notes to Table 3. Column (1) is the baseline sample used in the paper, column (2) is an alternative sample of enlistees who enrolled in two year vocational programs, and column (3) is an alternative sample of enlistees who stopped school in 9th grade after finishing their compulsory education. Grades are only available for the birth cohorts 1972-1976. Father's annual earnings are measured in year 1980 Swedish Krona (the exchange rate was 4.155 Swedish Krona to 1 U.S. dollar on July 1, 1980).

Table A.2. The effect of general aging on cognitive skills by education track.

	Crystallized Intelligence		Fluid Intelligence	
		Technical		
	Synonyms	comprehension	Spatial	Logic
	(1)	(2)	(3)	(4)
A. Academic track				
Age in days / 100	0.040**	0.043**	0.019**	0.037**
	(0.002)	(0.002)	(0.003)	(0.002)
B. Vocational program				
Age in days / 100	0.024**	0.025**	0.007**	0.013**
	(0.002)	(0.002)	(0.002)	(0.002)
C. 9th grade compulsory				
Age in days / 100	0.027**	0.023**	0.026**	0.037**
	(0.005)	(0.004)	(0.004)	(0.005)

Notes: N=128,617 panel A, N=191,623 in panel B, and N=54,567 in panel C. Regressions mirror those presented in Figure 1. Coefficient estimates from separate regressions of the four cognitive test scores on age at test date. Regressions do not include a variable for the number of school days, but are otherwise similar to the specification used in Table 3. Panel A is the baseline sample used in the paper (the estimates match those presented graphically in Figure 1), panel B is an alternative sample of enlistees who enrolled in two year vocational programs, and panel C is an alternative sample of enlistees who stopped school in 9th grade after finishing their compulsory education. **p-value<0.05, *p-value<0.10.

Table A.3. Heterogeneous effects by school quality measures.

	Crystallized Intelligence (synonyms + tech. comp.) (1)		Fluid Intelligence (spatial + logic) (2)	
	coeff.	**s.e.**	**coeff.**	**s.e.**
A. Teacher-student ratio (TSR)				
Low TSR × school days / 100	0.113**	(0.027)	-0.021	(0.031)
High TSR × school days / 100	0.112**	(0.028)	-0.014	(0.032)
Low TSR × age / 100	-0.004	(0.013)	0.040**	(0.014)
High TSR × age / 100	-0.001	(0.013)	0.039**	(0.015)
B. Teacher experience				
Low teacher exp × school days / 100	0.101**	(0.028)	-0.044	(0.031)
High teacher exp × school days / 100	0.122**	(0.027)	0.007	(0.031)
Low teacher exp × age / 100	0.004	(0.013)	0.051**	(0.015)
High teacher exp× age / 100	-0.008	(0.013)	0.028**	(0.014)
C. Teacher education				
Low teacher educ × school days / 100	0.107**	(0.028)	-0.014	(0.031)
High teacher educ × school days / 100	0.116**	(0.027)	-0.022	(0.031)
Low teacher educ × age / 100	0.003	(0.013)	0.039**	(0.015)
High teacher educ × age / 100	-0.007	(0.013)	0.040**	(0.014)

Notes: N=128,507. See notes to Table 3. The teacher-student ratio is calculated as the number of high school teachers in the region divided by the number of students (multiplied by 100). The measures on average years of experience and share with a university degree are obtained by aggregating individual teacher data to the high school regional level. High school regions with a value below (above) the median for a given school quality measure are categorized as being in the low (high) group. **p-value<0.05, *p-value<0.10.