Relationen mellan utbildning och hälsa

Mårten Palme

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Bakgrunden till relationen mellan utbildning och hälsa

- Kunskap, information
- Resurser
- Arbetsmiljö
- Sociala skillnader, stress (Michael Marmot ”Status syndrome”)
- Tillgång till vård
- Levnadsvanor
- Genetiska faktorer, skillnader i preferenser
- Skillnader i uppväxtförhållanden

Grundläggande fråga: om man tänker sig ett experiment där man slumpmässigt ger en grupp mer utbildning, kommer personerna i denna grupp få bättre hälsa av "behandlingen"? Finns det en kausal effekt av utbildning på hälsa?

- Ett sätt att studera detta är genom "naturliga experiment".
- I en nyligen publicerad studie:

Meghir, C., Palme, M., & Simeonova, E. (2018). Education and mortality: Evidence from a social experiment. *American Economic Journal: Applied Economics*, *10*(2), 234-56.

- Använder Grundskolereformen som implementerades som ett social experiment kommunvis mellan 1949 och 1962.
  - Obligatoriska utbildningen förlängdes från 7 eller 8 år till 9 nationellt.
  - Nationell läroplan.
  - Sammanhållna klasser.

Ursprunglig studie om effekterna på inkomster och slutlig utbildning: Meghir, C., & Palme, M. (2005). Educational reform, ability, and family background. *American Economic Review*, *95*(1), 414-424.

TABLE 2—THE IMPACT OF THE REFORM ON EARNINGS

	Differences-in-differences		
	Males and females	Males	Females
All	1.42	0.88	2.11
	(0.89)	(1.37)	(1.24)
Low father's education	3.36	3.06	3.79
All abilities pooled	(0.91)	(1.36)	(1.30)
Low father's education	2.62	3.23	1.66
Low ability	(1.28)	(2.03)	(1.59)
Low father's education	4.53	2.97	6.71
High ability	(1.27)	(1.87)	(2.02)
High father's education	−5.59	−7.66	−4.22
All abilities pooled	(1.88)	(3.12)	(2.72)

Notes: Standard errors in round brackets allowing for clustering by municipality, thus also allowing for arbitrary serial correlation. Coefficients are interpreted as percentage effects on annual earnings.

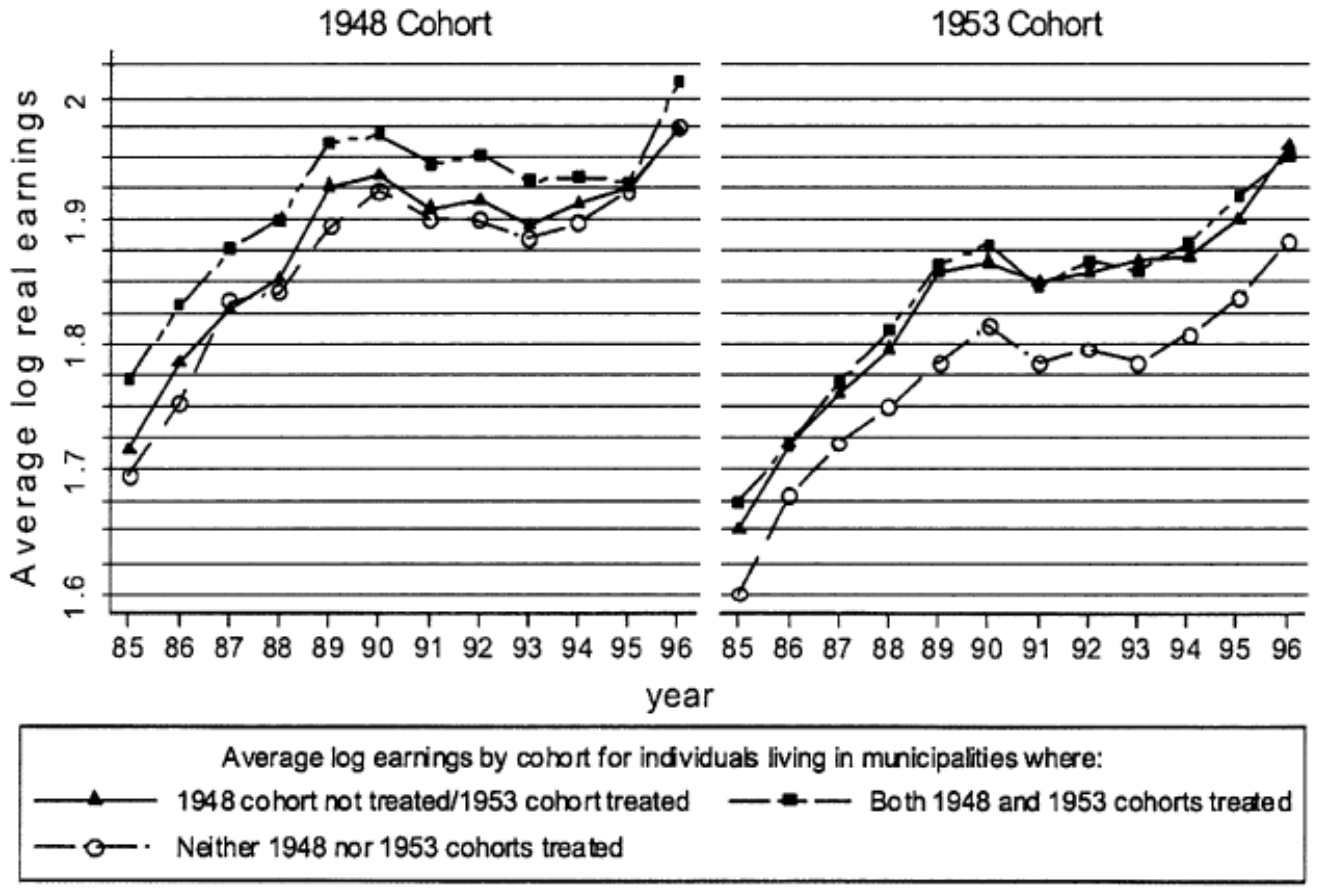


FIGURE 1. AVERAGE LOG EARNINGS FOR THE 1948 AND 1953 COHORTS BY REFORM STATUS AND YEAR

Meghir, C., Palme, M., & Simeonova, E. (2018). Education and mortality: Evidence from a social experiment. *American Economic Journal: Applied Economics*, *10*(2), 234-56.

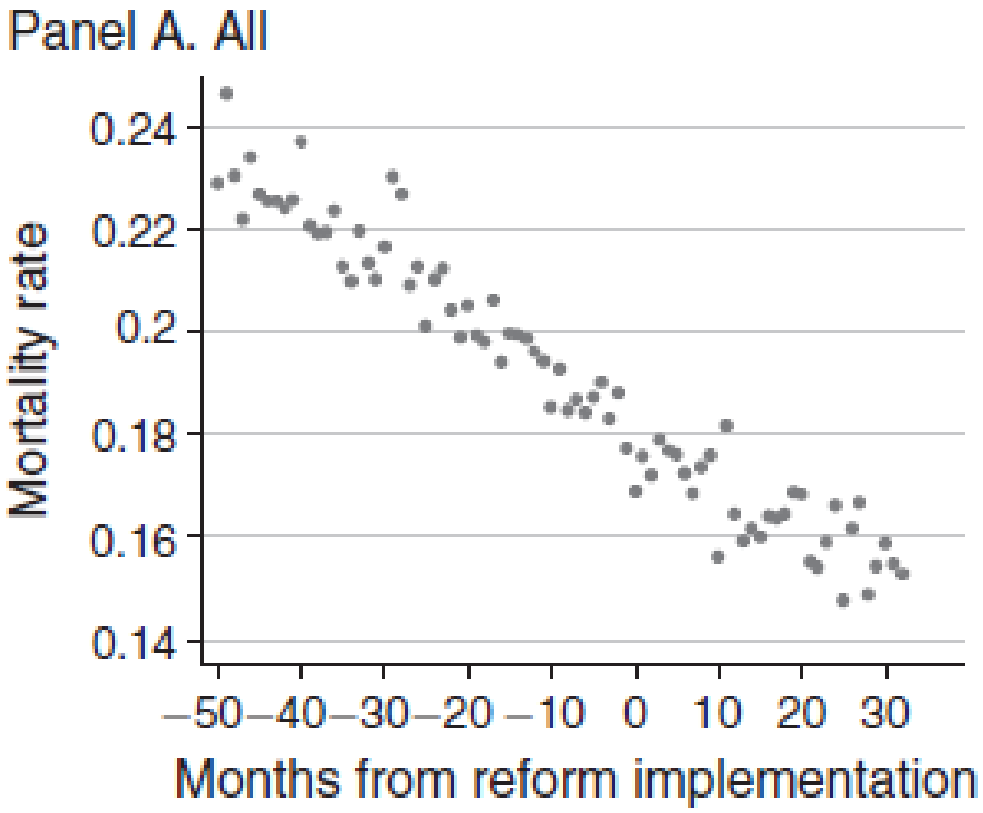
- Mortalitet. Olika dödsorsaker.
- Data från Slutenvårdsregistret. Olika diagnoser (ICD koder).
- Förskrivningsregistret. Olika typer av mediciner.

Övergripande slutsats: **Inga effekter!**

TABLE 2—MORTALITY AND EDUCATION: MALES AND FEMALES AND BY CAUSE

	All causes (1)	Circulatory diseases (2)	Cancer (3)	Preventable diseases (4)	Treatable diseases (5)
Years of schooling, Cox	0.9286	0.9044	0.9578	0.9011	0.8894
	(0.0005)	(0.0010)	(0.0008)	(0.0018)	(0.0017)
Years of schooling, LPM	−0.0125	−0.0042	−0.0029	−0.0015	−0.0019
	(0.0001)	(0.0001)	(0.0001)	(0.00003)	(0.00003)
Dead, percent	19.98	4.98	8.15	1.66	1.95
Number of deaths	364,468	90,867	148,733	30,323	35,619
Observations	1,823,901	1,823,901	1,823,901	1,823,901	1,823,901

Note: Indicator variables for gender as well as year of birth dummies included in the specification.


Panel A. All
Mortality rate
0.24
0.22
0.2
0.18
0.16
0.14
−50 −40 −30 −20 −10 0 10 20 30
Months from reform implementation

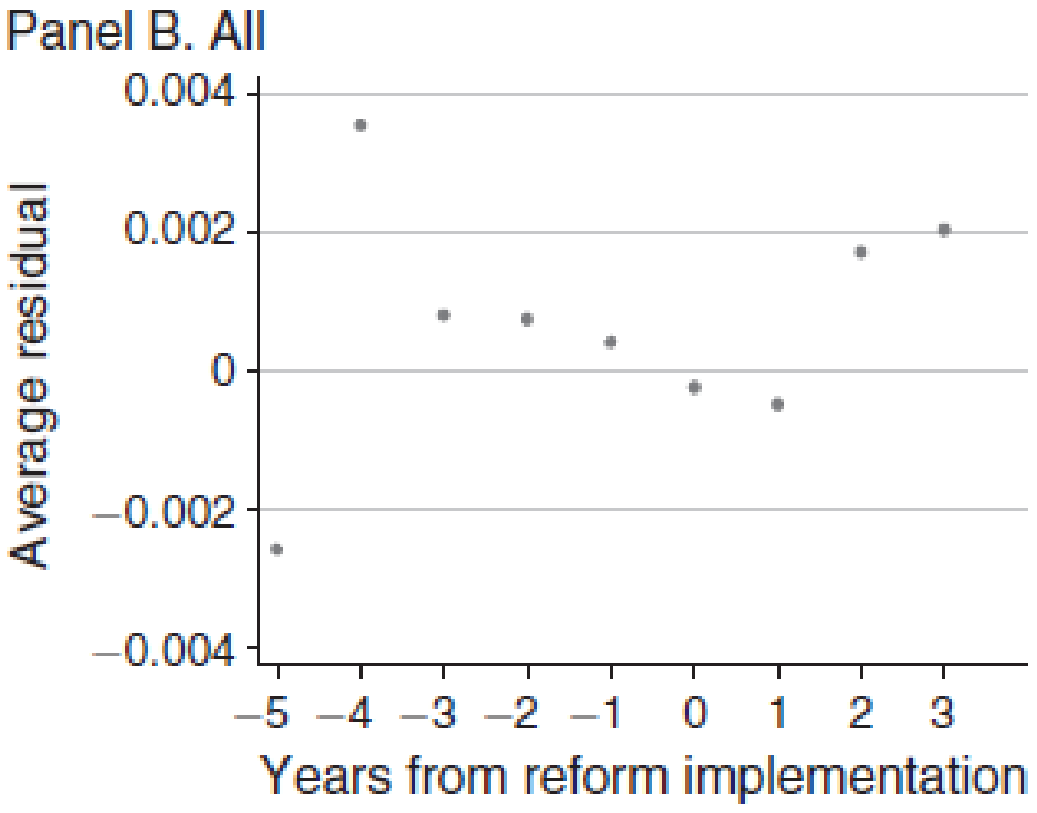

Panel B. All
Average residual
0.004
0.002
0
−0.002
−0.004
−5 −4 −3 −2 −1 0 1 2 3
Years from reform implementation

TABLE 4—THE EFFECTS OF EDUCATION REFORM ON MORTALITY. COX PROPORTIONAL HAZARD REGRESSIONS AND REGRESSION DISCONTINUITY ESTIMATION RESULTS

	All (1)	Low SES (2)	High SES (3)
Panel A. Males and females			
DiD, LPM	0.0006	0.0019	−0.0012
	(0.0017)	(0.0019)	(0.0036)
DiD, Cox	1.0005	1.0058	1.0071
	(0.0105)	(0.0128)	(0.0281)
RD, LPM	−0.00052	0.00091	0.00102
	(0.00223)	(0.00249)	(0.00456)
RD, Cox regression	0.9990	1.0088	1.0057
	(0.0135)	(0.0160)	(0.0337)
Observations	1,562,493	1,051,462	296,392
Deaths	335,085	216,861	45,406

Palme, Mårten, and Emilia Simeonova. "Does women's education affect breast cancer risk and survival? Evidence from a population based social experiment in education." *Journal of Health Economics* 42 (2015): 115-124.

Table 2
Correlations between years of educational attainment and diagnosis/death from breast cancer in women.

Panel A	(1)	(2)	(3)
Diagnosis			
Years of schooling	0.96*		0.89*
coef* 1000	(0.09)		(0.08)
High SES		2.99*	1.92*
coef* 1000		(0.54)	(0.56)
Observations	541,135	560,596	541,135
Mean incidence per 1000	34.1	34.1	34.1
R-squared	0.006	0.007	0.010
Empirical model	Linear Prob	Linear Prob	Linear Prob
Panel B	(1)	(2)	(3)
Death from breast cancer			
Years of schooling	−0.01		−0.02
coef* 1000	(0.01)		(0.01)
High SES		−0.09	0.12
		(0.18)	(0.09)
Mean deaths per 1000	4.1	4.1	4.1
Observations	541,135	560,596	541,135
Empirical model	Linear Prob	Linear Prob	Linear Prob

Note: Robust standard errors in parentheses; *Significant at 1%; SE clustered on the municipality of birth level.

Table 4
Educational reform and the risk of diagnosis and death from breast cancer.

Father's education	All	
Diagnosis		
Reform coef * 1000	1.5**	1.71**
	(0.78)	(0.775)
Mean dep var * 1000	34.1	
Linear trends by year of reform implementation	Yes	
Municipality trend		Yes
Observations	560,596	560,596
R-squared	0.006	0.0075
Death from breast cancer		
Reform coef * 1000	0.63**	0.66**
	(0.3)	(0.33)
Mean dep var * 1000	4.1	4.1
Linear trends by year of reform implementation	Yes	
Municipality trend		Yes
Observations	560,596	560,596
R-squared	0.002	0.004

Uppväxtförhållanden och hälsa

- Tidigare litteratur har visat att barn till lågutbildade har sämre hälsa än barn till högutbildade. Case, Lubotsky och Paxson (2002) visar att det både har att göra med att förekomster av hälsoproblem är högre bland barn till lågutbildade och att hälsoeffekten givet ett visst hälsoproblem är starkare bland lågutbildade.
- Tidigare litteratur har också visat att många hälsoproblem formeras väldigt tidigt i livet (Barker, 1995, 1998).

Lindahl, M., Lundberg, E., Palme, M., & Simeonova, E. (2016). *Parental influences on health and longevity: Lessons from a large sample of adoptees* (No. w21946). National Bureau of Economic Research.

- Beror sambandet på faktorer innan födseln (genetiska faktorer eller faktorer under fosterstadiet?) eller på skillnader i uppväxtförhållanden (Nature versus Nurture).
- Vi studerar utfall för alla adopterade i Sverige födda mellan 1940 och 1967.
- Vi använder olika registerdata där vi har information om både de biologiska och de adopterande föräldrarna.

	(1) Non-adoptees	(2) Adoptees - Bio father known	(3) Adoptees - Large sample
Years of education, Bio Mother	0.9769***	1.0453*	0.9901
	(0.0015)	(0.0243)	(0.0150)
Years of education, Bio Father	0.9747***	0.9887	
	(0.0011)	(0.0180)	
Years of education, Ad Mother		0.9536**	0.9707**
		(0.0208)	(0.0138)
Years of education, Ad Father		0.9926	0.9981
		(0.0159)	(0.0102)
P-value joint significance			
Biological parents	0.0000	0.1569	0.5119
Adoptive parents		0.0171	0.0456
Observations	2,828,078	10,837	21,206

All models include controls for gender and birth cohort of both children and parents

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$