

The Long Run Impact of Cash Transfers to Poor Families

Anna Aizer

Shari Eli

Joseph Ferrie

Adriana Lleras-Muney

Online Appendix

I. Matching algorithm

A. Matching to the DMF

We start by matching our MP records to DMF. The match uses 6 variables: first name, middle initial, last name, day, month and years of birth. The match allows for errors in strings and in single digits for DOB. Specifically we convert all names/strings into sounds using the SOUNDEX function and match individuals based on this rather than based on the original strings to avoid dealing with changes in spelling and spelling mistakes. The procedure SPEDIS computes a measure of distance between strings and we use it to measure the quality of a match. We also allow for error in the dates.

Step 1: take as a possible match any pairs of observations meeting at least one of these criteria

- a. surname SOUNDEX codes match AND first letter of given names match AND year of birth is within 2 years
- b. first letter of surnames match AND given name SOUNDEX codes match AND year of birth is within 2 years
- c. first letter of surnames match AND first letter of given names match AND date of birth matches exactly
- d. surname SOUNDEX codes match AND date of birth matches exactly

Step 2: group the matches based on quality

First Best:

-birthdate matches exactly AND average SPEDIS score across surname and given name is 0 OR

-(birthdate matches exactly OR 2 of [birth month, day, year] match) AND (surname matches exactly OR one surname contains the other OR one surname contains the 1st three letters of the other) AND (given name matches exactly OR one given name contains the other OR one given name contains the 1st three letters of the other)

Second Best: if no "First Best" group

(year of birth matches exactly OR date of birth differs by a month or less) AND (surname matches exactly OR one surname contains the other OR one surname contains the 1st three letters of the other) AND (given name matches exactly OR one given name contains the other OR one given name contains the 1st three letters of the other)

Third Best: if no “First best” or “Second best” group
(year of birth is within 2 years) AND (surname matches exactly OR one surname contains the other OR one surname contains the 1st three letters of the other) AND (given name matches exactly OR one given name contains the other OR one given name contains the 1st three letters of the other)

Step 3: Retain only observations only if they were in one of the three categories in Step 2 AND average SPEDIS score across surname and given name is less than 9

Step 4. Retain only those observations with the "best" match AND the lowest average SPEDIS score across surname and given name is zero

Step 5. Retain only those observations with 5 or fewer matches to the DMF or state death records

These procedures rely heavily on two functions:

1. SOUNDEX: The SOUNDEX function encodes a character string according to an algorithm that was originally developed by Margaret K. Odell and Robert C. Russel (US Patents 1261167 (1918) and 1435663 (1922)). The algorithm is described in Knuth, The Art of Computer Programming, Volume 3. (See References.) Note that the SOUNDEX algorithm is English-biased and is less useful for languages other than English.

2. SPEDIS: SPEDIS returns the distance between the query and a keyword, a nonnegative value that is usually less than 100 but never greater than 200 with the default costs. SPEDIS computes an asymmetric spelling distance between two words as the normalized cost for converting the keyword to the query word by using a sequence of operations.

B. Matching to the 1940 Census and WWII

Matching to the 1940 Census and WWII records differs because date of birth is not available in these records, only year of birth. Each potential match is placed in one of four groups from most to least likely:

1. Birth year difference no more than one and an average "Levenstein distance" over given names and surnames no greater than three
2. Birth year difference no more than one and one given name is contained in the other and one surname is contained in the other, but the match does not fit into Group 1
3. Group 2 but allowing a birth year difference no more than two
4. Group 1 but allowing an average Levenstein distance over given names and surnames no greater than five.

Any matches in Group 1 are accepted over any in Groups 2 through 4; if there are no Group 1 matches, any matches in Group 2 are accepted over any in Groups 3 or 4; etc.

Levenstein distance is defined as the fewest number of single-character changes (substitution,

deletion, or insertion) needed to transform one name into another; e.g. Ferry --> Ferrie has a distance of 2 (one substitution and one addition).

Stringent and non-stringent matching procedures

II. State and county level data

A. State Data

State characteristics at the time of application include:

1-manufacturing wages (computed as the national manufacturing wages * ratio of state to national manufacturing earnings), education/labor laws (age must enter school age can obtain a work permit and whether a continuation school law is in place). These were obtained from Price Fishback at:

http://www.u.arizona.edu/~fishback/Published_Research_Datasets.html. The information is available for all years from 1900 to 1930.

2-state expenditures (education, charity and total expenditures on social programs). These were collected from various volumes of the Financial Statistics of the States and are available for 1915-1919, 1923-1930. We imputed missing values for 1923-1930 using linear interpolation within states.

B. State Mother's Pensions Laws

Available for years 1914, 1916, 1919, 1922, 1925, 1926, 1929 and 1934. Missing values were imputed using the last observation within state. The data for each year of the MP Laws was gleaned from the following resources:

- **1914:** "Laws Relating to 'Mothers' Pensions' in the United States, Denmark, and New Zealand" from the U.S. Department of Labor, Children's Bureau, Dependent Children Series, No. 1, Bureau Publication No. 7
- **1916:** "Widows' Pension Legislation" from the Bureau of Municipal Research and Training School for Public Service in New York, No. 85, May, 1917
- **1919:** Thompson, Laura A. 1919. "Laws Relating to 'Mothers' Pensions' in the United States, Canada, Denmark, and New Zealand." Washington, DC: U.S. Government Printing Office (U.S. Department of Labor, Children's Bureau, Legal Series No. 4, Bureau Publication No. 63)
- **1922:** Eckman, Lulu L. 1923. "Public Aid to Children in Their Own Homes: A Tabular Summary of State Laws in Effect November 1, 1922." Washington, DC: U.S. Government Printing Office (U.S. Department of Labor, Children's Bureau, Legal Chart No. 3)
- **1925:** Eckman, Lulu L. 1925. "A Tabular Summary of State Laws relating to Public Aid to Children in Their Own Homes in effect January 1, 1925 and the Text of the Laws of

Certain States.” Washington, DC: U.S. Government Printing Office (U.S. Department of Labor, Children’s Bureau, Chart No. 3)

- **1929:** “A Tabular Summary of State Laws relating to Public Aid to Children in Their Own Homes in effect January 1, 1929 and the Text of the Laws of Certain States.” Washington, DC: U.S. Government Printing Office (U.S. Department of Labor, Children’s Bureau, Chart No. 3)
- **1934:** “A Tabular Summary of State Laws relating to Public Aid to Children in Their Own Homes in effect January 1, 1934.” Washington, DC: U.S. Government Printing Office (U.S. Department of Labor, Children’s Bureau, Chart No. 3)

C. County data for Ohio

We include three county level variables available for a few years: total expenditures on relief, total expenditures on outdoor relief and total expenditures on children’s homes. These were collected from various volumes of the Ohio General Statistics, available for 1915-1922. We imputed missing values using linear extrapolation within counties.

III. Selection of controls from the 1900 (5%), 1910 (1%), 1920 (1%), and 1930 (5%) Censuses

The exercise of selecting controls from the censuses is difficult for two reasons. First there is very little information about the socio-economic status of women who are not married: prior to 1940 the census does not report education or earnings, and although occupation is available, very few women worked.¹ Also the Iowa census data suggest that a randomly chosen widow might not be very poor. Second, none of the census reports exact date of birth: 1900 and 1930 report year and month, and 1910 and 1920 only report year of birth. As a result it is more difficult to match these individuals with their death certificates. For this reason we allow a “softer” matching criteria for the census.

We selected all children under age 18 of women living in poor areas, and included black families and all children living in institutions. We further selected children by matching their characteristics to those of the MP applicants using propensity scores and then matched them to death certificates. Appendix Table 5 shows that despite our best efforts, our census samples differ substantially from MP children on observables: they are older when we observe them, they are disproportionately drawn from more recent cohorts, and they come from smaller families. There is also more measurement error for these samples in the age at death. Panel D of Figure 3 (as well as Appendix Table 5) shows that we match substantially fewer of these children to death certificates (in particular blacks).

Below is more detail on the controls chosen.

¹ Labor force participation among women in 1910 in the US is about 22% (Olivetti 2013) and this number is substantially lower among those with children (NEED CITE).

1-Black sample: All black children 18 and younger in poor minor civil divisions within MP states living in households and whose mother is marital status was “widowed”, “single/never married” “divorced” or “abandoned”

2-Controls in MP states:

- All white children 18 and younger
- living in poor minor civil divisions within MP states
- mothers’ marital status was “widowed”, “single/never married” “divorced” or “abandoned”
- matched by propensity score using gender, gender-specific year-of-birth dummies, age at application/observation dummies, number of siblings in each age category, dummies for (imputed) mother’s birthplace, number of letters in last name and state dummies.

3-Controls from neighboring states.

- All white children 18 and younger
- Living in poor minor civil divisions in control/neighboring states.
- Control states were selected based on a-geographic proximity, b-having no MP program, c-having an MP program with very few recipients according to Children’s Bureau publications.
- States chosen based on the following table:

MP state	Control state
Colorado	New Mexico (passed law in 1931).
Ohio	Kentucky (passed law in 1928) and Indiana
Connecticut	New Hampshire
Oklahoma	Missouri
Iowa	Missouri
Illinois	Indiana and Missouri

- matched by propensity score using the same covariates as listed above

NB: A *poor* minor civil division is defined as a minor civil division in which a-average earnings of adults in households were below the 50th percentile of socio-economic index in the combined 1900-1930 censuses or b-average earnings of adults in households were below the 50th percentile of Duncan occupational score in the combined 1900-1930 censuses, or c-average earnings of married men in dual households was below the 50th percentile.

IV. Sample Collection and Selection

A. Collection

We attempted to collect data on Mother's Pension applicants from every county that maintains historical records on the program. We did not collect records from a county if date of birth of the children was missing. Our search efforts included the following: searching on "mother's pension" or "widow's pension" using familysearch.org (the genealogical records maintained by the Church of Jesus Christ of Latter-Day Saints) and online directories of state archives and in some cases, individual county archives. The vast majority of these records are publicly available to researchers. In only one state where we found records, Washington, were the records were not publicly available. In this case, we were able to gain access to them on the condition that we not release identifying information related to the families in the records.

Of 50 states, six did not have an MP program until 1928 (these include Alabama, Georgia, Kentucky, Mississippi, New Mexico, and South Carolina.) We do not find any records for these six states. Moreover, if we had, we would have had only 2 years' worth of records given that we do not include post-1930 applicants. The decision not to include post 1930 applicants was made based on the fact that 1) many counties ran out of funds for their MP program and discontinued new pensions during the period of the Great Depression, and 2) those counties that maintained their programs expanded their eligibility criteria to provide aid to intact families in which the father was able-bodied but unemployed. As a result, the types of families that received Mothers Pension benefits changed significantly at this time.

Of the 44 states with an MP program established prior to 1928, we found records for 14 of them. These include: Colorado, Connecticut, Idaho, Illinois, Iowa, Minnesota, Montana, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Washington, Wisconsin. Of the 14 states with MP records, three of the states did not maintain any information on applicants to the MP program who were denied and were dropped from the analysis as a result (Colorado, Montana and Pennsylvania).

B. Sample Selection

Among the 11 states that had MP records with information on rejected applicants, MP records were available for 158 counties. Of these 158 counties, 152 kept records that included full name, date of birth and year of application for all children – three pieces of information that we require to match MP records with death, WWII and 1940 census records. Of the 152 counties, 86 also included information on children whose mothers applied but were rejected.

Imposing these sample restrictions reduces the number of children from the original sample size of 77,077 to a sample of 16,069. Table S5 shows how the sample size changes as we include additional criteria for inclusion in the sample. First, we remove those with missing information on year of birth, first or last name, or year of application, or those older than 19 year old. This reduces the sample size to 70,512. Second, we drop all females, resulting in sample size of 35,694. Third, we limit the sample to those born between 1900 and 1925, so as to increase the probability of death by 2013, which reduces the sample to 31,957. Next we remove those who

applied after 1929 so as to remove families who applied during the Great Depression when many counties closed their MP programs to new families or expanded eligibility to include two parent families, which reduces the sample to 26,660. Finally we remove children in counties without information on rejected applicants which reduces the sample to 16,069.

C. Sample Representativeness

To assess the extent to which the subset of counties included in our analysis are representative of counties in the US at the time, we present the results of regression analyses in which we assemble a dataset of all counties in 1910 (n=3031) and regress an indicator equal to 1 if the county was included in the final analysis sample (n=86) on county characteristics as measured in the 1910 Census. The county characteristics include: the average Duncan Socio Economic Status Index, the share poor (defined as the share below the 20th percentile of the national Socio Economic Status Index), the share elderly, the share less than 18 years old, the share white, share foreign born, share of women and men who are literate, the female labor force participation rate, the share working in agriculture, the share working in manufacturing, the share living on a farm and the size (population) of the county.

The regression results presented in Table S6 suggest little selection into our sample based on these characteristics. None of the county characteristics is statistically significantly predictive of inclusion in the sample with the exception of the average socio economic index which is slightly higher in our analysis sample, though the point estimate is very small (0.002) and not economically meaningful. A second coefficient on share foreign born is also positive (0.06) and significant at the 10% level. This likely reflects the fact that no southern states are included in our analysis sample both because they were the last to establish MP programs and because we were unable to locate any surviving MP records for the South. We conclude that the subset of counties included in our analysis are similar in many ways to the overall population of counties in the U.S at this time, especially those in the non-Southern states.

Though the counties we include in our analysis sample do not appear to differ significantly from the general population of counties in terms of the characteristics of inhabitants, it could be that the counties still differ in terms of the poor relief they offer. This could affect the level of public support that mothers who are rejected from the MP program receive, thereby affecting our estimates. We have information on poor relief (outside of the Mother's Pension program) at the level of the county for the state of Ohio. Specifically, we have county-level information on the number of children in children's homes, expenditures on outdoor poor relief and overall expenditures on poor relief (each calculated per 10,000 inhabitants of the county). When we compare the average county characteristics including poor relief for counties in Ohio which we do not include in our sample (n=82) and those that we do (n=17), we see that the county characteristics are very similar, as are the number of children in children's homes and total expenditures on poor relief. However, counties included in our analysis sample spend more on outdoor poor relief than other counties. If counties that we include in our sample are more generous in terms of poor relief, then this would likely lead to an underestimate of the impact of MP benefits on children's outcomes because rejected mothers in these counties would have access to other sources of support.

Figure S1a: Predicted % without age at death by cohort
Among all US males

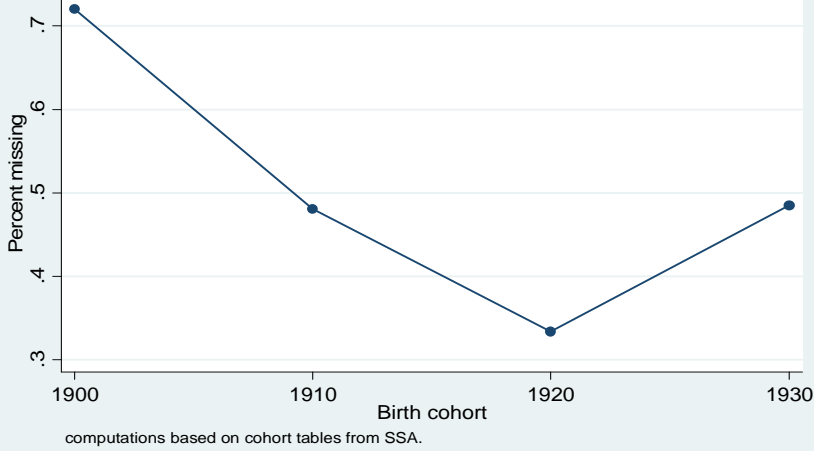
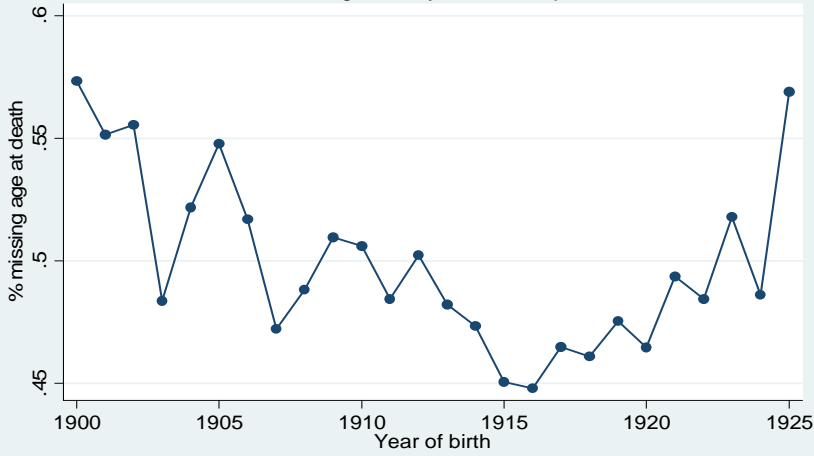


Figure S1b: Pattern of missing data by cohort
Among MP boys. Full sample



Survival rates in MP sample and 1910 cohort
Boys whose mothers were rejected

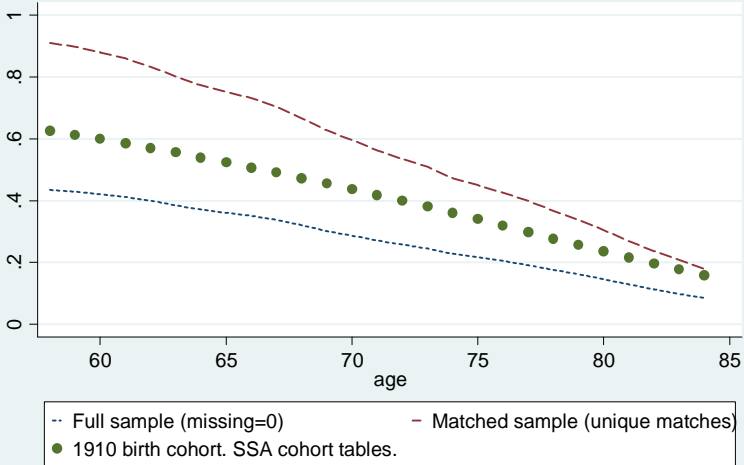


Figure S2a: Age Applied

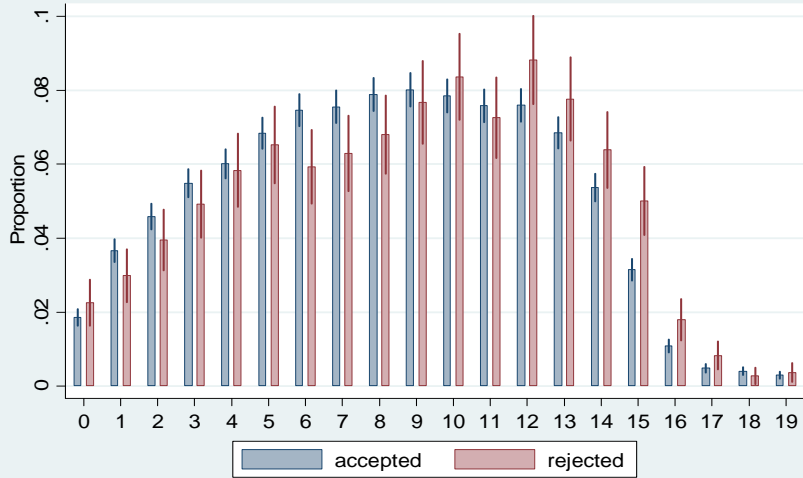
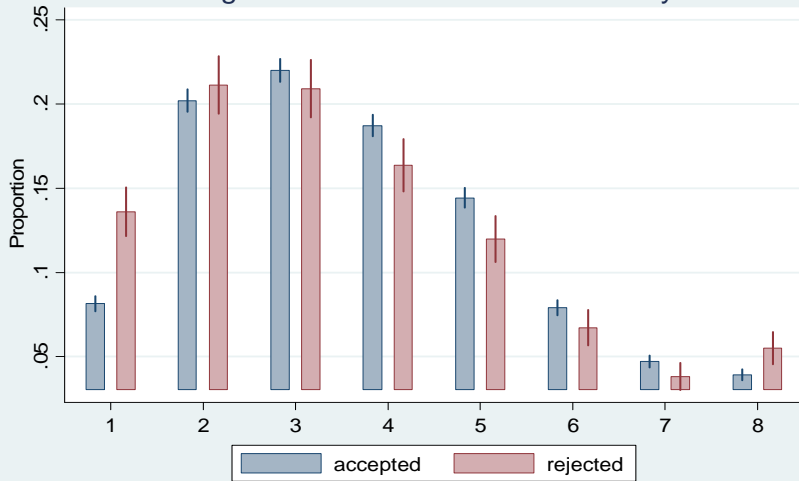


Figure S2b: Number of kids in family



86% sample born 1920 and earlier.

Figure S2c: Youngest kid in family

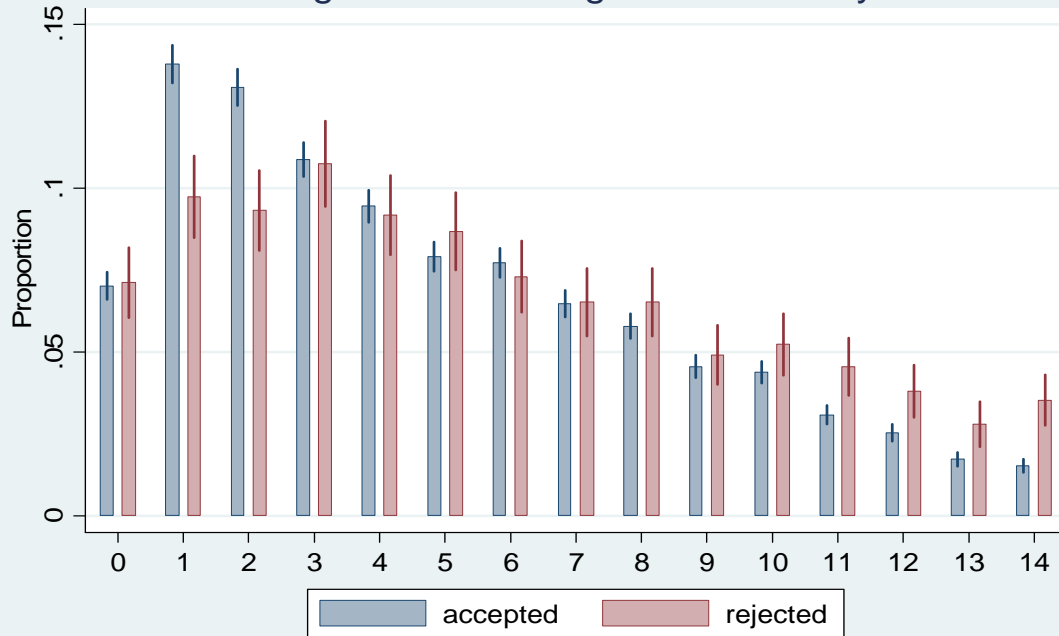
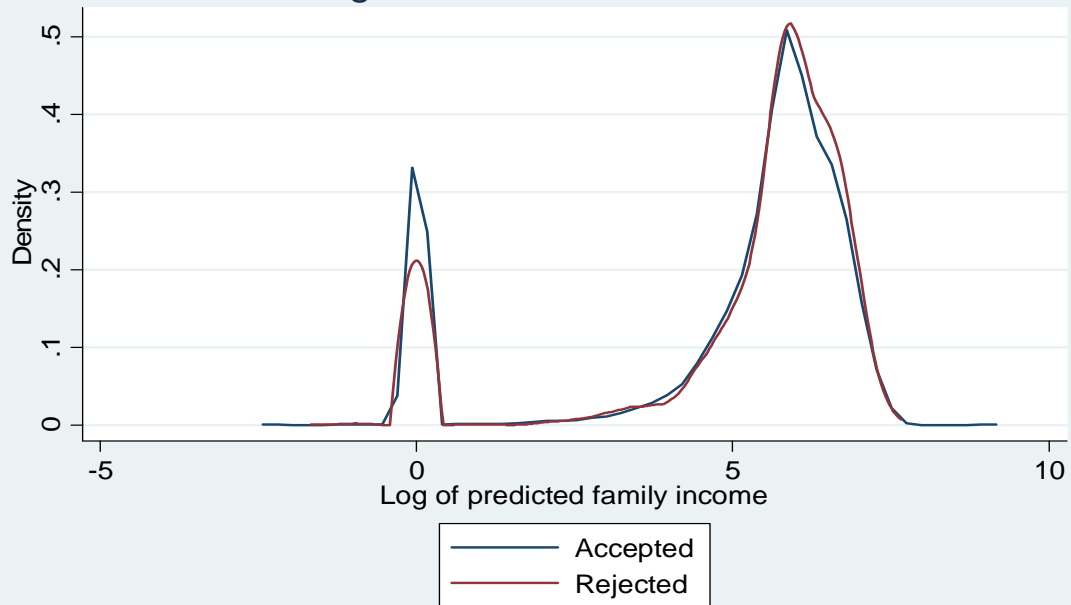


Figure S2d: Predicted income



Income predicted using the 1915 Iowa census. Incomes lower than or equal to 0 set equal to one.

Figure S3: Distribution of father's occupation in the 1900-1920 Federal Censuses for Ohio sample, by accepted status.

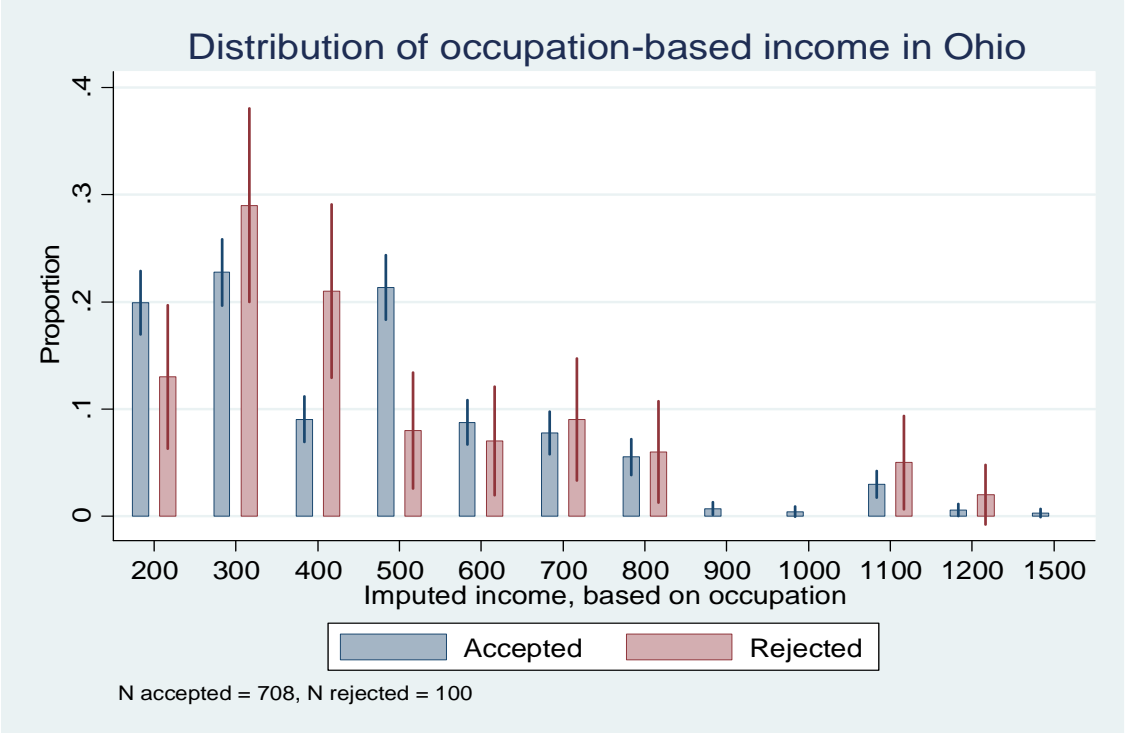
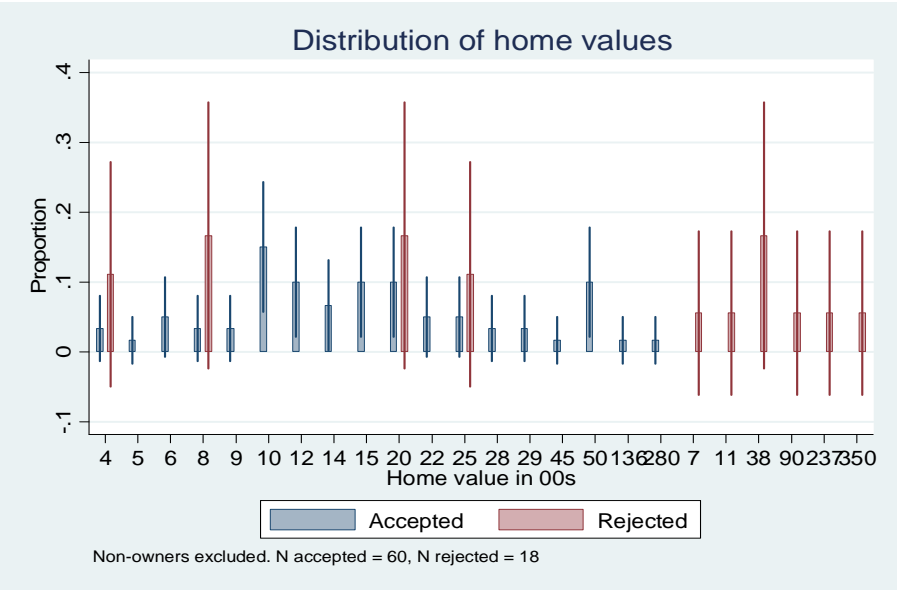
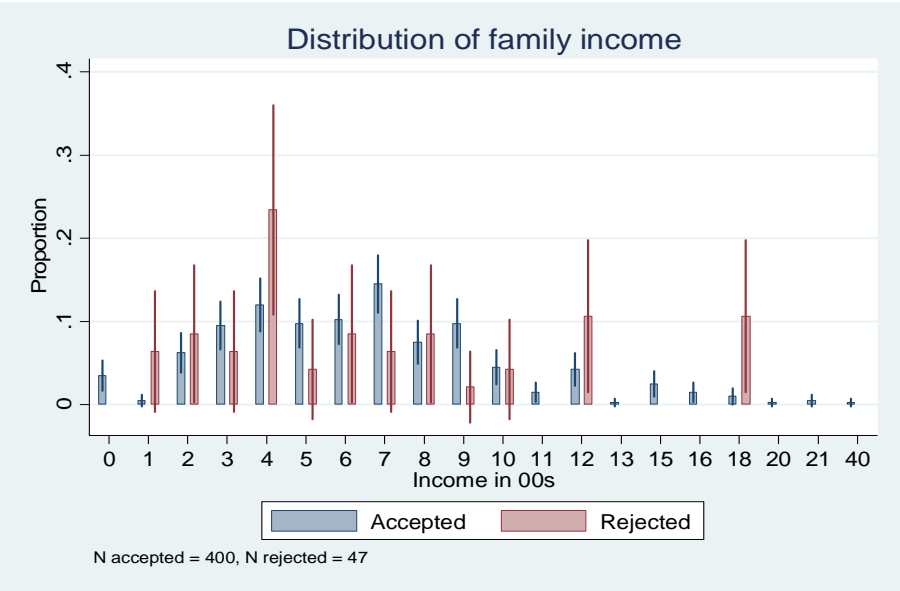
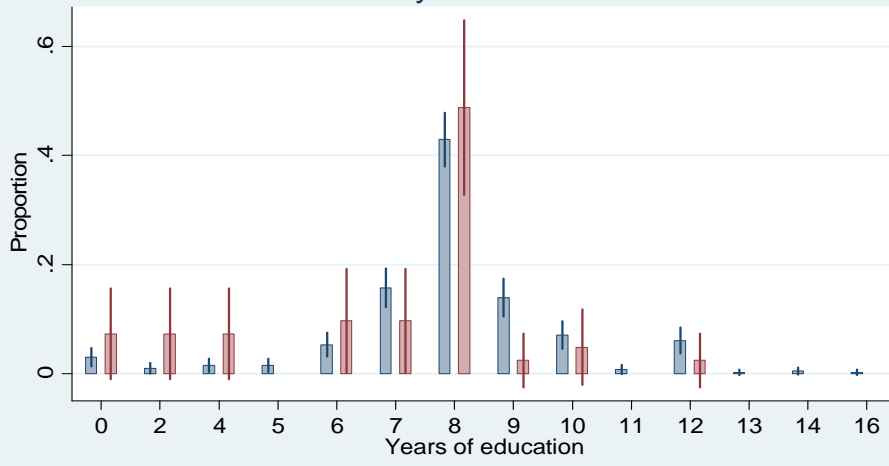


Figure S4: Distribution of pre-application socio-economic characteristics in the 1915 Iowa Sample, by accepted status.



Father's years of education



Accepted Rejected

N accepted = 394, N rejected = 41

Figure S5: Coefficient of Accepted
on probability of having income above percentile



Graph displays coefficients and 95% confidence intervals, with and without controls

Fig S6: Comparison of average MP characteristics in 1931 in MP records collected and reports of the Children's Bureau

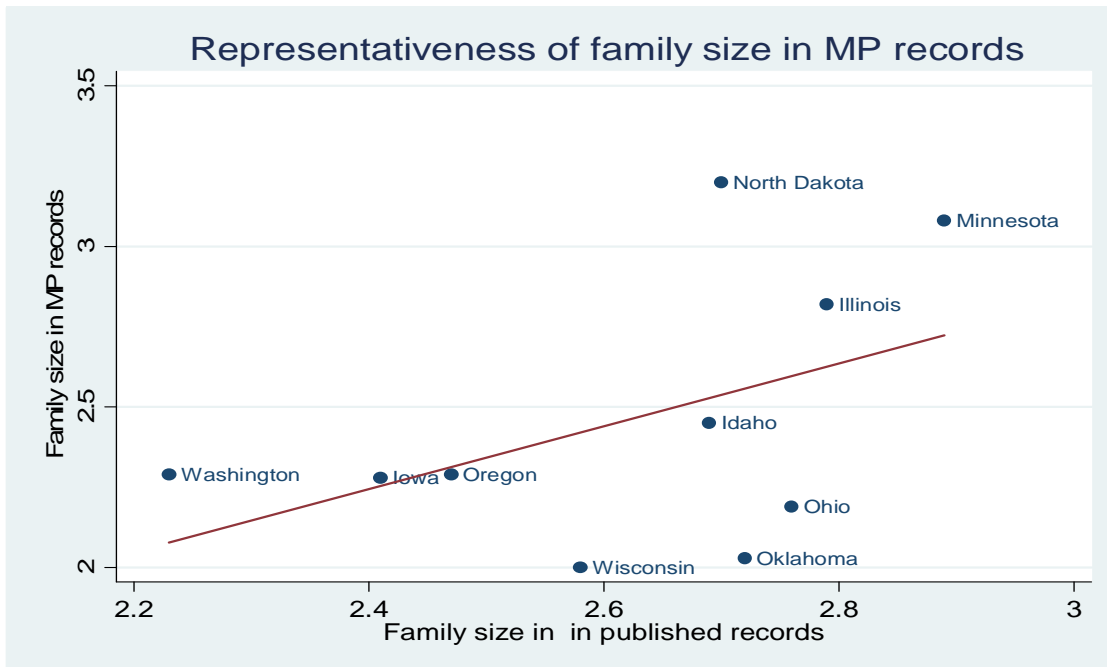
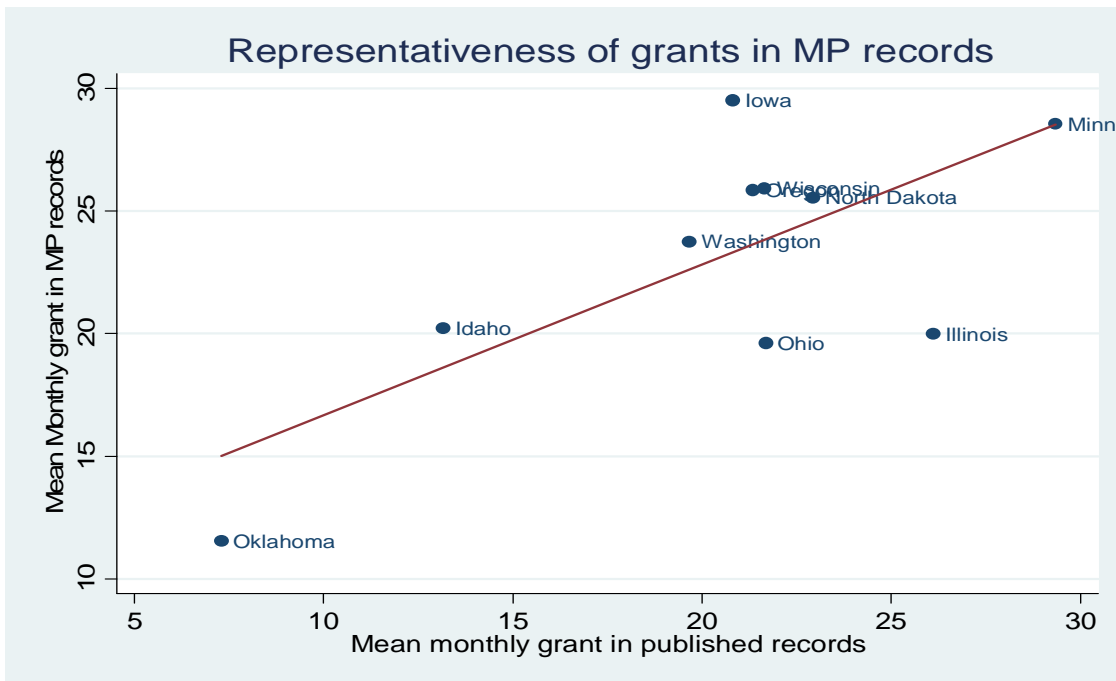


Table S1 Mothers' Pension Program Characteristics in 1922

States with MP Records Collected

State (year MP enacted)	Eligibility					Requirements			Benefits		
	Deserted / divorced	Husband in institution	Age elig.	Resident	Citizen	Prop. limit	Work	Re-apply ?	1st child	add'l child	Max
Connecticut (1919)	No	no	16	No	No				**	**	No
Idaho (1913)	No	yes	15	Yes	No				10	5	No
Illinois ^a (1911)	No	yes	14	Yes	Yes	yes	yes		25	15	60
Iowa (1913)	No	yes	16	No	No				12	12	No
Minnesota (1913)	Yes	yes	16	Yes	Yes	yes	yes	yes	20	15	No
North Dakota (1915)	No	no	14	Yes	No				15	15	No
Ohio (1913)	Yes	yes	16	Yes	No		yes	yes	35	10	No
Oklahoma (1915)	No	yes	14	Yes	No				10	5	No
Oregon (1913)	No	yes	16	Yes	Yes	yes	yes	yes	15	10	60
Washington (1913)	No	no	15	Yes	No			yes	15	5	No
Wisconsin (1913)	Yes	yes	14	Yes	No	yes	yes		15	10	No

Source: Children's Bureau (1922c).

**Connecticut's law had a more complicated schedule of payments depending on the family characteristics.

*Colorado's law did not determine any minimum or maximum amounts but specified that amounts should be deemed

a. larger amounts were given in counties with populations with more than 300,000. For smaller areas the amounts were 15/10

“Work” consists of laws that specified that maternal employment could be demanded and constrained in terms of the number of days/hours at work.

“Citizenship” consists or requiring either citizenship or the intention of becoming one.

Table S2: Income and Wealth by family composition in the Iowa 1915 Census
Sample: Boys 0-18 living in households with at least one child under 14

Household with	No married man in household				Married woman and married man
	Widow	Divorced woman	Single woman	Married woman	
Panel A: IOWA Census					
Total family earnings	684	316	280	504	1,109
% below 30th percentile of family earnings	52	73	80	66	17
# of kids under 14 in household	2.6	1.8	1.9	2.7	3.1
Number of people in household	5.4	3.4	3.7	5.3	6
Earnings per capita	127	93	76	95	185
% own house/farm	50%	7%	15%	27%	47%
Value of house/farm (if owns)	7,372	2,146	6,697	12,498	11,042
<i>N of individuals ages 0-18</i>	<i>604</i>	<i>97</i>	<i>143</i>	<i>970</i>	<i>14,792</i>
Panel B: predicted income in MP sample using IOWA					
Full sample	438	307	222	310	
Accepted	435	306	222	303	
Rejected	461	312	-	354	
<i>N</i>	<i>8438</i>	<i>471</i>	<i>2</i>	<i>2927</i>	

Author's tabulations from the Iowa 1915 census.

Predictions in Panel B come from estimating a linear regression of family earnings on a dummy for widow, the number of children age 0, number age 1, ..., number of children age 17, the length of family name and the interactions between widow, number of children of a given age, and length of family name. The R^2 of this regression is 0.18. We then use the coefficients from this regression to predict family earnings in our sample using the identical set of regressions. Predicted values below 0 set equal to one dollar.

Table S3 Generosity of Transfers in Real Terms

State	1911-1930 transfers in all MP records as a function of income				1919 transfers in estimation sample as a function of income		
	Monthly MP amount	Monthly wages in manufacturing in state	Amount as % of manufact. wage	Estimated % of total family income in MP families	Monthly MP amount	Household income: urban two parent households*	Farm Laborer Income in Region**
Idaho	19.76	121.88	16%		20.9		59.2
Illinois	16.46	117.23	14%	29% ^a	16.8	126.91	42.21
Iowa	30.59	103.91	29%	44% ^b	25.92	124.18	50.81
Minnesota	23.67	104.11	23%	50% ^c	19.56	124.60	50.81
North Dakota	33.03	120.31	27%		34.23		50.81
Ohio	11.07	115.2	10%	100% ^e	9.875	121.11	42.21
Oklahoma	13.27	108.46	12%		14.33	130.90	36.19
Oregon	19.42	114.6	17%		22.35	136.96	65.3
Washington	20.94	121.01	17%		23.4	130.31	65.3
Wisconsin	20.31	102.04	20%		25	114.06	42.21

*Computed from ICPSR study "COST OF LIVING IN THE UNITED STATES, 1917-1919."

**State average imputed using the census region average reported in: <http://hsus.cambridge.org/HSUSWeb/table/seriesprev.do>. The original data source is: Lebergott, *Manpower in Economic Growth: The American Record since 1800* (McGraw-Hill, 1964), Tables A-23 and A-24, pp. 257ff.

Connecticut is excluded because we have only 3 observations in 1919.

- Computed from MP records using observations with maternal earnings. Records from Montgomery county show maternal income as varying from 50 cents per week, up to 10 dollars a week, making the percentage even higher (Dahlquist 2011). Sample size not reported.
- N=244. Computed using the average family pension 1915-1919 in Iowa MP records and average income from the 1915 Iowa Census.
- N=62. Clay County MP records 1930.
- N=100. First 100 cases in Hamilton County Ohio. 1914 (Bullock, 1915). Computed as the average MP pension divided by monthly wages of mothers. Other sources of income not reported.

Table S4a: Representativeness of MP Data Collected
State-Level and National Averages

	MP data collected for 1930				Published Statistics 1931*			
	New beneficiaries				All beneficiaries receiving transfers			
	# families	# children	Mean monthly grant	Mean family size ^a	# families	# children	Mean monthly grant	Mean Family size
Idaho	75	184	20.22	2.45	230	619	13.16	2.69
Illinois	68	192	19.99	2.82	6087	17004	26.11	2.79
Iowa	81	185	29.51	2.28	3242	7829	20.81	2.41
Minnesota	40	123	28.54	3.08	3455	9990	29.35	2.89
Ohio	365	800	19.63	2.19	7708	21262	21.68	2.76
Oklahoma	78	158	11.53	2.03	1896	5166	7.29	2.72
Oregon	76	174	25.86	2.29	862	2127	21.35	2.47
North Dakota	20	58	25.54	3.2	978	2644	22.93	2.60
Washington	316	723	23.75	2.29	2517	5605	19.66	2.23
Wisconsin	37	74	25.93	2	7052	18188	21.66	2.58
Avg. in These States ^b			23.71	2.52636			20.80	2.75
Avg. in All U.S. MP States ^b							31.97	2.71

*Published data come from Children's Bureau (1931). Connecticut is excluded because we only have 3 observations for 1930.

^a in our data, we count the number of children in the application. Using the published statistics we compute family size as as #children/#families;

^b Unweighted.

Table S4b: Evaluating Data Accuracy From County Level Publications

	average grant per child 1929	average grant in our records 1925-1930	N in our records
<u>Panel A: Illinois*</u>			
Champaign	15	8.45	110
Cook	25	6.21	278
Effingham	5	3.17	23
Macon	8	7.40	265
Macoupin	4	3.06	352
Massac	5	4.84	31
McDonough	10	6.80	102
Montgomery	7.5	3.05	230
Perry	3.5	3.00	5
<i>Average</i>	<i>9.22</i>	<i>5.11</i>	
<u>Panel B: Wisconsin</u>			
	average per family 1920	average grant in our records 1918-1922	N
Burnett	19.33	23.18	11
Calumet	30.03	25.00	2
Pierce	24.68	36.49	75
Waupaca	21.37	23.30	97
Waushara	19.11	30.00	1
<i>Average</i>	<i>22.90</i>	<i>27.59</i>	
	average per family 1927	average grant in our records 1925-1929	N
Burnett	22.36	20.68	99
Pierce	29.7	34.41	128
Waupaca	18.5	19.54	76
Waushara	14.83	20.38	24
<i>Average</i>	<i>22.976</i>	<i>23.75</i>	

*Data for Illinois published in Zimmerman, Edna "State Aid for Mother's Pensions in Illinois," Social Service Review, vol4, No. 2, p 222-237, June 1930

**Data for Wisconsin 1920 and 1927 come from County treasurer reports, data for 1921 reported in Aid to Dependent Children's Law in Wisconsin (Mothers' Pension Law) 1921. State Board of Control of Wisconsin, Madison Wisconsin 19

Table S5: Sample Selection

	Number of individuals in all records collected	Drop if yob, first and last name, or year of application are missing or if age>19 or age<0	Males	YOB 1900- 1925	Drop post 1930 applicants	Drop states without rejected applicants	Drop counties without rejected applicants
Colorado	666	662	353	354	285		
Connecticut	326	303	147	126	99	99	99
Idaho	4,432	4,247	2,069	2,151	1,536	1,536	854
Illinois	3,762	3,325	1,690	1,559	1,357	1,357	726
Iowa	3,074	2,982	1,477	1,290	1,115	1,115	812
Minnesota	4,750	4,040	2,025	1,751	1,478	1,478	553
Montana	1,829	1,812	931	877	753		
North Dakota	1,818	1,716	843	777	694	694	628
Ohio	20,064	19,043	9,573	8,678	7,273	7,274	5,803
Oklahoma	2,548	2,435	1,268	1,008	773	773	773
Oregon	6,455	4,847	2,426	2,163	1,839	1,839	1,436
Pennsylvania	8,560	7,107	3,533	3,310	3,269	5,375	4,292
Washington	17,394	16,637	8,208	6,909	5,375		
Wisconsin	1,399	1,356	1,151	1,004	814	814	93
Total individuals	77,077	70,512	35,694	31,957	26,660	22,354	16,069

Table S6: Selection into the Sample Based on County Characteristics

	(1) Final Sample for analysis	(2) Avg. County Characteristic	(3) Std. Dev County Characteristic
Poverty rate	-0.00169 [0.0409]	0.16	0.1
Avg Socio-economic index	0.0028 [0.000995]	20.58	4.98
Share elderly	-0.128 [0.133]	0.04	0.03
Share less than 18	-0.00322 [0.0552]	0.44	0.09
Share white	0.0253 [0.0218]	0.86	0.22
Share foreign born	0.0548 [0.0342]	0.09	0.11
Share women literate	0.201 [0.130]	0.98	0.03
Share men literate	0.196 [0.177]	0.99	0.02
Labor force participation rate of women	-0.00451 [0.0353]	0.21	0.14
Share in agriculture	0.0159 [0.0650]	0.21	0.11
Share in manufacturing	0.0548 [0.0907]	0.07	0.05
Population (in 10,000)	-0.000213 [0.000168]	6.81	19.34
Share living on farm	0.0197 [0.0266]	0.52	0.24
Observations	2,955		
R-squared	0.017		
Number of counties in "final sample"	77		

Each observation is a county and the sample includes 2955 counties in the US in 1910. County characteristics come from 1910 census data. "Final Sample" consists of counties in which MP records for accepted and rejected children survive and that include males born between 1900 and 1925, were less than 20 years old at the time of application, applied before 1931, and have non-missing information on year of birth and name.

Table S7a: Robustness Checks. Coefficient on Accepted on the probability of surviving past 70

	Accepted=1		Obs	Mean Y	% effect
	beta	se			
Panel A: Logit					
Unique matches and missing dropped	0.268***	[0.071]	7,835	0.596	11%
Unique matches and missing imputed as dead	0.215***	[0.058]	15,735	0.273	16%
Random match and missing imputed as dead	0.206***	[0.055]	16,068	0.280	15%
All matches treated as observations, missing imputed as dead	0.204***	[0.055]	16,554	0.287	15%
Keep highest quality match	0.210**	[0.094]	5,826	0.609	8%
Panel B: MLE (Logit model)					
All matches and missing imputed as dead	0.212***	[0.056]	16,068	0.287	15%
Sample matched on propensity score	0.206***	[0.056]	16,068	0.28	15%
Drop individuals with 3 or matches	0.210***	[0.056]	15,976	0.284	15%
Individuals with 1 or 2 matches, missing dropped	0.253***	[0.076]	8,100	0.602	10%
Panel C: results for Ohio (Logit)					
a. original DMF data					
No county controls	0.256***	[0.087]	5,469	0.298	18%
Add county*year controls	0.260***	[0.087]	5,469	0.298	18%
Drop missing	0.225*	[0.130]	2,374	0.581	9%
c. Additional deaths from any source					
No county controls	0.196**	[0.082]	5,469	0.387	12%
Add county*year controls	0.200**	[0.082]	5,469	0.387	12%
Drop missing	0.224**	[0.096]	4,043	0.535	10%

Table S7b: Effect share accepted on survival rates and mean age at death

	Survived to 70		Average age at death	
no weights	0.0486*** [0.018]	0.0378* [0.021]	1.249** [0.538]	1.424** [0.640]
pop weights	0.0737*** [0.018]	0.0482*** [0.016]	1.712*** [0.484]	1.928*** [0.625]
Observations	6,187	6,187	4,073	4,073
Mean	0.292	0.292	72.75	72.75
State and cohort dummies	X		X	
all controls		X		X

Table S7c: Differences between Accepted and rejected applicants among subgroups. Coefficient on accepted reported.

Subgroup	Year of application	Year of birth of child	Child age (years)	Day or month of birth missing	Number of children in family	Age of oldest children in family	Age of youngest children in family	Length of family name	Widow	Divorced	Husband abandoned/prison/hospital	Mother's marital status unknown	Predicted family income	N
Income above median	1.283 [0.805]	1.629* [0.867]	-0.344** [0.151]	0.014* [0.007]	0.094 [0.189]	-0.48 [0.336]	-0.871*** [0.271]	-0.003 [0.105]	0.045 [0.046]	0.005 [0.013]	-0.003 [0.024]	-0.047 [0.050]	-4.758 [19.024]	3944
Income below median	0.551 [0.789]	0.854 [0.698]	-0.303 [0.244]	0.008 [0.007]	0.303 [0.185]	0.123 [0.327]	-0.299 [0.210]	0.1 [0.097]	-0.006 [0.050]	-0.004 [0.018]	0.034 [0.034]	-0.024 [0.068]	-11.342 [8.924]	3,915
Fraction urban above median	2.047* [1.086]	2.257* [1.090]	-0.223 [0.181]	0.002 [0.002]	0.598*** [0.140]	0.253 [0.149]	-0.816*** [0.218]	0.001 [0.118]	0.049 [0.076]	0.022 [0.017]	0.061* [0.034]	-0.132 [0.088]	-36.276** [13.999]	4,283
Fraction urban below median	-0.365 [0.881]	0.493 [0.925]	-0.844*** [0.221]	0.023* [0.013]	-0.228* [0.133]	-1.080*** [0.358]	-0.756*** [0.280]	0.03 [0.101]	-0.014 [0.045]	-0.023* [0.013]	-0.036 [0.025]	0.073 [0.047]	-35.874 [24.098]	3,577
% foreign born above median	1.463 [1.252]	2.03 [1.227]	-0.579*** [0.171]	0.017 [0.013]	0.207 [0.177]	-0.383 [0.410]	-0.898*** [0.185]	0.039 [0.087]	0.103 [0.078]	0.016 [0.020]	0.024 [0.042]	-0.143 [0.086]	-27.938 [21.345]	3,729
% foreign born below median	0.414 [0.878]	0.903 [0.863]	-0.481* [0.238]	0.006 [0.005]	0.197 [0.238]	-0.38 [0.351]	-0.711*** [0.263]	-0.017 [0.124]	-0.044 [0.032]	-0.014 [0.012]	0.008 [0.029]	0.05 [0.040]	-42.031** [17.671]	4,131
Age<=14	0.95 [0.794]	1.295 [0.799]	-0.347** [0.153]	0.013** [0.006]	0.214 [0.138]	-0.288 [0.257]	-0.705*** [0.158]	-0.017 [0.080]	0.02 [0.044]	0 [0.015]	0.021 [0.025]	-0.041 [0.054]	-23.762* [12.825]	7,408
Age<=10	0.765 [0.791]	0.812 [0.712]	-0.05 [0.184]	0.012* [0.006]	0.233 [0.164]	-0.019 [0.313]	-0.356* [0.185]	-0.004 [0.070]	0.011 [0.051]	0.006 [0.018]	0.025 [0.030]	-0.042 [0.064]	-16.849 [11.167]	5,203
Born 1900-1920	1.022 [0.717]	1.535** [0.608]	-0.529*** [0.188]	0.012* [0.007]	0.231 [0.147]	-0.357 [0.257]	-0.869*** [0.193]	0.011 [0.076]	0.017 [0.040]	-0.002 [0.014]	0.001 [0.021]	-0.016 [0.048]	-37.725** [15.132]	6,798
Born 1900-1910	0.960*** [0.312]	1.023*** [0.208]	-0.097 [0.212]	0.016* [0.008]	0.419*** [0.175]	-0.353 [0.359]	-1.308*** [0.217]	0.009 [0.109]	0.06 [0.036]	-0.020** [0.009]	-0.032 [0.023]	-0.008 [0.044]	-24.082 [27.387]	2,524
Born 1911-1920	-0.15 [0.580]	0.133 [0.212]	-0.295 [0.409]	0.011 [0.007]	0.063 [0.147]	-0.039 [0.342]	-0.2 [0.369]	0.002 [0.082]	-0.016 [0.056]	0.009 [0.025]	0.023 [0.029]	-0.017 [0.070]	-28.403* [15.763]	4,274
Family size 3-7	0.396 [0.690]	1.068* [0.639]	-0.665*** [0.196]	0.01 [0.007]	0.014 [0.083]	-0.671** [0.276]	-0.659*** [0.172]	0.007 [0.091]	0.017 [0.047]	-0.007 [0.013]	0.025 [0.024]	-0.036 [0.058]	-53.841** [20.840]	5,178

* p<0.10, ** p<0.05. Each entry in the table reports the coefficient of a regression of the individual characteristic listed in each column on a dummy for "accepted" and the standard errors are clustered at the county level. This regression is repeated for each subgroup separately.

Table S8: Summary statistics for Ohio, WWII and 1940 census samples (unique matches only)

	Ohio sample		WWII sample		1940 sample	
	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted
Year of application	1,921.03	1,920.92	1,922.84	1,923.21	1,921.49	1,922.21
YOB of child	1,912.33	1,912.60	1,914.81	1,915.71	1,912.79	1,913.87
Child age (years)	8.66	8.29	8.03	7.48	8.7	8.37
Number of kids in family (imputed)	3.4	3.79	3.5	3.76	3.65	3.8
Age of oldest kid in family record	11.61	11.66	11.44	11.02	11.57	11.45
Age of youngest kid in family record	5.44	4.71	5.21	4.49	5.36	4.8
Length of family name	6.36	6.29	6.17	6.25	6.59	6.42
Widow	0.49	0.48	0.53	0.54	0.56	0.55
Divorced or never married	0.01	0	0.02	0.03	0.02	0.03
Husband abandoned, in prison/hospital	0.16	0.18	0.18	0.21	0.16	0.2
Mother's marital status unknown	0.34	0.33	0.26	0.22	0.27	0.23
Day or month of birth missing	0	0.01	0.01	0.02	0.01	0.02
Number of children	594	3282	291	2155	249	1850