

## Appendix A: Adoptions in Sweden 1940-1967

### *A.1 The History and Institutions of Adoptions*

Adoptions in the period when the children we study in this paper were born were very different from what they are today, in Sweden and in most other Western industrialized countries. At that time, they were dominated by children born in Sweden, and their biological parents were in most cases young and lacked economic resources, or were stigmatized by having an unplanned child, which prevented them from taking care of the baby. International adoptions, although started already in the 1950s, did not overtake domestic adoptions until in the late 1960s. We show the number of Swedish domestic adoptions by year in Figure 1 and as a share of all Swedish-born children in Figure A1.

Domestic adoptions in Sweden have been described in several previous academic works and government documents. Two studies, Bohman (1970) and Nordlöf (2001), use primary sources. Bohman (1970) gives a broad overview and presents results from different empirical comparisons between adoptees and non-adoptees. Nordlöf (2001) focuses on adoptions in the city of Stockholm between 1919 and 1973. She uses archival records from the Stockholm child welfare office (*Barnavårdsnämnden*), which administrated adoptions, to give a description of the adopted children and their families. Several empirical studies using adoptee data, e.g. Björklund, Lindahl and Plug (2004) and Oskarsson et al. (2018), also give comprehensive overviews of adoptions in Sweden.

Sweden had its first law regulating adoptions in 1917. This law was changed on several occasions since it was first implemented. However, the original law prescribed several principles that are still in use. One such principle is that the adoption should be “in the best interest of the child”, both regarding whether or not the adoption should take place at all and the choice of adopting parents. Another principle was that no payments were allowed between the adopting and the biological parents. Finally, the adopted child should have all the rights regarding inheritance from the adopting parents that their biological children would have had.<sup>1</sup>

The law also prescribed that the adoption should be finalized in a court decision. All administrative work preparing for the adoption, including all contacts with the biological and the adopting parents, was carried out by the child welfare offices (*Barnavårdsnämnderna*). An adoption could be cancelled if both the adopting parents and the child agreed on it when the child had reached the age of majority, or as the result of misbehavior of either party. The latter category included different kinds of abuse of the child as well as general criminal behavior. In 1944, the law was extended to also include major health problems and defects of the adopted child. However, Nordlöf (2001) concludes that cancellations of adoptions were extremely rare in the Stockholm area in the period 1918-1973.

### *A.2 The Biological Parents*

Bohman (1970) and Nordlöf (2001) give a fairly consistent description of the mothers who gave up their children for adoption: they were on average substantially younger than mothers who kept their children; they were, except for a few rare cases, unmarried or divorced; and they did, on average, have a lower socio-economic status as compared to the rest of the population, although the differences were quite small. The largest occupational category of these mothers

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<sup>1</sup> The main principle was that the adopted child’s rights to inherit his or her biological parents were lost. However, until 1959, some legal connection was kept between the biological parents and the adopted child. These adoptions are sometimes called weak adoptions and entailed that the child was still the heir of her/his biological parents and they were responsible for supporting the child economically if the new adopting parents could not. These legal responsibilities did not imply any further contact between the child and the biological parents. From 1959 onwards, these kinds of weak adoptions do no longer occur and in 1971, all weak adoptions were retroactively made strong, i.e., all legal ties were also cut between the biological parents and the child.

in Nordlöf's study was maids (26 percent), followed by office workers (18 percent) and restaurant workers (15 percent). In most cases, the child was voluntarily given up for adoption with the predominant reason being lack of housing and economic resources for supporting the child. In some very rare cases, it was because the mother died when giving birth or because she suffered from severe health problems.

Bohman (1970) has a description of the biological fathers. Similar to the mothers, they were, on average, younger than those who did not give up their children for adoption; they had a slightly lower average education level, although the difference was quite small; and they had a higher rate of registered alcohol abuse and crime rate.

Nordlöf attributes the rapid decline in domestic adoptions by the end of the 1960s to changes in social policy – including the introduction of housing allowances, the improvement of general housing conditions, increased child allowances and the introduction of childcare. Other important changes in society were the reduced social stigma of having children without being married or being in a steady relationship, the increased availability and usage of contraceptives, and the liberalization of the legislation for abortion.<sup>2</sup>

### ***A.3. The Adopted Child***

Most adoptions took place when the child was an infant. The mother had to wait until she had recovered from delivery before she could make the final decision to give the child up for adoption. The child was therefore initially placed in a nursery home and thereafter placed in a prospective adoptive family. The recommendation was that the placement be made before the child was six months old and that the trial period should be between three to six months. If the trial period went well, the adoptive parents would apply to the court for a legal adoption decision.

The children underwent a medical examination before they were adopted. The recommendations for this procedure were described in the *Handbook for Social Workers* (see e.g. Allmänna barnhuset, 1955). Nordlöf (2001) writes that children with physical or mental defects were in general not adopted, but stayed in foster care homes. This was also true for children whose mothers were prostitutes or who were conceived after a rape.

Bohman (1970) finds no significant difference in health at age 10-11 between his sample of adoptees and a control group of non-adoptees of the same age. Oskarsson, Dawes and Lindgren (2018) interpret this lack of difference as a net effect of two counteracting forces. Adoptees are to a larger extent than non-adoptees born by low SES mothers, which would indicate that they have inferior health. However, as a result of the medical testing before the adoptions took place, children who were eventually adopted are positively selected from this group. In addition, the adoptive parents do often represent higher SES households, which could also have a positive impact on adopted children's health.

We here use our data to show some results where we compare cause of death and health characteristics between adoptees and non-adoptees. Figure A2 shows the number of deaths by year of birth and broken down by the most common causes of death in our sample, which are circulatory diseases, cancer and all other causes of death.<sup>3</sup> The left-hand panel corresponds to the sample of adoptees and the right-hand panel to the comparison group of non-adoptees. Comparing the death rates in the two panels, it can be seen that it is somewhat higher among adoptees and that the graphs for adoptees are quite noisy as a result of small sample sizes. The

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<sup>2</sup> A law allowing abortion without any particular reason until the end of week 18 in the pregnancy was passed in 1974. However, it was preceded by a gradual increase in the number of abortions over the previous decade, as the necessary conditions for obtaining a legal abortion were relaxed.

<sup>3</sup> Note that the graphs with the share of deaths among adoptees are less smooth than the corresponding graphs for non-adoptees. This is because of the much smaller sample size among adoptees, especially for the early cohorts (for the number of adoptees by birth cohort, see Figure A1).

share of deaths is quite low for the younger age groups. For the child generation, we therefore use proportional hazard models allowing for right censoring of date of death.

Table A1 shows the distribution of all deaths by the main underlying cause of death observed in the sample of adoptees and the comparison group, respectively. The six most common causes of death according to the main chapter in the ICD 10 code are included together with a seventh category, “Other”, corresponding to all causes not included in the six most common ones. The last column of Table A1 shows the  $p$ -values for a test of equality between the shares of deaths in the two samples that can be attributed to each of the causes considered. The distributions are quite similar, although adoptees are somewhat less likely to die from cancer and more likely to die from diseases in the digestive organs and from mental disorders.<sup>4</sup>

#### ***A.4. The Adopting Parents***

The legal requirements for adopting were few; adoptive parents had to be free of tuberculosis, sexually transmitted diseases and be at least 25 years old. In practice, local social authorities followed the recommendation that the adopting family should be young enough to be able to be the biological parents, they had to have adequate housing and they should be married. Furthermore, the father should have a steady income, also implying that the mother should be able to stay at home. The adopting family’s suitability for taking care of a child was evaluated by the child welfare offices (*Barnavårdsnämnderna*).

Until 1944, families with own biological children were not allowed to adopt. Nordlöf (2001) documents that it was rare that these families were admitted to adopt also after 1944, since there was always a shortage of children available for adoption and the child welfare offices considered it a disadvantage to have own biological children. This convention did, to a large extent, rule out adoptions in the immediate families of the biological mother or father, such as their mothers or siblings. Nordlöf (2001) estimates such adoptions by close relatives to be only around 1 percent of all adoptions in her sample.

#### ***A.5. Matching of Children and Adopting Parents***

The social workers were instructed to find adopting parents that fit the child given up for adoption (see e.g. Allmänna barnhuset, 1955). Characteristics such as height and eye color were mentioned in the instructions. However, as pointed out by Björklund, Lindahl and Plug (2004), the information available to the social worker about the biological mothers was likely to be quite limited. This was also acknowledged in the instructions, which is reflected in the following quote: “The social worker’s ambition to find an adoptive home that fits a specific child particularly well is often unrealistic. The important task is to find good adoptive parents who can be expected to give children in general good conditions.”<sup>5</sup>

The prospective adopting parents were able to post requests for characteristics of the child based on heredity. According to Nordlöf (2001), very few used that opportunity in other ways than just stating that they wanted a “healthy child”. In very rare cases there were requests for children of mothers with good grades in school. The biological mothers were also able to post requests concerning the prospective adopting parents. Again, very few used that

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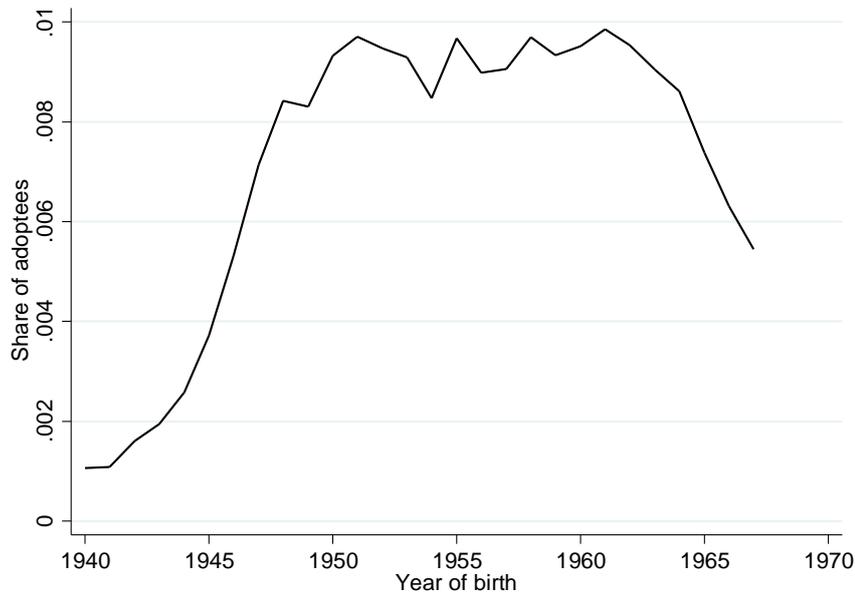
<sup>4</sup> The results in Table A1 are not adjusted for educational attainment or other measure of SES, which could explain the differences. We also know from previous research that adoptees have worse mental health than non-adoptees (see e.g. Miller et al., 2000). Included in digestive causes are K70 (ICD 10), which is an alcohol-related liver disease. The mean of K70 is 0.027 among adoptees, and 0.016 among non-adoptees. This implies that about half of the adoptees’ digestive death is alcohol related, and the figure is slightly lower for non-adoptees. This does not explain the entire difference, however.

<sup>5</sup> This quotation is originally from Allmänna barnhuset (1969) and was obtained by us from Björklund, Lindahl and Plug (2004).

opportunity. Nordlöf (2001) found one request for an “intellectual” and one for an “artistic” family in her material.

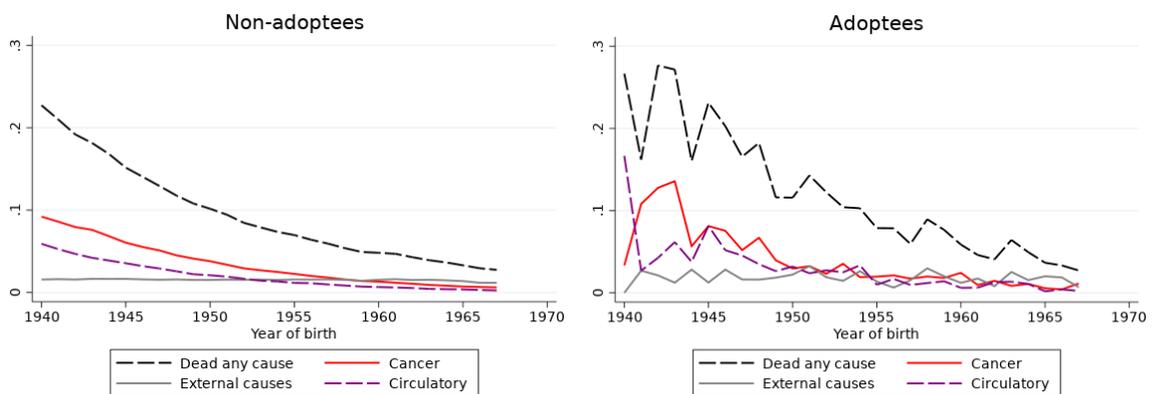
From the instructions to the social workers, there are no indications that direct matching on health status between the prospective adopting parents and the child took place.

**Figure A1.** Share of adoptees of total number of children by year of birth



Notes: The figure shows the share of children who were adopted by two parents, relative to non-adoptees, born in year 1940-1967 in Sweden.

**Figure A2.** Share of individuals in the child-generation sample who died before August, 2016.



**Table A1.** Share of deaths by cause

	Adoptees	Non-adoptees (weighted)	<i>p</i> -values mean diff
Cancer	0.278	0.329	0.0000
External causes	0.206	0.222	0.6612
Circulatory	0.215	0.180	0.1155
Digestive	0.070	0.042	0.0012
Mental	0.037	0.024	0.0169
Respiratory	0.036	0.034	0.6933
Other	0.159	0.168	0.5284
Share of deaths	0.088	0.069	0.0001
Tot # of deaths	965	258,860	

*Notes:* In the third column *p*-values of test for equal share in the group of adopted and non-adopted children are shown. Non-adoptees are weighted by cohort size to be comparable with adoptees.

## References Appendix A

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## Appendix B

**Table B1.** Sample restrictions, mortality sample

Born in Sweden 1940-1967	Non-adoptees	Adoptees
Not adopted	3,058,697	
Adopted		65,034
Adopted by two parents		33,276
Biological mother identified	3,016,784	24,248
Date of death is not missing*	2,926,756	22,807
Not adopted by own parents	2,926,756	22,766
Adopting parents' age restriction**	2,926,756	21,356
Not dead first year	2,915,162	21,343
Biological father is identified	2,833,838	10,913
Parents are dead by August 2016	1,674,637	4,069

\*Dropping observations for which we cannot observe date of death because they have migrated or is missing in the cause of death register. We define them as missing in the cause of death register if we do not observe date of death and they are born before 1913, or they are not observed in any Censuses in 1960, 1970, 1990 or 2004.

\*\* Adopting mother's age 25-47, and adopting father's age 25-66, at birth of adopted child.

**Table B2.** Cox proportional hazard model estimates of the associations between child mortality and parental age at death for mothers and fathers separately and the sample of adoptees with unknown biological father

	(1)	(2)	(3)	(4)	(5)	(6)
	Non-adoptees		Adoptees			
Age at death, Bio Mother	0.9903*** (0.0002)	0.9900*** (0.0002)	0.9859*** (0.0038)	0.9814*** (0.0052)	0.9872*** (0.0032)	
Age at death, Bio Father			0.9904** (0.0040)	0.9886** (0.0050)		
Age at death, Ad Mother			0.9962 (0.0042)	0.9962 (0.0054)	0.9950 (0.0032)	0.9969 (0.0046)
Age at death, Ad Father			0.9995 (0.0043)	0.9998 (0.0054)	1.0040 (0.0032)	0.9977 (0.0046)
Sample	All CC	CC born <1953	All CC	CC born <1953	Children with unknown bio fathers included	CC born <1953
<i>P-value joint significance</i>						
Biological parents	0.0000	0.0000	0.0001	0.0001	0.0001	
Adoptive parents			0.6662	0.7874	0.1273	0.7322
Observations	1,674,637	1,126,649	4,069	2,194	5,694	2,949

*Notes:* Results from Cox proportional hazard models. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for gender and birth cohort of both children and parents. Columns (1) and (2) are based on a sample of non-adopted children, columns (3)- (5) on adoptees. Column (1) and (3) is based on a sample of children with parents that are all dead (CC) in the end of the observation period. In column (2) and (4) an additional restriction is imposed that children are born before 1953. In column (5) the sample is expanded to include adopted children with unknown biological fathers. In column (6) the sample is restricted to adoptees born before 1953 with dead adopting parents.

**Table B3.** Proportional hazard model (Gompertz distribution) estimates of the associations between child mortality and parental age at death

	(1)	(2)	(3)	(4)	(5)
	Non-adoptees		Adoptees		
Age at death, Bio parents	0.9818*** (0.0003)	0.9813*** (0.0003)	0.9761*** (0.0055)	0.9702*** (0.0072)	
Age at death, Ad parents			0.9960 (0.0063)	0.9969 (0.0083)	0.9947 (0.0069)
Share of dead children	0.1214	0.1490	0.1297	0.1655	0.1580
Sample	All CC	CC born <1953	All CC	CC born <1953	CC born <1953
Observations	1,674,637	1,126,649	4,069	2,194	2,949

*Notes:* Results from a proportional hazard model based on the Gompertz distribution. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for gender and birth cohort of both children and parents. Columns (1) and (2) are based on a sample of non-adopted children, columns (3)- (5) on adoptees. Column (1) and (3) is based on a sample of children with parents that are all dead (CC) in the end of the observation period. In column (2) and (4) an additional restriction is imposed that children are born before 1953. In column (5) the sample is restricted to adoptees born before 1953 with dead adopting parents.

**Table B4.** Cox proportional hazard model estimates of the associations between child mortality and parental age at death

	(1)	(2)
	Non-adoptees	Adoptees
Age at death, Bio mother	0.8824*** (0.0019)	0.8560*** (0.0311)
Age at death, Bio father	0.8971*** (0.0019)	0.8815*** (0.0320)
Alive 2013, Bio Mother	0.8191*** (0.0050)	0.9916 (0.0779)
Alive 2013, Bio Father	0.8382*** (0.0067)	0.8405* (0.0782)
Age at death, Ad mother		0.9811 (0.0389)
Age at death, Ad father		0.9885 (0.0373)
Alive 2013, Ad Mother		0.9272 (0.0934)
Alive 2013, Ad Father		1.0083 (0.1300)
<i>P-value joint significance</i>		
Biological parents	0.0000	0.0000
Adoptive parents		0.9175
Observations	2,833,838	1,0913

*Notes:* Results from Cox proportional hazard models. Standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression and all regressions include indicators for birth cohort of children, and five-year intervals for parental cohorts. Age at death is actual age at death among parents that have deceased (demeaned) and Alive is an indicator for being alive at the end of the observed period (August 2016).

**Table B5.** OLS estimates of associations between percentile rank of parental and child lifetime health measured by indices based on hospitalization data for mothers and fathers separately and the sample of adoptees with an unknown biological father

	Hospitalization			Health index		
	(1) Non-adoptees	(2) Adoptees	(3) Adoptees – Bio father unknown	(4) Non-adoptees	(5) Adoptees	(6) Adoptees – Bio father unknown
Bio Mother	0.0807*** (0.0007)	0.0752*** (0.0123)	0.0795*** (0.0083)	0.0682*** (0.0007)	0.0769*** (0.0124)	0.0734*** (0.0084)
Bio Father	0.0600*** (0.0007)	0.0691*** (0.0122)		0.0540*** (0.0007)	0.0500*** (0.0126)	
Ad Father		0.0331** (0.0131)	0.0258*** (0.0090)		0.0155 (0.0128)	0.0167* (0.0087)
Ad Mother		0.0150 (0.0128)	0.0195** (0.0087)		0.0097 (0.0127)	0.0183** (0.0086)
Biological parents	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Adoptive parents		0.0161	0.0008		0.3261	0.0116
Observations	1,937,645	6,117	13,095	1,937,645	6,117	13,095

*Notes:* Results from OLS regressions. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for gender and birth cohort of both children and parents. Columns (1) and (4) are based on a sample of non-adopted children, columns (2) and (5) on adoptees with all parents that are all known, in column (3) and (6) we add adoptees with unknown biological fathers. The dependent variable in columns (1) - (3) is a measure of hospitalizations, and the dependent variable in columns (4) - (6) is a health index. Both measures are ranked within cohort separately by mother, fathers, daughters, and sons.

**Table B6.** OLS estimates of associations between percentile rank of parental and child lifetime health measured by indices based on hospitalization data by gender

	(1)	(2)	(3)	(4)
	Women		Men	
	Non-adoptees	Adoptees	Non-adoptees	Adoptees
<i>Health index</i>				
Bio parents	0.1197*** (0.0013)	0.1160*** (0.0260)	0.1245*** (0.0013)	0.1361*** (0.0232)
Ad parents		-0.0078 (0.0254)		0.0520** (0.0236)
<i>Hospitalization</i>				
Bio parents	0.1456*** (0.0014)	0.1271*** (0.0251)	0.1359*** (0.0013)	0.1626*** (0.0231)
Ad parents		0.0576** (0.0263)		0.0414* (0.0239)
Observations	946,017	2,933	991,628	3,184

*Notes:* Results from OLS regressions. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for birth cohort of both children and parents. Column (1) and (2) shows results for women and column (3) and (4) for men. Columns (1) and (3) are based on a sample of non-adopted children, columns (2) and (4) on adoptees. In the upper panel, the results for hospitalization is shown, and in the lower panel, the results for health index is shown. Both measures are ranked within cohort separately by mother, fathers, daughters, and sons.

**Table B7.** Associations between percentile rank of parental health index and firstborn grandchild's health at birth, controlling for percentile rank of child's health

	(1)	(2)		(3)	(4)	(5)		(6)
	Birth weight	Hospitalization		APGAR<9	Birth weight	Health index		APGAR<9
		Low Birth weight				Low Birth weight		
<i>Non-adoptees</i>								
Child	0.0105*** (0.0014)	-0.0003*** (0.0000)		-0.0002*** (0.0000)	0.0146*** (0.0014)	-0.0003*** (0.0000)		-0.0002*** (0.0000)
Bio parents	0.0077*** (0.0018)	-0.0001*** (0.0000)		-0.0000 (0.0000)	0.0240*** (0.0018)	-0.0001*** (0.0000)		-0.0001*** (0.0000)
Observations	623,154	623,154		570,149	623,154	623,154		570,149
<i>Adoptees</i>								
Child	0.0307 (0.0229)	-0.0005** (0.0002)		-0.0001 (0.0002)	0.0498** (0.0234)	-0.0005** (0.0002)		-0.0001 (0.0002)
Bio parents	-0.0058 (0.0308)	-0.0000 (0.0003)		-0.0005** (0.0003)	0.0194 (0.0315)	-0.0004 (0.0003)		-0.0002 (0.0003)
Ad parents	0.0690** (0.0316)	-0.0006** (0.0002)		-0.0002 (0.0003)	0.0709** (0.0305)	-0.0003 (0.0002)		-0.0002 (0.0003)
Observations	2,152	2,152		1,964	2,152	2,152		1,964

*Notes:* Results from OLS regressions. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for mother's age at birth, child gender, year of birth, and grandparents' birth cohort. The upper panel is based on a sample of non-adoptees, and the lower panel on a sample of adoptees. The dependent variable in columns (1) and (4) is birth weight measured in grams and scaled into percentile ranks, in columns (2) and (5) it is a binary variable capturing if birth weight <2,500 grams, and in columns (3) and (6) the dependent variables is a binary variable capturing if APGAR score at 5 min is below 9.

**Table B8.** Cox proportional hazard model estimates of the intergenerational association in mortality for the non-adopted and adopted children with the same biological mother

	(1)	(2)	(3)	(4)	(5)
	Non-adoptees		Adoptees		
Age at death, Bio parents	0.9871*** (0.0026)	0.9822*** (0.0035)	0.9764*** (0.0061)	0.9693*** (0.0075)	
Age at death, Ad parents			0.9935 (0.0067)	0.9933 (0.0087)	0.9915 (0.0073)
Sample	All CC	CC born <1953	All CC	CC born <1953	CC born <1953
Observations	15,439	6,039	3,411	1,832	2,500

*Notes:* Results from Cox proportional hazard models. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for gender and birth cohort of both children and parents. The samples are overall restricted to children with a biological mother that has given at least one child up for adoption and raised at least one child of her own. Columns (1) and (2) are based on a sample of non-adopted children, columns (3)-(5) on adoptees. Column (1) and (3) is based on a sample of children with parents that are all dead (CC) in the end of the observation period. In column (2) and (4) an additional restriction is imposed that children are born before 1953. In column (5) the sample is restricted to adoptees born before 1953 with dead adopting parents.

**Table B9.** Linear probability model estimates of intergenerational association of dying before age 60, 65 and 70, respectively, for the non-adopted and adopted children with the same biological mother

	(1)	(2)	(3)	(4)	(5)	(6)
	Dead < age 60		Dead < age 65		Dead < age 70	
	Non-adoptees	Adoptees	Non-adoptees	Adoptees	Non-adoptees	Adoptees
Bio parents	0.0103 (0.0066)	0.0520*** (0.0145)	0.0272*** (0.0097)	0.0734*** (0.0186)	0.0304* (0.0175)	0.0580 (0.0400)
Ad parents		0.0017 (0.0139)		0.0026 (0.0185)		0.0311 (0.0423)
Mean dep var	0.0759	0.0678	0.0897	0.0806	0.0974	0.0892
Observations	12,532	4,069	6,106	2,096	2,117	470

*Notes:* Results from a linear probability model. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for gender and birth cohort of both children and parents. The samples are overall restricted to children with a biological mother that has given at least one child up for adoption and raised at least one child of her own. In columns (1) and (2), the sample is restricted so that all children are born before August 1956; in columns (3) and (4) before August 1951; and in columns (5) and (6) before August 1946. Columns (1), (3) and (5) are based on a sample of non-adopted children and columns (2), (4) and (6) on adoptees.

**Table B10.** Diagnoses codes for different diagnose categories

Diagnoses	ICD10 codes
Cancer	C00-D48
Circulatory	I00-I99
Respiratory	J00-J99
External	S00-T98, V01-Y98
Mental	F00-F99
Digestive	K00-K93
Preventable	C33-C34, K70, K74.3-K74.6
Treatable	A15-A19, B90, C53 , I05-I09, J00-J99, J45, J46, K35-K38, K40-K46, I10-I15, I60-I69, K80-K81

**Table B11.** Linear probability model estimates of intergenerational association of dying before age 65, by child cause of death.

	(1) Cancer	(2) External causes	(3) Circulatory	(4) Digestive	(5) Mental	(6) Respiratory	(7) Other	(8) Preventable	(9) Treatable
<i>Non-adoptees</i>									
Dead < age 65, Bio parents	0.0040*** (0.0004)	-0.0003 (0.0003)	0.0089*** (0.0004)	0.0013*** (0.0002)	0.0004*** (0.0001)	0.0009*** (0.0001)	0.0019*** (0.0002)	0.0021*** (0.0002)	0.0026*** (0.0002)
Observations	1,147,746	1,147,746	1,147,746	1,147,746	1,147,746	1,147,746	1,147,746	1,147,746	1,147,746
<i>Adoptees</i>									
Dead < age 65, Bio parents	0.0149 (0.0104)	0.0202** (0.0083)	0.0338*** (0.0102)	0.0040 (0.0051)	-0.0020 (0.0022)	0.0078* (0.0043)	-0.0032 (0.0057)	-0.0027 (0.0044)	0.0110* (0.0061)
Dead < age 65, Ad parents	-0.0006 (0.0108)	0.0012 (0.0077)	-0.0079 (0.0082)	-0.0002 (0.0048)	0.0007 (0.0033)	-0.0001 (0.0034)	0.0090 (0.0077)	-0.0010 (0.0051)	-0.0027 (0.0050)
Observations	2,470	2,470	2,470	2,470	2,470	2,470	2,470	2,470	2,470

*Notes:* Results from a linear probability model. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for gender and birth cohort of both children and parents. The sample is restricted so that all children are born before August 1951. In the upper panel results for non-adoptees are shown, and in the lower panel results for non-adoptees are shown. The grouping of the different diagnoses is displayed in Table B10.

**Table B12.** Competing risk Cox proportional hazard model estimates of the associations between percentile rank of parental longevity and child mortality by child cause of death.

	(1) Cancer	(2) External causes	(3) Circulatory	(4) Digestive	(5) Mental	(6) Respiratory	(7) Other	(8) Preventable	(9) Treatable
<i>Non-adoptees</i>									
Age at death, Bio parents	0.9885*** (0.0004)	0.9671*** (0.0005)	0.9951*** (0.0008)	0.9785*** (0.0012)	0.9759*** (0.0016)	0.9812*** (0.0006)	0.9707*** (0.0012)	0.9753*** (0.0010)	0.9692*** (0.0008)
Observations	1,674,637	1,674,637	1,674,637	1,674,637	1,674,637	1,674,637	1,674,637	1,674,637	1,674,637
<i>Adoptees</i>									
Age at death, Bio parents	0.9822* (0.0106)	0.9693*** (0.0101)	0.9678** (0.0159)	0.9878 (0.0210)	0.9636 (0.0374)	0.9938 (0.0122)	0.9191*** (0.0239)	1.0040 (0.0254)	0.9552** (0.0185)
Age at death, Ad parents	1.0003 (0.0112)	1.0094 (0.0144)	0.9987 (0.0183)	0.9717* (0.0165)	1.0278 (0.0378)	0.9817 (0.0137)	0.9577 (0.0283)	1.0209 (0.0229)	1.0084 (0.0223)
Observations	4,069	4,069	4,069	4,069	4,069	4,069	4,069	4,069	4,069

*Notes:* Results from a Cox proportional hazard models. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for gender and birth cohort of both children and parents. In the upper panel results for non-adoptees are shown, and in the lower panel results for non-adoptees are shown. The grouping of the different diagnoses is displayed in Table B10. The sample consists of children with parents that have all died (CC) in the end of the observational period (August 2016).

**Table B13.** Interaction effects between health of biological and adopting parents

	(1) Hospitalization	(2) Health index
Bio parents*Ad parents	-0.0020** (0.0008)	-0.0010 (0.0008)
Bio parents	0.2462*** (0.0438)	0.1795*** (0.0445)
Ad parents	0.1391*** (0.0405)	0.0663* (0.0370)
Observations	6,117	6,117

*Notes:* Results from OLS regressions. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for birth cohort of both children and parents. In column (1) results for hospitalization is shown, and column (2) the results for health index is shown. Both measures are ranked within cohort separately by mother, fathers, daughters, and sons.

**Table B14.** Sample restricted to first-born adoptees and adoptees who moved out from the municipality of birth

	(1) (2) Different municipalities		(3) (4) First-borns	
	Hospitalization	Health index	Hospitalization	Health index
Bio parents	0.1402*** (0.0182)	0.1233*** (0.0187)	0.2012*** (0.0247)	0.1256*** (0.0245)
Ad parents	0.0446** (0.0190)	0.0273 (0.0184)	0.0482* (0.0257)	0.0332 (0.0253)
Observations	5,240	5,240	2,910	2,910

*Notes:* Results from OLS regressions. Robust standard errors in parentheses; \*\*\* significant at 1%, \*\* at 5%, \* at 10%. Each column represents a separate regression, and all regressions include indicators for birth cohort of both children and parents. In column (1) and (2) the sample consists of adoptees with biological mothers living in a different municipality than their adopting mothers in the 1960. In column (3) and (4) the sample consists of first-born children that has been given up for adoption. Column (1) and (3) shows results for hospitalization and (2) and (4) for health index.