READ ME: Long-Term Effects of Childhood Nutrition: Evidence from a School Lunch Reform

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This document provides a description of the data, do-files, and variables used for the analyses in the article "Long-Term Effects of Childhood Nutrition: Evidence from a School Lunch Reform" by Petter Lundborg, Dan-Olof Rooth, and Jesper Alex-Petersen.

Data Availability

Our data contains sensitive information on individual outcomes and, hence, Swedish law requires users of the data to hold a permission from the Swedish Ethical Review Authority ("Etikprövningsmyndigheten"). This implies that we are unable to make our data available online. Researchers interested in obtaining the data could apply for a permission from the Swedish Ethical Review Authority at https://etikprovningsmyndigheten.se/. Conditional on approval, researchers can apply for and buy the data from Statistics Sweden (www.scb.se), the Swedish Military Archive (https://riksarkivet.se), and the National Board of Health and Welfare (www.socialstyrelsen.se). Statistics Sweden performs the merger of the data sets. The data on the introduction of the school lunch program was obtained from the Swedish National Archive (www.riksarkivet.se) and can be manually collected. The data obtained from Statistics Sweden does not contain any personal information such as names and addresses.

Formal references to all the data sets used are provided at the end of the document. Below, we describe the various data sets used in the analyses.

Individual-level data

Data set	Reference
Population register (RTB) (1968-2012)	Statistics Sweden (2020a)
Census (FoB) (1960, 1965)	Statistics Sweden (2020b)
Income register (1968-2011)	Statistics Sweden (2020c)
Education register (1990-2011)	Statistics Sweden (2020d)
Military enlistment register (1951-1965)	Riksarkivet (2020c)
Medical birth register (1973-2012)	National Board of Health and Welfare (2020a)
Causes-of-death register (1964-2012)	National Board of Health and Welfare (2020b)
Inpatient register (1990-2012)	National Board of Health and Welfare (2020c)
Outpatient register (2001-2012)	National Board of Health and Welfare (2020d)
Microdata on social insurance (1994-2011)	Swedish Social Insurance Agency (2020)
Multigeneration register (1932-2011)	Statistics Sweden (2020e)

Historical data

The historical data on municipality characteristics were collected from Statistical Yearbooks of Swedish Municipalities (The National Archives 2020a).

The historical data on the introduction of the school lunch program between 1959-1969 were obtained from the Swedish National Archives (The National Archives 2020b). The data is found in the series labelled SE/RA/420401/53/H1HA.

The historical data on school absence between 1959-1969 were collected from local municipality archives across Sweden (Local Municipality Archives 2020).

Other data

For the calculations on the nutritional composition of foods and dishes, we used the Swedish Food Agency's searchable "Swedish Food Composition Database" (Swedish Food Agency. 2020)

Do-files
Stata version 16 was used for the analyses. The do-files listed below produce the tables and figures in the paper. The individual tables and figures are found in the subfolders "Tables" and "Figures".

Figures:
1. Figure_2.do
2. Figure_3.do
3. Figure_4.do
4. Figure_C1.do

Tables:

1. Table_1.do
2. Table_2.do
3. Table_3.do
4. Table_4.do
5. Table_5.do
6. Table_6.do
7. Table_D1.do
8. Table_E1.do
9. Table_F1.do
10. Table_F2.do
11. Table_G1.do
12. Table_H1.do
13. Table_H2.do
14. Table_H3.do
15. Table_H4.do
16. Table_H5.do
17. Table_I1.do
18. Table_I2.do
19. Table_J1.do

Variables in do-files

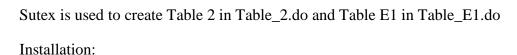The variables used in the do-files are described in Table 1 below.

Table 1. Variable description

Variable name	Description
year_lunch	Year of school lunch introduction
log_inc	Municipality average log income
log_real	Municipality average log real estate value
log_pop	Municipality log population size
log_agland	Municipality log agricultural land share
log_agval	Municipality average log agricultural value
skane	Southernmost region in Sweden (Skåne)
southern	Southern part of Sweden
l_m_dinc_earn_to_65	Log average income between 1968-2011
sms_y_int	Number of years of school lunch exposure
sex	Gender (female=1, male=0)
sweden	Indicator for whether born in Sweden
byear	Birth year
unit_school	Indicator for exposure to schooling reform
schooling	Number of years of schooling
edu_13	Indicator for university attendance
mother_inc_bin70	Labor market participation 1970 by mother
father_inc_bin70	Labor market participation 1970 by father
household_earnings_parents	Average household income 1968-2011
dead	Indicator for being deceased by 2012
dyear	Year of death
any_visit	Indicator for any hospital visit 1990-2012
sum_intime	Number of hospital visits 1990-2012
no_visits	Number of outpatient visits 2001-2011
duration1	Days of sick leave 1994-2011
any_disability	Disability benefits at any point 1994-2011
mean_height	Average female height (cm) across births
any_smoke	Indicator for female smoking
lngd	Male height (cm) at enlistment
near_perfect_health	Indicator of being evaluated as having near perfect health at the military enlistment
any_diagnosis	Indicator of having any health diagnosis at the military enlistment
fall_absence	Number of school absence days (fall)
spring_absence	Number of school absence days (spring)
treated	Indicator for school lunches being introduced in a municipality
select	Indicator for municipalities with non-missing data on school absence
log_bw	Log birth weight of child

low_bw	Indicator of low birth weight (<2500 grams)
prematurity	Premature birth
infant_death	Indicator for infant death
sum_intime_child	Hospital visits 2001-2012 (child)
no_visits_child	Outpatient visits 2001-2012 (child)
kid_birth_year	Birth year of child
av_schooling	Average years of schooling of parents
parents_age	Average age of parents
both_nonswede_parent	Indicator of both parents being born outside Sweden
municipality	Municipality codes
inc_quart	Household income quartile (0-3)
econ_index	Index for economic outcomes
health_index_women	Index for female health outcomes
health_index_men	Index for male health outcomes
long_health_index	Index for long-term health outcomes
health_index_sec_generation	Index for second generation health outcomes
growth_pop	Change in municipality population size between 1952-1958
growth_ag_land_share	Change in municipality agricultural land share between 1952-1958
growth_ag_val_share	Change in municipality average agricultural value between 1952-1958
growth_real_est	Change in municipality average real estate value between 1952-1958
year_3-year_11	Indicators for years 1961 to 1969
log_summa	Log number of pupils aged 7-11 in a municipality
late_exposed	Indicator for school lunches being introduced by 1965
late_cohort	Indicator for cohorts born 1955-1959
pupils	Number of pupils in 6th grade
school_year	Year fixed effects
l_m_dinc_labor_to_65	Average labor income between 1968-2011
log_35_45	Average income between ages 35-45
comp_school_intro	Year of introduction of the compulsory school reform
AgLandShare	Municipality agricultural share
four_more	Four or more years of school lunch exposure
income_99_01	Log income 1999 and 2001 for males in the enlistment register
height_observed	Indicator for observing female height
bw_observed	Indicator for observing birth weight of child
bmi	Body Mass Index among males
mean_bmi	Average Body Mass Index across births among females
missb	Indicator for congenital disorder among males

hearthosp	Indicator for being hospitalized for heart conditions between 1997-2012
mentalbehavhosp	Indicator for being hospitalized for mental and behavioral disorders between 1997-2012
cancerhosp	Indicator for being hospitalized for cancer (benign tumors) between 1997-2012
endocrinehosp	Indicator for being hospitalized for endocrine, nutritional, and metabolic diseases between 1997-2012
digestivhosp	Indicator for being hospitalized for diseases of the digestive system between 1997-2012
first_two	Indicator for being first or second-born in family
age_diff_1_2	Age difference between first and second-born
second_third	Indicator for being second or third-born in family
age_diff_2_3	Age difference between second and third-born

Stata packages used

Sutex is used to create Table 2 in Table_2.do and Table E1 in Table_E1.do

Installation:

ssc install sutex

qqvalue is used to create Table F2 in Table_F2.do

Installation:

ssc install qqvalue

multiplegt is used to create Table H5 in Table_H5.do

Installation:

ssc install multiplegt

reghdfe is used to create Table M1 in Table_M1.do

Installation

ssc install reghdfe

References

Swedish Food Agency. (2020). "Swedish Food Composition Database, [database]". http://www7.slv.se/SokNaringsinnehall.

The National Archives. (2020a). "Årsbok för Sveriges kommuner, 1952-1958 (Statistical Yearbook of Swedish Municipalities)", Registrator, accessed (2016).

The National Archives. (2020b). "Skolsociala uppgifter, primärmaterial, serie SE/RA/420401/53/H 1 HA", Registrator, accessed (2016).

Statistics Sweden (SCB). (2020a). "Registret över totalbefolkningen, RTB (Population register), 1968-2012 [database]", SCB:s Statistikservice, accessed (2016).

Statistics Sweden (SCB). (2020b). "Folk- och bostadsräkning, FOB (Census), 1960, 1965 [database]", SCB:s Statistikservice, accessed (2016).

Statistics Sweden (SCB). (2020c). "Inkomst- och taxeringsregistret, IoT, (Income register), 1968-2011 [database]", SCB:s Statistikservice, accessed (2016).

Statistics Sweden (SCB). (2020d). "Utbildningsregistret (Education register), 1990-2011 [database]", SCB:s Statistikservice, accessed (2016).

The National Archives. (2020c). "Mönstringsregistret (Military enlistment register), 1951-1965 [database]", Registrator, accessed (2016).

National Board of Health and Welfare. (2020a). "Medicinska födelseregistret (Medical birth register), 1973-2012 [database]", Socialstyrelsens registersservice, accessed (2016).

National Board of Health and Welfare. (2020b). "Dödsorsaksregistret (Causes-of-death register), 1964-2012 [database]", Socialstyrelsens registersservice, accessed (2016).

National Board of Health and Welfare. (2020c). "Patientregistret (Inpatient register), 1964-2012 [database]", Socialstyrelsens registersservice, accessed (2016).

National Board of Health and Welfare. (2020d). "Patientregistret, öppenvård (Outpatient register), 2001-2012 [database]", Socialstyrelsens registersservice, accessed (2016).

Swedish Social Insurance Agency. (2020). " MiDAS - Mikrodata för analys av socialförsäkringen (Microdata on social insurance), 1994-2011 [database]". Försäkringskassans statistikenhet, accessed (2016).

Local Municipality Archives. (2020). "Betygskataloger. 1959-1969 (Grade catalogues)", Local Municipality archives, accessed (2016).

Statistics Sweden (SCB). 2020e. "Flergenerationsregistret (Multigeneration register), 1932-2011 [database]", SCB:s Statistikservice, accessed (2016).