A Appendix Figures

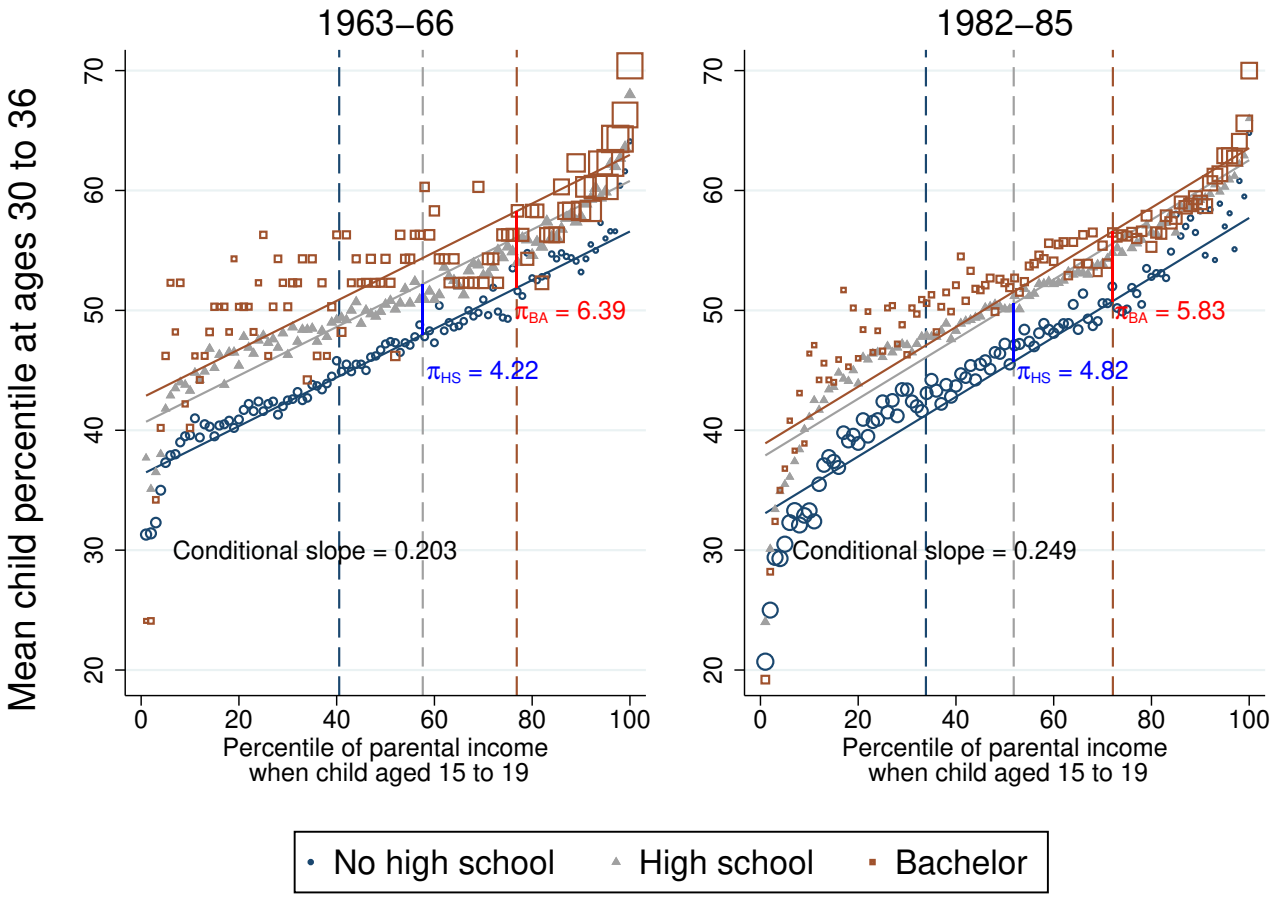

Figure A1: Intergenerational rank mobility within maternal education groups, 1963-66 and 1982-85 birth cohorts

Source: Authors' calculations based on the IID+

Note: Each point in this graph represents the mean child percentile rank for a given parental income rank, where child income is measured at ages 30 to 36 and parental income is average annual family income when the child is aged 15 to 19. The markers are weighted using the number of children in each cell. The slopes are coefficients from linear rank-rank regressions of child income rank on parent income rank controlling for parental education dummies. The values of π_{HS} and π_{BA} are the estimated coefficients on those dummy variables.

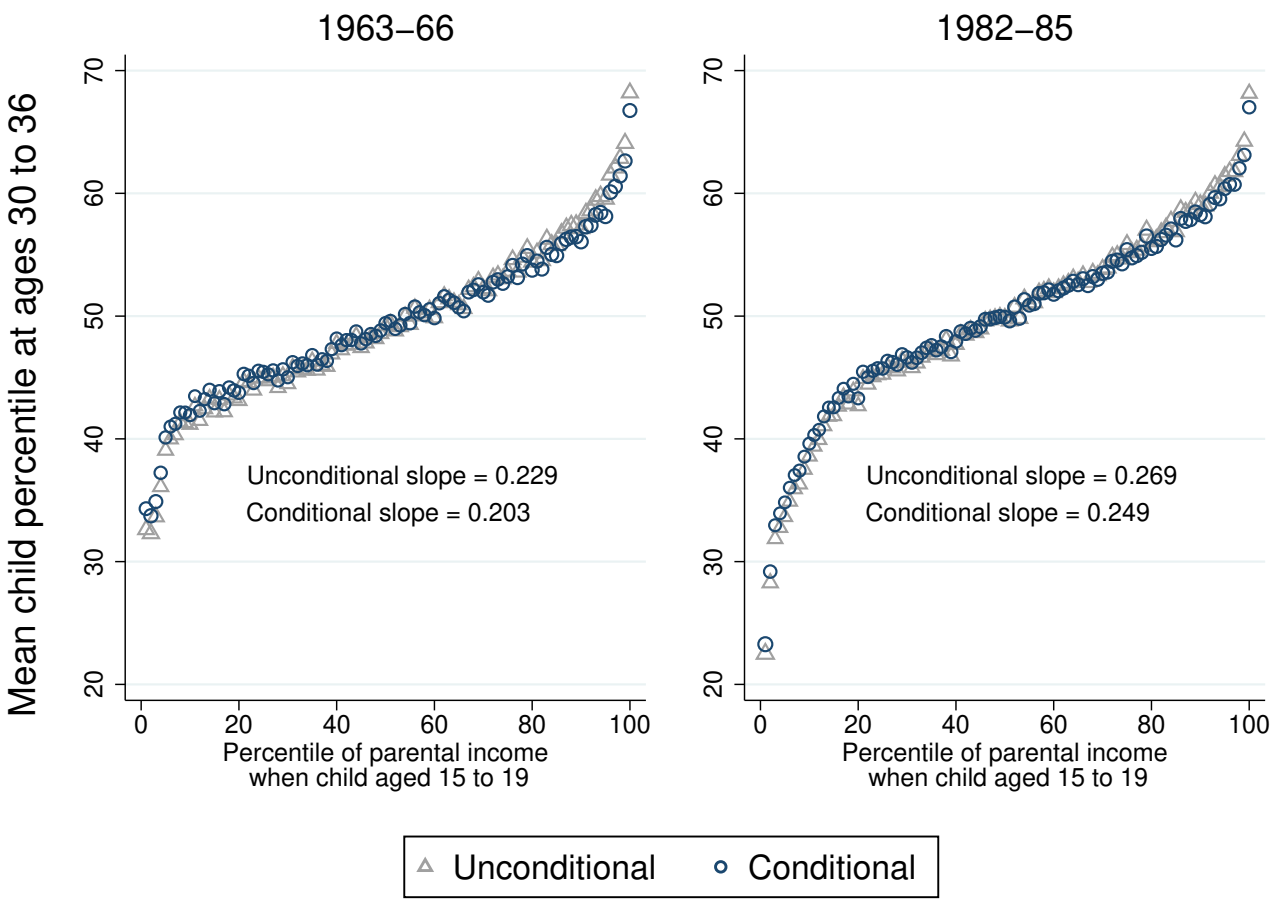

Figure A2: Intergenerational rank mobility within maternal education groups, 1963-66 and 1982-85 birth cohorts

Source: Authors' calculations based on the IID+

Note: This figure shows the rank-rank relationship between child and parental income ranks. The conditional series are constructed by regressing child income ranks on dummies for each parental income percentile, controlling for maternal education dummies. The blue dots show the values of those regression coefficients, which have been re-centered so that the overall average child income rank is equal to 50. Child income is measured at ages 30 to 36 and parental income is average annual family income when the child is aged 15 to 19. The markers are weighted using the number of children in each cell. The unconditional slopes are coefficients from linear rank-rank regressions of child income rank on parent income rank, and the conditional slopes are coefficients from linear rank-rank regressions of child income rank on parent income rank controlling for maternal education dummies.

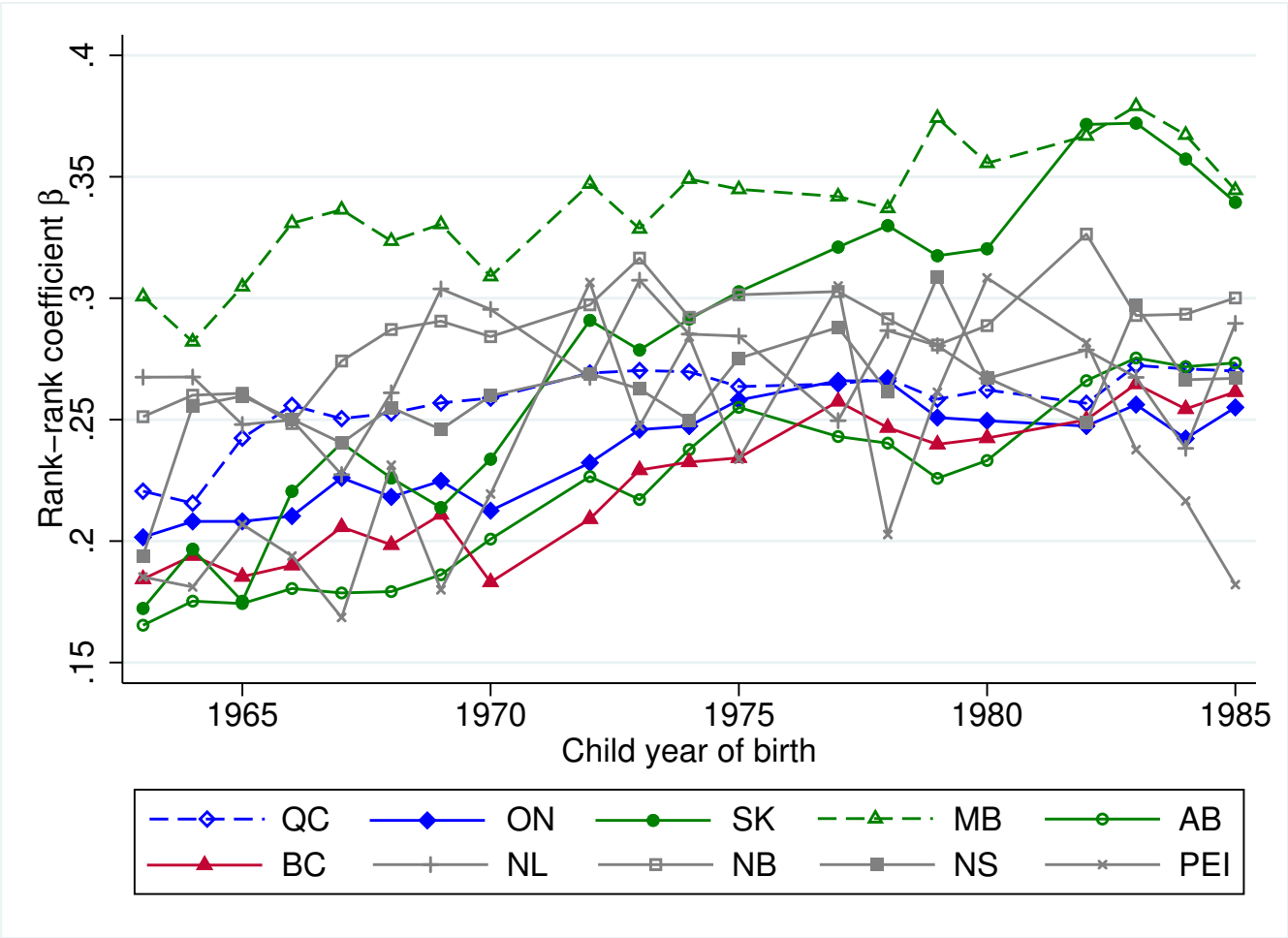

Figure A3: Intergenerational rank mobility by province over time

Source: Authors' calculations based on the IID+

Note: Each point in this graph represents the intergenerational rank mobility (β_{pt}) estimated for a given child birth year and province, where child income is measured at ages 30 to 36 and parental income is average annual family income when the child is aged 15 to 19. The two provinces that have experienced the most dramatic changes in mobility (Alberta and Saskatchewan) are highlighted.

B Data Appendix

B.1 IID and IID+

The IID+ includes 68 percent of the families originally present in the IID, when only the match to the mother is performed. It consists of more than four million parent-child pairs, forming a nationally-representative sample of individuals born from 1963 to 1985.

Table B1: Descriptive Statistics

Variable	Mean	Std. Dev.
Child is male	0.513	0.500
Child is female	0.487	0.500
Child total income (constant 2016 $)		
Ages 25 to 29	36,800	28,620
Ages 27 to 31	41,800	36,290
Ages 30 to 34	48,000	79,060
Ages 30 to 36	49,600	80,020
Parental total income (constant 2016 $)		
When child aged 15 to 19	89,500	119,880
When child aged 10 to 19	85,700	92,500
When mother aged 40 to 49	90,500	96,150
When mother aged 45 to 49	97,400	121,020
Single mother at time of IID link	0.157	0.363
Mother's age at birth	26.6	5.240
Mother's educational attainment		
Mother has a high school diploma	0.745	0.436
Mother has a bachelor degree	0.106	0.308

Source: Authors' calculations based on the IID+
Note: These statistics are computed using the IID weights. Weighted number of observations is 3,051,485. Some variables are based on a slightly smaller number of observations due to missing values.

Table B2: Additional Descriptive Statistics

Child year of birth	Mean	Std. Dev.
1963	0.035	0.184
1964	0.042	0.199
1965	0.045	0.207
1966	0.048	0.214
1967	0.045	0.208
1968	0.049	0.215
1969	0.050	0.207
1970	0.048	0.214
1972	0.047	0.211
1973	0.048	0.214
1974	0.049	0.216
1975	0.052	0.222
1977	0.049	0.216
1978	0.052	0.221
1979	0.054	0.226
1980	0.056	0.230
1982	0.055	0.227
1983	0.057	0.232
1984	0.059	0.236
1985	0.060	0.237

	Mother's place of birth		Residence when child aged 16 to 19	
Province	Mean	Std. Dev.	Mean	Std. Dev.
Newfoundland and Labrador	0.045	0.207	0.036	0.186
Prince Edward Island	0.009	0.093	0.007	0.084
Nova Scotia	0.050	0.218	0.043	0.202
New Brunswick	0.044	0.205	0.037	0.190
Quebec	0.287	0.452	0.271	0.445
Ontario	0.280	0.449	0.300	0.458
Manitoba	0.060	0.237	0.048	0.213
Saskatchewan	0.079	0.270	0.053	0.224
Alberta	0.080	0.272	0.104	0.306
British Columbia	0.066	0.248	0.101	0.301

Source: Authors' calculations based on the IID+

Note: These statistics are computed using the IID weights. Weighted number of observations is 3,051,485.

Differences in rank mobility measured using the IID or the IID+ are negligible. When child income is measured between the ages of 30 to 36, and parental income is measured when the child is 15 to 19 years old, the largest difference we observe on the rank-rank slope using the IID versus the IID+ is 0.0043 in absolute value (less that 2% of the average value) and the smallest is 0.0003. If child income is instead measured between the ages of 27 to 31 inclusively, the largest difference is 0.0038 in absolute value and the smallest is 0.00035. Clearly, interpretation of results using the IID+ leads to extremely similar conclusions to those using the IID. The risk of bias from using the restricted sample, the IID+, for which information on the mother is available in one of the Censuses, is therefore minimal when studying rank mobility.

B.2 Definition of maternal education

In this paper, we use two dummy variables to define the education status of mothers. First we determine whether the mother has obtained a high school diploma, and then we indicate whether the mother has completed at least a bachelor degree. Below, we document how these two dummies are coded across different Census waves.

HIGH SCHOOL DIPLOMA DUMMY

The high school (HS) dummy is constructed using two variables: HDGREE in 2006, 2011 and 2016, and HLOSP in 1991, 1996 and 2001. The fields for these variables are listed below. In all cases, the education variables are only populated for people 15 years of age and over, excluding institutional residents.

The HS dummy is set equal to one under the following conditions:

- Census 2016: HDGREE > 1 & < 14
- NHS 2011: HDGREE > 1 & < 14
- Census 2006: HDGREE > 1 & < 14
- Census 2001: HLOSP > 3 & < 15
- Census 1996: HLOSP > 3 & < 15
- Census 1991: HLOSP > 3 & < 15

BACHELOR DEGREE COMPLETED DUMMY

The bachelor (BA) dummy is constructed using the same two variables, HDGREE in 2006, 2011 and 2016, and HLOSP in 1991, 1996 and 2001. The bachelor dummy is set equal to one under the following conditions :

- Census 2016: HDGREE > 8 & < 14
- NHS 2011: HDGREE > 8 & < 14
- Census 2006: HDGREE > 8 & < 14
- Census 2001: HLOSP > 10 & < 15
- Census 1996: HLOSP > 10 & < 15
- Census 1991: HLOSP > 10 & < 15

The categories of HDGREE and HLOSP are listed below.

B.2.1 Dataset: 2016 Census of Population

Variable HDGREE: Education: Highest certificate, diploma or degree

Values Categories
1 No certificate, diploma or degree
2 Secondary (high) school diploma or equivalency certificate
3 Trades certificate or diploma other than Certificate of Appr
4 Certificate of Apprenticeship or Certificate of Qualification
5 Program of 3 months to less than 1 year (College, CEGEP and
6 Program of 1 to 2 years (College, CEGEP and other non-university
7 Program of more than 2 years (College, CEGEP and other non-university
8 University certificate or diploma below bachelor level
9 Bachelor's degree
10 University certificate or diploma above bachelor level
11 Degree in medicine, dentistry, veterinary medicine or optometry
12 Master's degree
13 Earned doctorate
88 Not available
99 Not applicable

B.2.2 Datasets: 2011 National Household Survey and 2006 Census of Population

Variable HDGREE: Education: Highest certificate, diploma or degree
Values Categories

1 None
2 High school graduation certificate or equivalency certificat
3 Other trades certificate or diploma
4 Registered apprenticeship certificate
5 College, CEGEP or other non-university certificate or diploma
6 College, CEGEP or other non-university certificate or diploma
7 College, CEGEP or other non-university certificate or diploma
8 University certificate or diploma below bachelor level
9 Bachelor's degree
10 University certificate or diploma above bachelor level
11 Degree in medicine, dentistry, veterinary medicine or optometry
12 Master's degree
13 Earned doctorate degree
88 Not available
99 Not applicable

B.2.3 Datasets: 1991, 1996 and 2001 Census of Population

Variable HLOSP: HIGHEST LEVEL OF SCHOOLING

Values Categories
1 Less than Grade 5
2 Grades 5 to 8
3 Grades 9 to 13
4 Secondary - high school graduation certificate
5 Trades certificate or diploma
6 College: Without trades or college certificate or diploma
7 College: With trades certificate or diploma
8 College: With college certificate or diploma
9 University: Without certificate, diploma or degree
10 University: With university or college certificate or diploma
11 University: With bachelor or first professional degree
12 University: With certificate or diploma above bachelor level

13 University: With master's degree[s]

14 University: With earned doctorate

98 Not available

99 Not applicable