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# Do income and marriage mediate the relationship between cognitive ability and fertility? Data from Swedish taxation and conscriptions registers for men born 1951-1967 

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#### Abstract

Recent evidence suggests a positive association between fertility and cognitive ability among Swedish men. In this study we use data on 18 birth cohorts of Swedish men to examine whether and how the relationship between cognitive ability and patterns of childbearing are mediated by income, education and marriage histories. We examine whether the expected positive associations between cognitive ability and life course income, can explain this positive association. We also explore the role of marriage for understanding the positive gradient between cognitive ability and male fertility. To address these question we use Swedish population administrative data that holds information on fertility histories, detailed taxation records, and data from conscription registers. We also identify siblings in order to adjust for confounding by shared family background factors. Our results show that while cognitive ability, education, income, marriage, and fertility, are all positively associated with each other, income only explains a part of the observed positive gradient between fertility and cognitive ability. We find that much of the association between cognitive ability and fertility can be explained by marriage, but that a positive association exists among both ever-married and never-married men. Both low income and low cognitive ability are strong predictors of high childlessness and low fertility in our population. The results from the full population persist in the sub-sample of brothers.


Keywords: Fertility, Childlessness, Cognitive ability, Income, Sweden

## Introduction

The relationship between cognitive ability and fertility has vexed researchers for over a century. Throughout the $20^{\text {th }}$-century researchers variously reported positive and negative gradients for the fertility and cognitive ability, though in the second half of the $20^{\text {th }}$-century researchers increasingly observed negative gradients where men, but particularly women, with lower cognitive ability had more children. A recent study using Swedish military conscription data, a data source of unusually high quality in regards to representativeness and quality of cognitive ability measurement, researchers found a clear positive association between cognitive ability and fertility for men (Kolk and Barclay 2019). In this study we use a similar dataset from Sweden, linked with high quality yearly taxation records, to examine the extent to which socioeconomic success among higher cognitive ability individuals might explain the positive fertility and cognitive ability gradient. We also employ data on marriage histories to examine the extent to which marriage mediates the association, to understand the extent to which the cognitive ability and fertility gradient are explained by partnership availability or fertility preferences of men within unions.

## Previous Research on Intelligence and Fertility

In order to contextualize our research, it is important to provide a brief historical overview of research on the relationship between fertility and intelligence. Key figures in the history of statistics and evolutionary biology, such as Francis Galton, Karl Pearson, and Ronald Fisher, were all interested in differential fertility by achievement and intelligence; indeed, much of contemporary statistics was developed in conjunction with research on these and closely related questions. Most early research on this topic was motivated by eugenics concerns, where it was feared that higher fertility amongst lower achievement groups would lead to declining average achievement in future generations (Kevles 1985, Osborn 1952). Kevles (1985) provides an excellent overview of early research on this topic. This dystopian dysgenic perspective seems to retain a persistent, if controversial, grip in the popular imagination to this day. In the $19^{\text {th }}$ century, and the first half of the $20^{\text {th }}$ century, a wide range of traits were considered to be exchangeable or substitutable for the concept of intelligence, including achievements in art and sciences, social class, and educational attainment. However, this changed in the early $20^{\text {th }}$ century as modern IQ tests were developed, and the concept of generalized intelligence emerged.

An increased sophistication in the measurement of cognitive ability was later followed by improvements in the quality of data collection and research design, with the study of IQ and fertility in Scotland playing a prominent role. A particularly important piece of work for the research question addressed in this study was that of Higgins, Reed and Reed (1962). Higgins and colleagues examined the implications of examining the research question from the perspective of parents (which is the primary dimension relevant to understand a trait's distribution in the following generation), in addition to the perspective of children, where the intelligence-fertility association was inferred from mean test scores by sibling group size. Critically, taking the perspective of parents recognized the importance of incorporating childless individuals into the analysis, as well as the importance of parity distributions. Analyzing the data from the parents’ perspective they found that there was almost no gradient between intelligence and fertility.

Following Higgins, Reed and Reed (1962), a number of studies using modern survey data from the United States found positive correlations intelligence and completed fertility. This research, often based on sub-populations from the upper Midwest, examined cohorts born in the 1910s and 1920s who were having children throughout the US baby boom (Bajema 1963, Bajema 1968, Falek 1973, Waller 1971). Using data on later cohorts Vinning $(1982,1995)$ and Retherford and Sewell $(1988,1989)$ found small negative correlations between fertility and intelligence. Several of these studies examined parity progression to higher births and found that the intelligence differences were larger at higher parities. Recent studies on the US including have found small negative IQ-fertility gradients for men and women, with more consistent negative gradients for women (Lynn 1999, Lynn and Van Court 2004, Meisenberg 2010, Woodley et al. 2016), though others have reported a small positive association for white men (Woodley and Meisenberg 2013).

Reported gradients in the intelligence-fertility association in the United States have changed over time. Research on cohorts born in the early $20^{\text {th }}$ century suggests that there was no clear gradient, though it may have been positive during the baby boom period. However, amongst cohorts born the second half of the $20^{\text {th }}$ century, research suggests a small to moderate negative intelligence-fertility gradient. Outside the US, Von Stumm, Batty and Deary (2011) found no overall association between childbearing and intelligence for men or women in Scotland, Kanazawa (2014) found small negative associations between entry to parenthood and intelligence for women in the UK, and Woodley et al. (2016) found no clear pattern for men or women in the UK. Recent data from East Asia has found negative gradients between IQ and
fertility in Taiwan (Chen et al. 2013) and China (Wang, Fuerst and Ren 2016). Finally, two older Swedish studies (Nyström, Bygren and Vining Jr 1991, Vining et al. 1988), studying cohorts born in the 1910s to 1930s, found high fertility amongst men with very high cognitive ability, and an unclear pattern for women, with some support for a negative gradient. However, this finding should not be considered conclusive due to the small and non-representative sample.

Alternatives to traditional IQ tests have also been used to attempt to infer the intelligencefertility association. For example, Madison, Woodley and Sänger (2016) found that auditory reaction times were slower in Swedish cohorts born in the 1980s than the 1960s, and suggested that this implied negative selection on intelligence. Polygenic scores have also been used to assess the link between educational attainment and fertility, based on the theory that educational attainment has a strong cognitive genetic basis. In Iceland, polygenic scores predict a negative association between educational attainment and fertility (Kong et al. 2017). The findings from polygenic studies using US data are mixed (Beauchamp 2016, Conley et al. 2016), while a negative association has been reported in data from the UK (Barban et al. 2016).

Contrary to much previous research, recent studies using population administrative data and military conscription records from Norway and Sweden have reported an unambiguously positive intelligence-fertility gradient for men (Bratsberg and Rogeberg 2018, Kolk and Barclay 2019). The association is particularly strong at lower levels of cognitive ability (Kolk and Barclay 2019). One potential explanation for the discrepancy between these findings and much other work is that the education-fertility and income-fertility gradients in Scandinavia differ from other contexts. In the Nordic countries both education and income are positively associated with fertility for men (Chudnovskaya 2019, Jalovaara and Fasang 2019, Jalovaara et al. 2019, Kolk 2019), which is less clear in other contexts (Freedman and Thornton 1982, Jones and Tertilt 2008, Skirbekk 2008).

The importance of socioeconomic status for patterns of childbearing, as well as the strong connection between cognitive ability and socioeconomic success in contemporary societies, means that it is important to understand how income mediates the relationship between cognitive ability and fertility among Swedish men. As marriage is also highly concentrated among high-income and highly educated individuals in the Nordic countries (Jalovaara and Fasang 2019, Ohlsson-Wijk 2011), we also explore how marriage is related to childlessness, income, cognitive ability, and fertility. This research will improve our understanding of the mediators of cognitive ability and fertility, and be helpful for understanding how the
relationship between cognitive ability and fertility may vary in contexts where markers of male and female socioeconomic status have been shown to associate with fertility in different ways. In the following section we review previous research on the degree to which the association between cognitive ability and fertility is mediated by income, education, and marriage, as well as the research on how income, education, and marriage are associated with fertility.

## Previous Research on Pathways Explaining the Association between Cognitive Ability and Fertility

A robust finding across contemporary societies is that high cognitive ability is associated with economic success for both men and women (Carneiro, Crawford and Goodman 2007, Heckman, Stixrud and Urzua 2006, Lindqvist and Vestman 2011, Strenze 2007). Cognitive ability is a strong predictor of school grades (Duncan et al. 2007), as well as later life outcomes, including income (Lindqvist and Vestman 2011). This is unsurprising given the strong link in contemporary societies between cognitive ability and educational outcomes, and between education and income. Consistent with evolutionary theory, the empirical literature also indicates that, net of other socioeconomic traits, intelligence is considered an attractive feature in a partner for both men and women (Buss and Barnes 1986, Miller 2000a, Miller 2000b). The few studies examining the association between cognitive ability and marriage are inconsistent, but may be said to indicate positive gradients for men, and negative gradients for women (Aspara, Wittkowski and Luo 2018, Taylor et al. 2005, Von Stumm, Batty and Deary 2011).

While most previous research on cognitive ability and fertility has been interested in the overall gradient between the two variables, some researchers have examined which sociodemographic variables may the intelligence-fertility association. Using path analysis, Meisenberg (2010) found that education was strongly positively associated with cognitive ability, but because that the education-fertility correlation was strongly negative (in particular for women), a negative intelligence-fertility gradient prevailed overall. Kim (2015) found that the intelligence was negatively associated with cognitive ability for US men and women in three different surveys, but that this association disappeared after adjusting for education. Using US data to study sex differences between status and fertility, Hopcroft (2015) found that cognitive ability was negatively associated with fertility for men and women.

Rodgers et al. (2008) examined the interaction between education, age at first birth, and cognitive ability using Danish twin data, and found that there were direct effects of education on later age at first birth, but no direct association between cognitive ability and later age at first birth. Using data from Wisconsin, Retherford and Sewell (1989) found that education entirely mediated the negative association between cognitive ability and fertility, and as education suppressed female fertility to a greater exent than male fertility, education could explain lower fertility among women with high cognitive ability. Reeve, Lyerly and Peach (2013) found a similar pattern using a nationwide US dataset. In studies applying polygenic scores, an observed negative education-fertility gradient in a population is the explanation for why polygenic scores predicting high education are associated with low fertility (Barban et al. 2016, Beauchamp 2016, Kong et al. 2017).

In summary, studies using data from the United States have frequently identified education as an important mediator for the negative association between cognitive ability and fertility, and this is particularly true for women. However, it is important to note that the negative association between education and fertility observed in the US and many other Western countries for most of the $20^{\text {th }}$ century (e.g. Blossfeld and Huinink 1991) does not hold true for Sweden (Jalovaara et al. 2019). Furthermore, in Sweden the income-fertility gradient is positive for men, which calls for the potential mediating role of income between intelligence and fertility to be examined carefully (Kolk and Barclay 2019). Previous research highlights the importance of considering how socioeconomic status is associated with fertility in order to understand the association between cognitive ability and fertility. However, all survey-based studies suffer from potential biases attributable to measurement error from both cognitive ability and income, as well as concerns about generalizability. Such issues are largely sidestepped by using population-level register data as we do in this study.

Recent research has highlighted the role of increasing social polarization and male childlessness, with a particular focus upon never-partnering men (Barclay and Kolk 2019, Demey et al. 2013, Hudson and Boer 2004, Jalovaara and Fasang 2019). Kolk and Barclay (2019) found particularly strong effects for low cognitive ability on childlessness. Failure to find and/or keep a partner for childbearing may be an important determinant of low fertility for men in contemporary Sweden. Moreover, low scores on cognitive ability are strongly correlated with childhood and adulthood health which may adversely affect fertility through both behavioral and physiological pathways (Calvin et al. 2010, Wraw et al. 2015). This may be of particular importance at the lower ranges of the cognitive ability distribution, where poor health
and disabilities are likely to be overrepresented. Another recent study using Swedish conscription data found that short, unfit and obese men had very poor fertility outcomes (Barclay and Kolk 2019). Barclay and Kolk (2019) found that these health differences in fertility were strongly mediated by ever-marrying, but that the negative associations also existed amongst married men. One way of assessing whether partner search processes mediate the relationship between cognitive ability and fertility is to examine the gradient within and across never-married and ever-married males. As entry into marriage is itself affected by education and income, this further motivates us to look at the multidimensional associations between marriage, income, cognitive fertility, and fertility.

## Data and Methods

## Data

To examine the relationship between cognitive ability and fertility, we use population register data from Sweden. These individual-level data are based on administrative records that can be linked using a unique personal identification number. These administrative sources include registers of vital events such as births, marriages, and deaths, as well as education and tax register, and military conscription registers. As the vital events are based on birth records we can only link fathers to children that are known by the authorities, though these represent over 99\% of all births (Statistics Sweden 2009), partly because of rigorous paternity investigations by the social services. As such our data is superior to self-reported information which can be problematic, and particularly so for assessing male fertility. Most of our data is based on fertility measured at or after age 50 , which assures that we have a virtually complete count of fertility, missing less than $1 \%$ of births.

Our measurement of cognitive ability is drawn from the military conscription registers. Sweden used to practice universal conscription, and we have data from intelligence tests conducted as a part of the military evaluation of all Swedish men born 1951-1967. Conscription tests took place at ages 17-20, and all Swedish men were required by law to attend these tests. We have data on scores from universal conscription tests for the period 1969 to 1981, but as we want to follow our cohorts until age 45 in order to be sure we measure completed fertility, we limit our study to cohorts born between 1951 and 1967. We define our population as all Swedish-born men of those cohorts alive until the end of their reproductive ages.

Kolk and Barclay (2019) used a similar dataset to study the overall relationship between cognitive ability and fertility. In the study, they provide further information on how conscription tests were designed and validated. Overall, the IQ test was rigorous and based on a test of approximately one hour with both a spatial, logical and verbal component (Mårdberg and Carlstedt 1998). The military conscription tests, despite being mandatory, were not taken by everyone (around 97\%), and of those that attended, a small group did not take the IQ test (2\%). The not-tested group, and to a lesser extent the missing group, would likely have lower IQ scores than the population as a whole. The non-tested group likely often have other physical and other handicaps which stopped them from completing the cognitive tests, and are particularly disadvantaged. In Tables S1 and S2 in the Supplementary Materials we present detailed descriptives for our population and covariates. Fertility in Sweden was stable over the cohorts of men that we study (1951-1967), with an average of around 1.8 children.

## Education

Information on educational attainment is derived from administrative registers. We use eight categories for education, based on highest educational attainment by 2012: primary ( $<9$ years), primary ( 9 years), secondary (10--11 years), secondary (12 years), tertiary (13--15 years), tertiary, but not including postgraduate qualifications (15+ years), and postgraduate qualifications (approximately 16-20 years). The final, eighth, category indicates whether the variable for education has a missing value. The information is based on current educational attainment at the end of the reproductive career. Primary and secondary attainment will mostly take place before the measurement of cognitive ability, while tertiary attainment takes place after measurement.

## Cumulative Income

To calculate cumulative income up to age 45, we use a measure of disposable income provided by Statistics Sweden. We sum up the total income earned between the ages of 18 and 40 as a measure of cumulative income. We then split this measure of cumulative income into deciles for each birth cohort, meaning that relative income position is defined in relation to other men the same age, who will have experienced similar labor market conditions over the life course.

## Marital Status

As part of our analyses we examine whether the association between our various anthropometric measures and fertility varies according to whether the men in our population had ever married by age 45 . This binary variable indicates whether the men had ever married at any point up to age 45, and ignores any subsequent change to marital status due to divorce or being widowed. We use this variable as an indicator of whether the men had been able to find a romantic partner without conditioning on childbearing. We also conduct additional sensitivity analyses using a variable that indicates that an individual had been married for at least five years before any divorce or widowhood. Due to the difficulty involved in identifying cohabiting men without children in the Swedish population registers, the never-married category also includes a substantial share of men who have formed one or more cohabiting relationships. However, the ever-married category only includes men who have formed at least one serious partnership.

## Statistical Analyses

To examine the relationship between cognitive ability scores and fertility we conduct regression analyses to examine how our cognitive ability measure is associated with total number of children by age 45 or later as well as childlessness at age 45 or later. To examine total number of children we use linear regression, while our analyses of childlessness take the form of linear probability models. We also conduct analyses to examine the pathways by which any association between cognitive ability and fertility flows. To this end we examine how cognitive ability scores are associated with entrance into marriage, how fertility varies between those who ever married and those who never married, the extent to which education and cumulative income mediate the fertility and cognitive ability association, and how cognitive ability scores interact with cumulative income.

We present regressions where we use all men in the population, as well as fixed effects models in which we only analyse variance between full biological siblings. These fixed effects models are based upon the subsample of families with at least two brothers who were born in the 19511967 cohort window. By comparing brothers in the same family we are able to hold constant all factors shared by brothers, including parental education and income, as well as other characteristics of parents that would otherwise be difficult to capture, including personality, parenting style, as well as parental intelligence. These sibling comparison models also adjust
for shared household, neighborhood, and school conditions, as well as shared genetics. We estimate the following models:
(1) $y=\beta_{0}+\beta_{1} I Q+\beta_{2}$ BirthYear $+\varepsilon$
(2) $y=\beta_{0}+\beta_{1} I Q+\beta_{2}$ BirthYear $+\beta_{3} B O+\beta_{4}$ FamSize $+\beta_{5} E d u+\varepsilon$
(3) $y=\beta_{0}+\beta_{1} I Q+\beta_{2}$ BirthYear $+\beta_{3} B O+\beta_{4}$ FamSize $+\beta_{5} E d u+\beta_{6}$ Income $+\varepsilon$
where $y$ is total number of children, $\beta_{0}$ is the constant, $I Q$ refers to a vector of dummy variables for our measurement of cognitive ability, BirthYear refers to a vector of dummy variables for individual birth years (1951,1952,...1967), BO refers to a vector of dummy variables for birth order within the sibling group of origin ( $1,2, \ldots, 6+$ ), FamSize refers to a vector of dummy variables for total number of siblings in the sibling group of origin ( $1,2, \ldots, 6+$ ), Edu refers to vector of dummy variables for the eight educational categories described in more detail above, Income refers to vector of dummy variables for deciles of cumulative income earned between ages 18 to 45 , while $\varepsilon$ is the residual. We control for birth order and family size as there is evidence that these factors are related to both cognitive ability and fertility in contemporary Sweden (Black, Devereux and Salvanes 2010, Hank 2007, Kolk 2014, Morosow and Kolk 2019). Using the subsample of siblings, we estimate three additional models:
(4) $y_{i j}=\alpha_{j}+\beta_{1} I Q_{i j}+\beta_{2}$ BirthYear $_{i j}+\varepsilon_{i j}$
(5) $y_{i j}=\alpha_{j}+\beta_{1} I Q_{i j}+\beta_{2}$ BirthYear $_{i j}+\beta_{3} B O_{i j}+\beta_{5} E d u_{i j}+\varepsilon_{i j}$
(6) $y_{i j}=\alpha_{j}+\beta_{1} I_{i j}+\beta_{2}$ BirthYear $_{i j}+\beta_{3} B O_{i j}+\beta_{5} E d u_{i j}+\beta_{6}$ Income $_{i j}+\varepsilon_{i j}$
where the subscripts refer to the individual $i$ in sibling group $j$, and $\alpha_{j}$ is the sibling fixed effect. Family size is constant within the sibling group and is therefore not controlled for in our sibling comparisons. We use a parallel modelling strategy with a binary variable for childlessness by age 45 or later as the outcome variable, which we label models $7-12$, and with a binary variable for ever-marrying by age 45 , which we label models 13-18.

To examine the interaction between cognitive ability scores and cumulative income, we estimate the following models:
(19) $y=\beta_{0}+\beta_{1} I Q *$ Income $+\beta_{2}$ BirthYear $+\beta_{3} B O+\beta_{4}$ FamSize $+\varepsilon$
(20) $y_{i j}=\alpha_{j}+\beta_{1} I Q_{i j} *$ Income $+\beta_{2}$ BirthYear $_{i j}+\beta_{3} B O_{i j}+\varepsilon_{i j}$
where $I Q$ * Income refers to the full interaction between cognitive ability scores and cumulative income deciles. We examine this interaction both in the full population as well as in the subsample of siblings. We also estimate parallel models with childlessness as the outcome in models 21 and 22.

Finally, we also examine whether the association between cognitive ability test scores and fertility varies between men who have ever married, and those who have not ( $\Leftrightarrow$ means that we stratify our sample for our regressions based on this value, i.e. if and only if Married=1):
(23) $y=\beta_{0}+\beta_{1} I Q+\beta_{2}$ BirthYear $+\beta_{3} B O+\beta_{4}$ FamSize $+\varepsilon \Leftrightarrow$ Married $=0$
(24) $y=\beta_{0}+\beta_{1} I Q+\beta_{2}$ BirthYear $+\beta_{3} B O+\beta_{4}$ FamSize $+\beta_{5}$ Edu $+\beta_{6}$ Income $+\varepsilon \Leftrightarrow$ Married $=0$
(25) $y=\beta_{0}+\beta_{1} I Q+\beta_{2}$ BirthYear $+\beta_{3} B O+\beta_{4}$ FamSize $+\varepsilon \Leftrightarrow$ Married $=1$
(26) $y=\beta_{0}+\beta_{1} I Q+\beta_{2}$ BirthYear $+\beta_{3} B O+\beta_{4}$ FamSize $+\beta_{5}$ Edu $+\beta_{6}$ Income $+\varepsilon \Leftrightarrow$ Married $=1$
where $y$ refers to total number of children at the end of our follow-up period, with separate models estimated conditional on a binary variable Married, indicating whether the men have ever married or not by age 45 . We estimate parallel models for childlessness by the end of our follow-up period in models 27-30. We also estimate the equivalent models using our subsample of brothers:
(31) $y_{i j}=\alpha_{j}+\beta_{1} I Q_{i j}+\beta_{2}$ BirthYear $_{i j}+\beta_{3} B O_{i j}+\varepsilon_{i j} \Leftrightarrow$ Married $=0$
(32) $y_{i j}=\alpha_{j}+\beta_{1} I Q_{i j}+\beta_{2}$ BirthYear $_{i j}+\beta_{3} B O_{i j}+\beta_{4}$ Edu $_{i j}+\beta_{5}$ Income $_{i j}+\varepsilon_{i j} \Leftrightarrow$ Married $=0$
(33) $y_{i j}=\alpha_{j}+\beta_{1} 1 Q_{i j}+\beta_{2}$ BirthYear $_{i j}+\beta_{3} B O_{i j}+\varepsilon_{i j} \Leftrightarrow$ Married $=1$
(34) $y_{i j}=\alpha_{j}+\beta_{1} I Q_{i j}+\beta_{2}$ BirthYear $_{i j}+\beta_{3} B O_{i j}+\beta_{4}$ Edu $_{i j}+\beta_{5}$ Income $_{i j}+\varepsilon_{i j} \Leftrightarrow$ Married $=1$
where models 31 and 32 include controls for early life factors that vary within the family, and models 33 and 34 include additional adjustment for socioeconomic factors measured in adulthood. We also do this for examining childlessness as the outcome in models 35-38.

## Results

The overall gradient between cognitive ability and fertility in Sweden is positive, as shown in Figure 1 where we regress cognitive ability measured at ages 17 to 20 on completed fertility. All regression estimates from Figure 1, including covariates, are available in Supplementary Tables S5 and S6, where we also show results for the small number of men who either missed the test or were not required to take it (they largely show lower fertility than other groups). We find particularly low fertility at lower cognitive ability scores, while we find a more consistent positive monotonic pattern when we compare brothers of the same families. The magnitude is substantial with men with the lowest scores of cognitive ability having around 0.4 fewer children in our full-population comparisons, while the difference between the highest and lowest score in our brother comparisons is over 0.7 children (among men with median cognitive ability, average fertility was 1.85 in our data). In Figure 1 we, also show the gradient after
adjusting for education, and education and income. We find that education largely does not mediate the observed non-adjusted relationship, though income reduces the overall positive gradient. We find that the lower fertility of low cognitive ability men partly is mediated by low income. Similarly, we find that after adjusting for high income of high cognitive ability men, that when holding their higher-income constant, men with higher cognitive ability men have slightly fewer children (high income is associated with high fertility among Swedish men; see Supplementary Figure S1 where we regress income on fertility). When we compare only brothers and adjust for income, we find that the monotonic positive gradient attenuates but remains broadly positive. In in Supplementary Tables S7 and S8, we show the regression effects of cognitive ability when operationalized as a linear variable regressed on fertility, and we find that the overall gradient remains positive, even after adjusting for income, in the full population as well as in the sub-sample of siblings.


Figure 1. Number of children by age 45 or older regressed on cognitive ability for Swedish men born 1951-1967. Error bars are 95\% confidence intervals. Models 1 and 4 control for birth year, birth order and family size. Models 2 and 5 introduce additional controls for educational attainment, and Models 3 and 6 further control for cumulative income deciles.

In Figure 2 we examine the relationship between income, fertility and cognitive ability in further detail, by examining the gradient between cognitive ability and fertility within deciles of accumulated income. All regression estimates from Figure 2, including covariates, are available in Supplementary Table S9. The most apparent pattern is the very strong relationship between income and fertility where we find that men in income deciles 1,2 and 3 have much lower fertility net of cognitive ability than men in higher income deciles (net of cognitive ability). For our population comparison models, Model 19 in Figure 2, we find that for a given decile of accumulated income the relationship between cognitive ability and fertility is rather weak. This suggested that much of the negative overall gradient between accumulated income and fertility is driven by the distribution of income and cognitive ability, where low cognitive ability men achieve lower accumulated income (see Supplementary Figure S2). However, within income deciles we do find that men with lower cognitive ability have lower fertility, in particular at low levels of income, which explains why our finding of an overall positive gradient between cognitive ability and fertility persists after adjusting for income. Within higher income deciles we occasionally find a small negative gradient, though there are few men with high income and very low cognitive ability. The results shown in Figure 2 do not include adjustment for educational attainment, but including educational attainment as a control variable makes little difference to the results (see Supplementary Figure S3).

In brother comparison models, Model 20 in Figure 2, we find consistently strong positive gradients even within income deciles. In other words, for two brothers with similar income (and a shared social background), on average the brother with higher cognitive ability has more children.


IQ Test Score

Figure 2. Number of children by age 45 or older regressed on interaction between cognitive ability and deciles of cumulative income for Swedish men born 1951-1967. Error bars are 95\% confidence intervals.

Previous research has shown that high and low cognitive ability is associated with the specific number of children of men in Sweden (Kolk and Barclay 2019). In particular - as highlighted in our literature review - it is plausible that much of the lower fertility of men with higher cognitive ability is affected by a reduced probability of finding a partner for childbearing. We explore this by examining patterns of childlessness and marriage in relation to cognitive ability scores.

In Figure 3, we examine the probability of childlessness by cognitive ability using linear probability models. All regression estimates from Figure 3 are available in Supplementary Tables S10 and S11. We find very high childlessness among low cognitive ability men, both when adjusting and not adjusting for income and education. We also find it in brother comparison models. The effect is very strong at around 0.2 higher probability of childlessness (the overall population probability is 0.21 , and 0.19 among men with median cognitive ability). Interestingly, we find that after adjusting for income, men with higher cognitive ability have a
slightly higher probability of childlessness than men with the median cognitive ability score. In other words, among high-income men, higher cognitive ability does not reduce the probability of childlessness. However, we do not observe this pattern in the results from the sibling comparison models.


Figure 3. Probability of childlessness regressed on cognitive ability for Swedish men born 1951-1967. Error bars are 95\% confidence intervals. Models 7 and 10 control for birth year, birth order and family size. Models 8 and 11 introduce additional controls for educational attainment, and Models 9 and 12 further control for cumulative income deciles.


IQ Test Score

Figure 4. Probability of childlessness by age 45 or older regressed on interaction between cognitive ability and deciles of cumulative income for Swedish men born 19511967. Error bars are $\mathbf{9 5 \%}$ confidence intervals.

In Figure 4 we examine how childlessness varies by combinations of income and cognitive ability, examining the gradient between cognitive ability and childlessness within deciles of accumulated income. All regression estimates from Figure 4 are available in Supplementary Table S12. It is again clear to see that there is a very strong relationship between income and the probability of childlessness, where men in the lowest decile of cumulative income have a far greater probability of childlessness by age 45 or later than men in the top half of the cumulative income distribution, and particularly in comparison to men in the highest decile of cumulative income. For our population comparison models, Model 21 in Figure 4, we can discern a pattern where men at the lower and upper tails of the cognitive income distribution have a slightly higher probability of childlessness than men at the median level of cognitive ability within each decile of cumulative income, and that this pattern is much clearer at lower levels of cumulative income. However, there are relatively few men with high cognitive ability scores in the lowest deciles of cumulative income, meaning that they contribute relatively little to the aggregate pattern shown in Figure 3. The results from our sibling comparison models, shown in Model 22 in Figure 4, consistently shown a higher probability
of childlessness amongst men with lower cognitive ability scores, and this is apparent at all levels of cumulative income. Here we do not find that when holding income constant, higher very high cognitive ability is associated with higher childlessness. The results shown in Figure 4 do not include adjustment for educational attainment, but including educational attainment as a control variable makes little difference to the results (see Supplementary Figure S4).


Figure 5. The probability of having ever married by age 45 or older regressed on cognitive ability for Swedish men born 1951-1967. Error bars are 95\% confidence intervals. Models 13 and 16 control for birth year, birth order and family size. Models 14 and 17 introduce additional controls for educational attainment, and Models 15 and 18 further control for cumulative income deciles.

In Figure 5 we examine the likelihood of marriage (as in ever marrying before age 45) by cognitive ability using linear probability models. Tabulations of ever married status by cognitive ability categories can be seen in Supplementary Figure S5. All regression estimates from Figure 5 are available in Supplementary Tables S13 and S14. Marriage is strongly linked to income in Sweden (see Supplementary Figure S6), partly because men with lower education are more likely to form long-lasting cohabitation as an alternative to marriage. Because of this, our never-married category includes both many individuals in long-lasting cohabiting
relationships (though these tend to be slightly less stable), as well as never-partnered men, while the ever-married group only includes individuals that have formed at least one serious partnership. In these results, we find a very strong gradient where men with the lowest compared to the highest level of cognitive ability differ by 0.2 in the probability of ever marrying by age 45 . The differences attenuate when adjusting for income, but remains substantial. Results for brother comparisons are similar to the population level patterns.


Figure 6. Number of children by age 45 or older regressed on cognitive ability and stratified by having ever married by age 45 for Swedish men born 1951-1967. Error bars are $95 \%$ confidence intervals. Models $23,25,31$, and 33 control for birth year, birth order and family size. Models $24,26,32$, and 34 introduce additional controls for educational attainment and cumulative income deciles.

In Figure 6 we examine how total childbearing varies by cognitive ability among men who have ever married, or never married, by age 45. All regression estimates from Figure 6 are available in Supplementary Tables S15 and S17. The results in the full population show that there are very few differences in total number of children by age 45 or later by cognitive ability among men who have married, though men in the lowest category of cognitive ability have approximately 0.10 fewer children. Amongst men who have ever married, we observe a pattern
where fertility is lower amongst men in the top half of the cognitive ability distribution as well as the bottom half of the cognitive ability distribution relative to the median. However, in brother-comparison models only lower cognitive ability men have statistically significantly lower fertility, whether they had ever married or not.


Figure 7. Childlessness by age 45 or older regressed on cognitive ability and stratified by having ever married by age 45 for Swedish men born 1951-1967. Error bars are 95\% confidence intervals. Models 27, 29, 35, and 37 control for birth year, birth order and family size. Models $28,30,36$, and 38 introduce additional controls for educational attainment and cumulative income deciles.

Finally, in Figure 7 we assess the joint probability of never having children and never marrying by cognitive ability. All regression estimates from Figure 6 are available in Supplementary Tables S16 and S18. Among the ever-married, we find rather small differences in childlessness, though men with very low cognitive ability are significantly less likely to have had a child even within the group of men who had ever married. Among never-married men we find a polarized pattern that is robust to adjustment for income. Never-married men with low cognitive ability are much more likely to be childless (as seen in figure 4), though the group of never-married men with high cognitive ability (this group is very small, due to the strong positive relationship
between income and marriage) are more likely than men with average cognitive ability to be childless. This might be due to these individuals choosing voluntary childlessness, but may also be related to the low prevalence of forming longer partnerships. As can be seen in Figure 5, however, this group has little effect on population-level gradients but this nevertheless remains an interesting finding. When comparing brothers we no longer observe the same pattern, but due to the low number of men in these groups, the estimates are very noisy.

## Discussion

In our paper, we show that while income is strongly associated with cognitive ability, men with lower cognitive ability have fewer children even after adjusting for income. We also find that these differences are magnified for childlessness, and are also very strong for entry into marriage. Consistent with previous research, we find that income and fertility are very strongly associated (Chudnovskaya 2019, Kolk 2019), but that the relationship between cognitive ability and fertility persists net of the mediation of income. This is particularly true at lower income levels. Men with low cognitive ability who are above the median in cumulative income between age 18 and 45 have approximately the same number of children as men who score highly on cognitive ability. However, men with low cognitive ability are much less likely to find themselves in the top half of the cumulative income distribution. Amongst ever-married individuals, the association between cognitive ability and fertility is strongly attenuated, and only really suggests lower fertility among men with the lowest scores on cognitive ability. When comparing full biological brothers with each other, we find a strong positive fertility and cognitive ability gradient even after adjusting for income. Overall, our results indicate that the primary reason that we observe low fertility among men with lower cognitive ability is because of their failure to attract a partner for stable unions for childbearing. In addition to confirming previous findings on cognitive ability and fertility in Sweden (Kolk and Barclay 2019), the findings of this study provide evidence for the importance of partnership formation, as well as showing that the intelligence-fertility association persists even after taking cumulative income into account.

Another intriguing empirical pattern that we have observed is that although men with high cognitive ability have more children overall, we find that men with high cognitive ability who never married have fewer children than men with average cognitive ability who never married. These never-married men with high cognitive ability are too few to affect the population-level
intelligence-fertility gradient, but may indicate a sub-population that either voluntarily abstains from childbearing and marriage, or in other ways have life trajectories that are associated with high education and income but not traditional patterns of family formation. In our full population analyses, when adjusting for cumulative income, we find that the men with the highest cognitive ability scores have slightly lower fertility than men with median cognitive ability scores, and higher childlessness. We observe slightly lower fertility amongst high IQ scoring never-married men (left-panels of Figures 6 and 7), as well as slightly lower fertility amongst men with high cognitive ability after adjusting for income (see Figure 1). However, our findings from population comparision models that, after adjusting for income, higher cognitive ability men have higher childlessness and lower fertility than men with similarily high income but average cognitive ability (suggesting either weaker preferences for childbearing or less desirability on the partner market), is not replicated in sibling comparision models.

In our sibling comparison models we consistently observe lower fertility among men in the bottom half of the cognitive ability distribution. The difference between our population level models and the sibling models is intriguing. Although the results from our population level models are key to understanding how cognitive ability may be distributed in the following generation (though without data on women we cannot speculate about this), the sibling comparison models effectively adjust for all factors shared in the family of origin. It is certainly possible that the results in the full population are confounded by factors that jointly affect both cognitive ability as well as fertility outcomes.

We believe that our study highlights the importance of examining and interpreting gross associations between cognitive ability and fertility by taking account of the associations between cognitive ability and mediating dimensions of social status and partnership formation. The sociological and demographic literature suggests great variation across the West in the associations between income and fertility, and education and fertility. Overall, we believe it is plausible that using data from the Swedish context, where there has been a positive statusfertility gradient for most of the $20^{\text {th }}$ century, may affect the generalizability of our findings for the association between cognitive ability and fertility. In other high-income countries, the interrelationships between education, income, marriage, and fertility, differ in important ways from Sweden, and our results may to some extent be contingent on the aggregate positive relationships between status and marriage and family formation in Sweden. Nevertheless, we think that the fertility disadvantage of very low cognitive ability men, is likely widespread across OECD contexts and that using datasets where such individuals are fully included is
important if researchers are to be able to make population-level inferences. Future research on cognitive ability and fertility is therefore well advised to carefully align their research with contemporary research on family sociology, demography, and economics on the overall relationship between status and fertility in the society they study. Importantly, the associations between income and fertility and education and fertility typically differ by gender. Unfortunately we cannot examine any gender differences in the intelligence-fertility gradient in Sweden due to the restrictive nature of male-only conscription data.

Our findings also contribute towards the increasing evidence for social polarization of childbearing in many Western countries. We find that the proportion childless and the proportion that never-marry is very substantial among men with lower cognitive ability. We find large separate effects where both low income and low cognitive ability are each strongly associated with high childlessness, and low completed fertility. When a man has both low income and low cognitive ability, fertility is even lower. This corresponds to the findings from a growing literature that shows that men with low income, low levels of education, worse health, and low cognitive ability, are largely unable to find a childbearing partner in Scandinavia (Barclay and Kolk 2019, Jalovaara and Fasang 2019, Jalovaara et al. 2019, Kolk 2019). Fertility in Scandinavia has traditionally been characterized by relatively small social differences between groups. Our findings of differences by cognitive ability in probabilities of childlessness and ever-marriage of 20 to 30 percentage points clearly show that partnership and childbearing unachievable for many men with low cognitive ability in contemporary Sweden.

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SUPPLEMENTARY INFORMATION


Figure S 1. Linear regression: final parity regressed on deciles of cumulative income earned between ages 18 and 45, with and without fixed effects. Swedish men born 1951-1967.

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Figure S2. Distribution of deciles of cumulative income earned between ages 18 and 45 by categories of the cognitive ability score measured at ages 17-20. Swedish men born 1951-1967.


Figure S3. Number of children by age 45 or older regressed on interaction between cognitive ability and deciles of cumulative income (controlling for educational attainment) for Swedish men born 1951-1967. Error bars are 95\% confidence intervals.


Figure S4. Probability of childlessness by age 45 or older regressed on interaction between cognitive ability and deciles of cumulative income (controlling for educational attainment) for Swedish men born 1951-1967. Error bars are $95 \%$ confidence intervals.


Figure S5. Tabulation of ever married by age 45 status by categories of the cognitive ability score measured at ages 17-20. Swedish men born 1951-1967.


Figure S6. Linear probability model: ever married by age 45 regressed on deciles of cumulative income earned between ages 18 and 45, with and without fixed effects. Swedish men born 1951-1967.

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| $08^{\text {I }}$ | 19＇1 | $88^{\prime}$ | $68^{\prime}$ | L8．${ }^{\text {I }}$ | L8．${ }^{\text {I }}$ | S8＇ | E8．${ }^{\text {I }}$ | 64＇I | $69^{\text {I }}$ | てが1 | I0＇ | แеәј | Kılued［pu！ |
| $6 E 666 t L$ | S08＇IZ | ع08＊0¢ | IIS＇95 | ¢91＇ 66 | 097＇szI | 0S6＇zSI | でI「015 | 897＇SL | 909くし | 090＇して | 698｀s |  | N |
|  | ภu！̣s！ | 9ZI＜ | 92I－6II | 6 İ－UII | LIL－tol | ＋01－96 | 96－68 | 68－18 | 18－t | $\dagger く>$ |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE S2. Descriptive Statistics: distribution of sibling sample and covariates by categories of IQ, Swedish men

|  |  | IQ Category |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Not tested | $<74$ | 74-81 | 81-89 | 89-96 | 96-104 | 104-111 | 111-119 | 119-126 | >126 | Missing | Total |
| N <br> Final parity |  | 4,594 | 7,365 | 15,928 | 23,962 | 32,950 | 43,591 | 34,742 | 24,940 | 14,874 | 7,962 | 6,147 | 217,055 |
|  | Mean | 1.12 | 1.58 | 1.82 | 1.90 | 1.93 | 1.94 | 1.95 | 1.97 | 1.99 | 1.98 | 1.72 | 1.90 |
|  | SD | 1.44 | 1.55 | 1.46 | 1.39 | 1.34 | 1.32 | 1.30 | 1.30 | 1.30 | 1.33 | 1.41 | 1.36 |
| Childless | \% | 52.7 | 34.6 | 24.5 | 20.4 | 19.1 | 18.4 | 18.2 | 18.0 | 17.9 | 19.1 | 27.3 | 20.6 |
|  | SD | 49.9 | 47.6 | 43.0 | 40.3 | 39.3 | 38.7 | 38.6 | 38.4 | 38.4 | 39.3 | 44.6 | 40.5 |
| Birth year | Mean | 1957.6 | 1958.8 | 1959.3 | 1959.3 | 1959.1 | 1959.6 | 1959.0 | 1958.8 | 1958.7 | 1958.8 | 1961.7 | 1959.2 |
| Birth order | Mean | 2.3 | 2.7 | 2.5 | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 2.4 | 2.2 |
| Sibling group size | Mean | 3.5 | 3.9 | 3.7 | 3.5 | 3.4 | 3.3 | 3.2 | 3.2 | 3.1 | 3.1 | 3.3 | 3.4 |
| \% by Education | Primary ( $<9$ years) | 8.2 | 8.4 | 4.4 | 3.3 | 2.4 | 1.3 | 0.7 | 0.3 | 0.1 | 0.0 | 1.8 | 2.0 |
|  | Primary (9 years) | 31.7 | 41.8 | 35.4 | 29.4 | 22.7 | 15.7 | 10.8 | 6.7 | 4.0 | 1.7 | 19.0 | 17.9 |
|  | Secondary (10-11 years) | 33.5 | 45.2 | 51.7 | 53.1 | 53.1 | 48.1 | 38.0 | 25.6 | 14.6 | 6.3 | 40.9 | 41.0 |
|  | Secondary (12 years) | 6.8 | 2.9 | 4.7 | 7.0 | 9.4 | 12.7 | 15.0 | 15.6 | 14.0 | 11.3 | 10.2 | 11.2 |
|  | Tertiary (13-15 years) | 6.8 | 0.9 | 2.5 | 4.5 | 7.5 | 12.6 | 18.7 | 24.0 | 27.7 | 25.0 | 13.3 | 13.5 |
|  | Tertiary (15+ years) | 6.8 | 0.6 | 1.2 | 2.5 | 4.7 | 9.2 | 15.9 | 25.5 | 34.9 | 45.6 | 12.9 | 13.0 |
|  | Postgraduate (16-20 years) | 1.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.9 | 2.3 | 4.7 | 10.0 | 1.2 | 1.2 |
|  | Missing | 5.2 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.8 | 0.2 |
| Income Deciles | 1 | 35.2 | 20.9 | 13.7 | 11.0 | 9.3 | 7.9 | 7.1 | 6.4 | 5.9 | 5.2 | 16.3 | 9.6 |
|  | 2 | 20.5 | 20.3 | 16.1 | 12.4 | 11.1 | 9.6 | 8.5 | 7.3 | 5.7 | 5.3 | 12.1 | 10.4 |
|  | 3 | 9.9 | 16.3 | 15.0 | 13.0 | 12.0 | 10.8 | 9.0 | 7.7 | 6.0 | 4.8 | 9.9 | 10.5 |
|  | 4 | 7.1 | 12.5 | 13.4 | 13.4 | 12.3 | 11.2 | 9.5 | 8.1 | 6.8 | 5.5 | 8.9 | 10.5 |
|  | 5 | 6.2 | 10.3 | 11.9 | 13.1 | 12.6 | 11.2 | 10.0 | 8.5 | 7.1 | 5.7 | 8.6 | 10.5 |
|  | 6 | 4.6 | 8.0 | 10.6 | 11.7 | 12.2 | 11.5 | 10.3 | 9.2 | 7.9 | 6.5 | 8.4 | 10.3 |
|  | 7 | 4.9 | 5.8 | 8.9 | 10.3 | 10.7 | 11.3 | 11.2 | 10.2 | 9.2 | 8.2 | 9.2 | 10.1 |
|  | 8 | 3.8 | 3.6 | 6.0 | 8.0 | 9.5 | 10.8 | 11.8 | 12.2 | 11.6 | 11.4 | 9.2 | 9.9 |
|  | 9 | 4.1 | 1.8 | 3.2 | 4.8 | 6.6 | 9.2 | 11.7 | 14.2 | 16.6 | 18.6 | 9.0 | 9.4 |
|  | 10 | 3.7 | 0.6 | 1.3 | 2.3 | 3.8 | 6.6 | 10.9 | 16.2 | 23.2 | 28.8 | 8.4 | 8.8 |
| \% by Ever Married | Never Married | 61.7 | 52.4 | 45.9 | 41.3 | 38.7 | 36.1 | 33.1 | 30.3 | 27.6 | 27.3 | 44.4 | 37.1 |
|  | Ever Married | 38.3 | 47.6 | 54.1 | 58.7 | 61.3 | 63.9 | 66.9 | 69.8 | 72.4 | 72.8 | 55.6 | 62.9 |

Table S3. Mean number of children by IQ and birth cohort for Swedish men born 1951-1967.

| IQ |  |  |  | Birth Cohort |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Everyone |  |  | 1951-1956 |  |  | 1957-1962 |  |  | 1963-1967 |  |  |
|  | N | Mean | SD | N | Mean | SD | N | Mean | SD | N | Mean | SD |
| Below 74 | 22,168 | 1.42 | 1.45 | 8,970 | 1.44 | 1.45 | 5,927 | 1.43 | 1.47 | 7,271 | 1.39 | 1.43 |
| 74 to 81 | 49,797 | 1.69 | 1.38 | 17,700 | 1.73 | 1.39 | 15,653 | 1.67 | 1.40 | 16,444 | 1.65 | 1.35 |
| 81 to 89 | 78,507 | 1.79 | 1.31 | 27,536 | 1.83 | 1.34 | 23,679 | 1.79 | 1.32 | 27,292 | 1.73 | 1.26 |
| 89 to 96 | 114,528 | 1.82 | 1.26 | 41,540 | 1.87 | 1.29 | 34,781 | 1.84 | 1.27 | 38,207 | 1.77 | 1.22 |
| 96 to 104 | 158,437 | 1.85 | 1.23 | 51,293 | 1.92 | 1.27 | 45,049 | 1.87 | 1.24 | 62,095 | 1.79 | 1.18 |
| 104 to 111 | 129,568 | 1.87 | 1.21 | 48,913 | 1.93 | 1.24 | 37,826 | 1.88 | 1.22 | 42,829 | 1.79 | 1.16 |
| 111 to 119 | 96,181 | 1.87 | 1.21 | 37,280 | 1.94 | 1.24 | 27,387 | 1.89 | 1.21 | 31,514 | 1.77 | 1.15 |
| 119 to 126 | 58,141 | 1.89 | 1.21 | 22,994 | 1.97 | 1.25 | 16,126 | 1.89 | 1.22 | 19,021 | 1.78 | 1.15 |
| Above 126 | 31,082 | 1.88 | 1.23 | 12,278 | 1.97 | 1.26 | 7,911 | 1.90 | 1.23 | 10,893 | 1.76 | 1.19 |
| Not Tested | 16,769 | 1.01 | 1.34 | 8,292 | 1.08 | 1.38 | 6,116 | 0.95 | 1.31 | 2,361 | 0.90 | 1.30 |
| Missing | 23,968 | 1.57 | 1.33 | 4,007 | 1.75 | 1.37 | 7,940 | 1.73 | 1.32 | 12,021 | 1.41 | 1.30 |

Table S4. Final parity by IQ and birth cohort for Swedish men born 1951-1967.

| IQ | Parity | Birth Cohort |  |  |  |  |  |  |  | IQ | Parity |  |  | Birth Cohort |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Everyone |  | 1951-1956 |  | 1957-1962 |  | 1963-1967 |  |  |  | Everyone |  | 1951-1956 |  | 1957-1962 |  | 1963-1967 |  |
|  |  | N | \% | N | \% | N | \% | N | \% |  |  | N | \% | N | \% | N | \% | N | \% |
| Below 74 | 0 | 8,465 | 38.2 | 3,414 | 38.1 | 2,291 | 38.7 | 2,760 | 38.0 | 104 to 111 | 0 | 23,671 | 18.3 | 8,564 | 17.5 | 6,985 | 18.5 | 8,122 | 19.0 |
|  | 1 | 3,423 | 15.4 | 1,350 | 15.1 | 867 | 14.6 | 1,206 | 16.6 |  | 1 | 17,141 | 13.2 | 6,447 | 13.2 | 4,798 | 12.7 | 5,896 | 13.8 |
|  | 2 | 5,577 | 25.2 | 2,219 | 24.7 | 1,475 | 24.9 | 1,883 | 25.9 |  | 2 | 53,723 | 41.5 | 19,286 | 39.4 | 15,572 | 41.2 | 18,865 | 44.1 |
|  | 3 | 2,897 | 13.1 | 1,227 | 13.7 | 790 | 13.3 | 880 | 12.1 |  | 3 | 25,918 | 20.0 | 10,566 | 21.6 | 7,726 | 20.4 | 7,626 | 17.8 |
|  | 4 | 1,167 | 5.3 | 499 | 5.6 | 319 | 5.4 | 349 | 4.8 |  | 4 | 6,855 | 5.3 | 3,022 | 6.2 | 2,068 | 5.5 | 1,765 | 4.1 |
|  | 5 | 391 | 1.8 | 167 | 1.9 | 120 | 2.0 | 104 | 1.4 |  | 5 | 1,683 | 1.3 | 732 | 1.5 | 522 | 1.4 | 429 | 1.0 |
|  | $6+$ | 248 | 1.1 | 94 | 1.1 | 65 | 1.1 | 89 | 1.2 |  | $6+$ | 577 | 0.5 | 296 | 0.6 | 155 | 0.4 | 126 | 0.3 |
| 74 to 81 | 0 | 13,421 | 27.0 | 4,606 | 26.0 | 4,416 | 28.2 | 4,399 | 26.8 | 111 to 119 | 0 | 17,719 | 18.4 | 6,464 | 17.3 | 5,031 | 18.4 | 6,224 | 19.8 |
|  | , | 7,746 | 15.6 | 2,706 | 15.3 | 2,344 | 15.0 | 2,696 | 16.4 |  | , | 11,902 | 12.4 | 4,688 | 12.6 | 3,202 | 11.7 | 4,012 | 12.7 |
|  | 2 | 15,952 | 32.0 | 5,655 | 32.0 | 4,824 | 30.8 | 5,473 | 33.3 |  | 2 | 40,016 | 41.6 | 14,745 | 39.6 | 11,371 | 41.5 | 13,900 | 44.1 |
|  | 3 | 8,433 | 16.9 | 3,131 | 17.7 | 2,724 | 17.4 | 2,578 | 15.7 |  | 3 | 20,080 | 20.9 | 8,355 | 22.4 | 5,895 | 21.5 | 5,830 | 18.5 |
|  | 4 | 2,910 | 5.8 | 1,117 | 6.3 | 917 | 5.9 | 876 | 5.3 |  | 4 | 4,929 | 5.1 | 2,241 | 6.0 | 1,459 | 5.3 | 1,229 | 3.9 |
|  | 5 | 885 | 1.8 | 308 | 1.7 | 296 | 1.9 | 281 | 1.7 |  | 5 | 1,127 | 1.2 | 562 | 1.5 | 314 | 1.2 | 251 | 0.8 |
|  | $6+$ | 450 | 0.9 | 177 | 1.0 | 132 | 0.8 | 141 | 0.9 |  | $6+$ | 408 | 0.4 | 225 | 0.6 | 115 | 0.4 | 68 | 0.2 |
| 81 to 89 | 0 | 17,199 | 21.9 | 5,903 | 21.4 | 5,262 | 22.2 | 6,034 | 22.1 | 119 to 126 | 0 | 10,850 | 18.7 | 4,011 | 17.4 | 3,072 | 19.1 | 3,767 | 19.8 |
|  | 1 | 12,182 | 15.5 | 4,219 | 15.3 | 3,563 | 15.1 | 4,400 | 16.1 |  | 1 | 6,843 | 11.8 | 2,696 | 11.7 | 1,807 | 11.2 | 2,340 | 12.3 |
|  | 2 | 28,530 | 36.3 | 9,624 | 35.0 | 8,535 | 36.0 | 10,371 | 38.0 |  | 2 | 23,885 | 41.1 | 8,979 | 39.1 | 6,594 | 40.9 | 8,312 | 43.7 |
|  | 3 | 14,260 | 18.2 | 5,290 | 19.2 | 4,382 | 18.5 | 4,588 | 16.8 |  | 3 | 12,509 | 21.5 | 5,327 | 23.2 | 3,492 | 21.7 | 3,690 | 19.4 |
|  | 4 | 4,441 | 5.7 | 1,700 | 6.2 | 1,376 | 5.8 | 1,365 | 5.0 |  | 4 | 3,131 | 5.4 | 1,501 | 6.5 | 889 | 5.5 | 741 | 3.9 |
|  | 5 | 1,341 | 1.7 | 567 | 2.1 | 398 | 1.7 | 376 | 1.4 |  | 5 | 678 | 1.2 | 351 | 1.5 | 201 | 1.3 | 126 | 0.7 |
|  | $6+$ | 554 | 0.7 | 233 | 0.9 | 163 | 0.7 | 158 | 0.6 |  | $6+$ | 245 | 0.4 | 129 | 0.6 | 71 | 0.4 | 45 | 0.2 |
| 89 to 96 | 0 | 22,945 | 20.0 | 8,202 | 19.7 | 7,035 | 20.2 | 7,708 | 20.2 | Above 126 | 0 | 6,091 | 19.6 | 2,179 | 17.8 | 1,523 | 19.3 | 2,389 | 21.9 |
|  | 1 | 16,907 | 14.8 | 6,048 | 14.6 | 4,990 | 14.4 | 5,869 | 15.4 |  | 1 | 3,484 | 11.2 | 1,401 | 11.4 | 833 | 10.5 | 1,250 | 11.5 |
|  | 2 | 44,091 | 38.5 | 15,336 | 36.9 | 13,251 | 38.1 | 15,504 | 40.6 |  | 2 | 12,479 | 40.2 | 4,690 | 38.2 | 3,233 | 40.9 | 4,556 | 41.8 |
|  | 3 | 21,812 | 19.1 | 8,436 | 20.3 | 6,684 | 19.2 | 6,692 | 17.5 |  | 3 | 6,889 | 22.2 | 2,952 | 24.0 | 1,755 | 22.2 | 2,182 | 20.0 |
|  | 4 | 6,447 | 5.6 | 2,532 | 6.1 | 2,108 | 6.1 | 1,807 | 4.7 |  | 4 | 1,638 | 5.3 | 802 | 6.5 | 434 | 5.5 | 402 | 3.7 |
|  | 5 | 1,661 | 1.5 | 705 | 1.7 | 506 | 1.5 | 450 | 1.2 |  | 5 | 373 | 1.2 | 194 | 1.6 | 90 | 1.1 | 89 | 0.8 |
|  | $6+$ | 665 | 0.6 | 281 | 0.7 | 207 | 0.6 | 177 | 0.5 |  | $6+$ | 128 | 0.4 | 60 | 0.5 | 43 | 0.5 | 25 | 0.2 |
| 96 to 104 | 0 | 29,516 | 18.6 | 9,164 | 17.9 | 8,533 | 18.9 | 11,819 | 19.0 | Not Tested | 0 | 9,319 | 55.6 | 4,404 | 53.1 | 3,498 | 57.2 | 1,417 | 60.0 |
|  | 1 | 22,278 | 14.1 | 7,117 | 13.9 | 6,146 | 13.6 | 9,015 | 14.5 |  | 1 | 1,782 | 10.6 | 890 | 10.7 | 669 | 10.9 | 223 | 9.5 |
|  | 2 | 64,369 | 40.6 | 19,728 | 38.5 | 17,893 | 39.7 | 26,748 | 43.1 |  | 2 | 3,193 | 19.0 | 1,648 | 19.9 | 1,113 | 18.2 | 432 | 18.3 |
|  | 3 | 30,762 | 19.4 | 10,916 | 21.3 | 9,071 | 20.1 | 10,775 | 17.4 |  | 3 | 1,627 | 9.7 | 896 | 10.8 | 548 | 9.0 | 183 | 7.8 |
|  | 4 | 8,551 | 5.4 | 3,199 | 6.2 | 2,466 | 5.5 | 2,886 | 4.7 |  | 4 | 569 | 3.4 | 303 | 3.7 | 194 | 3.2 | 72 | 3.1 |
|  | 5 | 2,159 | 1.4 | 818 | 1.6 | 696 | 1.5 | 645 | 1.0 |  | 5 | 194 | 1.2 | 102 | 1.2 | 68 | 1.1 | 24 | 1.0 |
|  | $6+$ | 802 | 0.5 | 351 | 0.7 | 244 | 0.5 | 207 | 0.3 |  | $6+$ | 85 | 0.5 | 49 | 0.6 | 26 | 0.4 | 10 | 0.4 |
|  |  |  |  |  |  |  |  |  |  | Missing | 0 | 7,390 | 30.8 | 1,067 | 26.6 | 2,023 | 25.5 | 4,300 | 35.8 |
|  |  |  |  |  |  |  |  |  |  |  | 1 | 3,106 | 13.0 | 494 | 12.3 | 1,007 | 12.7 | 1,605 | 13.4 |
|  |  |  |  |  |  |  |  |  |  |  | 2 | 8,010 | 33.4 | 1,342 | 33.5 | 2,865 | 36.1 | 3,803 | 31.6 |
|  |  |  |  |  |  |  |  |  |  |  | 3 | 3,884 | 16.2 | 758 | 18.9 | 1,430 | 18.0 | 1,696 | 14.1 |
|  |  |  |  |  |  |  |  |  |  |  | 4 | 1,154 | 4.8 | 232 | 5.8 | 451 | 5.7 | 471 | 3.9 |
|  |  |  |  |  |  |  |  |  |  |  | 5 | 298 | 1.2 | 84 | 2.1 | 110 | 1.4 | 104 | 0.9 |
|  |  |  |  |  |  |  |  |  |  |  | $6+$ | 126 | 0.5 | 30 | 0.8 | 54 | 0.7 | 42 | 0.4 |

Table S5. Linear regression: final parity regressed on IQ (categorical), no fixed effects. Swedish men born 1951-1967.

| Variable | Category | Model 1 |  |  | Model 2 |  |  | Model 3 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | -0.881 | 0.011 | -0.90, -0.86 | -0.832 | 0.011 | -0.85, -0.81 | -0.636 | 0.011 | -0.66, -0.61 |
|  | $<74$ | -0.444 | 0.011 | -0.46, -0.42 | -0.466 | 0.011 | -0.49, -0.45 | -0.315 | 0.010 | -0.34, -0.29 |
|  | 74-81 | -0.173 | 0.007 | -0.19, -0.16 | -0.189 | 0.007 | -0.20, -0.18 | -0.107 | 0.007 | -0.12, -0.09 |
|  | 81-89 | -0.073 | 0.006 | -0.08, -0.06 | -0.083 | 0.006 | -0.09, -0.07 | -0.037 | 0.006 | -0.05, -0.03 |
|  | 89-96 | -0.035 | 0.005 | -0.04, -0.03 | -0.040 | 0.005 | -0.05, -0.03 | -0.017 | 0.005 | -0.03, -0.01 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | 0.005 | 0.005 | 0.00, 0.01 | 0.007 | 0.005 | 0.00, 0.02 | -0.012 | 0.005 | -0.02, 0.00 |
|  | 111-119 | 0.011 | 0.005 | 0.00, 0.02 | 0.012 | 0.005 | 0.00, 0.02 | -0.023 | 0.005 | -0.03, -0.01 |
|  | 119-126 | 0.023 | 0.006 | 0.01, 0.04 | 0.018 | 0.006 | 0.01, 0.03 | -0.033 | 0.006 | -0.04, -0.02 |
|  | $>126$ | 0.019 | 0.008 | 0.00, 0.03 | 0.000 | 0.008 | -0.02, 0.02 | -0.064 | 0.008 | -0.08, -0.05 |
|  | Missing | -0.212 | 0.010 | -0.23, -0.19 | -0.205 | 0.010 | -0.22, -0.19 | -0.144 | 0.009 | -0.16, -0.13 |
| Birth year | 1951 | 0.148 | 0.008 | 0.13, 0.16 | 0.136 | 0.008 | 0.12, 0.15 | 0.127 | 0.008 | $0.11,0.14$ |
|  | 1952 | 0.146 | 0.008 | 0.13, 0.16 | 0.131 | 0.008 | 0.11, 0.15 | 0.123 | 0.008 | 0.11, 0.14 |
|  | 1953 | 0.143 | 0.008 | 0.13, 0.16 | 0.126 | 0.008 | 0.11, 0.14 | 0.114 | 0.008 | 0.10, 0.13 |
|  | 1954 | 0.143 | 0.008 | 0.13, 0.16 | 0.125 | 0.008 | 0.11, 0.14 | 0.114 | 0.008 | 0.10, 0.13 |
|  | 1955 | 0.137 | 0.008 | 0.12, 0.15 | 0.120 | 0.008 | 0.10, 0.14 | 0.110 | 0.008 | 0.09, 0.13 |
|  | 1956 | 0.135 | 0.008 | 0.12, 0.15 | 0.117 | 0.008 | 0.10, 0.13 | 0.107 | 0.008 | 0.09, 0.12 |
|  | 1957 | 0.131 | 0.008 | 0.11, 0.15 | 0.113 | 0.008 | 0.10, 0.13 | 0.102 | 0.008 | 0.09, 0.12 |
|  | 1958 | 0.108 | 0.008 | 0.09, 0.12 | 0.091 | 0.008 | 0.08, 0.11 | 0.080 | 0.008 | 0.06, 0.10 |
|  | 1959 | 0.095 | 0.008 | 0.08, 0.11 | 0.077 | 0.008 | 0.06, 0.09 | 0.069 | 0.008 | 0.05, 0.08 |
|  | 1961 | 0.072 | 0.008 | 0.06, 0.09 | 0.058 | 0.008 | 0.04, 0.07 | 0.046 | 0.008 | 0.03, 0.06 |
|  | 1962 | 0.042 | 0.008 | 0.03, 0.06 | 0.032 | 0.008 | 0.02, 0.05 | 0.026 | 0.008 | 0.01, 0.04 |
|  | 1963 | 0.031 | 0.008 | 0.02, 0.05 | 0.024 | 0.008 | 0.01, 0.04 | 0.020 | 0.007 | 0.01, 0.03 |
|  | 1964 | 0.037 | 0.007 | 0.02, 0.05 | 0.034 | 0.007 | 0.02, 0.05 | 0.030 | 0.007 | 0.02, 0.04 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | -0.033 | 0.007 | -0.05, -0.02 | -0.030 | 0.007 | -0.04, -0.02 | -0.027 | 0.007 | -0.04, -0.01 |
|  | 1967 | -0.042 | 0.007 | -0.06, -0.03 | -0.037 | 0.007 | -0.05, -0.02 | -0.035 | 0.007 | -0.05, -0.02 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 |  |  |  | -0.028 | 0.004 | -0.03, -0.02 | -0.027 | 0.003 | -0.03, -0.02 |
|  | 3 |  |  |  | -0.070 | 0.005 | -0.08, -0.06 | -0.068 | 0.005 | -0.08, -0.06 |
|  | 4 |  |  |  | -0.121 | 0.009 | -0.14, -0.10 | -0.122 | 0.008 | -0.14, -0.11 |
|  | 5 |  |  |  | -0.183 | 0.014 | -0.21, -0.16 | -0.184 | 0.014 | -0.21, -0.16 |
|  | 6+ |  |  |  | -0.161 | 0.019 | -0.20, -0.12 | -0.163 | 0.019 | -0.20, -0.13 |
| Sibling group size | 1 |  |  |  | $-0.109$ | 0.005 | -0.12, -0.10 | $-0.082$ | 0.005 | -0.09, -0.07 |
|  | $2 \text { [ref] }$ |  |  |  | $0.000$ |  |  | $0.000$ |  |  |
|  | 3 |  |  |  | 0.115 | 0.004 | 0.11, 0.12 | 0.120 | 0.004 | 0.11, 0.13 |
|  | 4 |  |  |  | 0.209 | 0.006 | 0.20, 0.22 | 0.226 | 0.006 | 0.21, 0.24 |
|  | 5 |  |  |  | 0.295 | 0.010 | 0.28, 0.31 | 0.323 | 0.010 | 0.30, 0.34 |
|  | 6+ |  |  |  | 0.392 | 0.014 | 0.37, 0.42 | 0.426 | 0.014 | 0.40, 0.45 |
| Education | Primary ( $<9$ years) |  |  |  | -0.095 | 0.012 | -0.12, -0.07 | -0.042 | 0.012 | -0.07, -0.02 |
|  | Primary (9 years) |  |  |  | -0.022 | 0.005 | -0.03, -0.01 | -0.004 | 0.005 | -0.01, 0.01 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | -0.072 | 0.005 | -0.08, -0.06 | -0.098 | 0.005 | -0.11, -0.09 |
|  | Tertiary (13-15 years) |  |  |  | -0.023 | $0.004$ | -0.03, -0.01 | -0.096 | 0.004 | -0.10, -0.09 |
|  | Tertiary ( $15+$ years) |  |  |  | 0.022 | 0.005 | 0.01, 0.03 | -0.070 | 0.005 | -0.08, -0.06 |
|  | Postgraduate (16-20 years) |  |  |  | 0.125 | 0.012 | 0.10, 0.15 | 0.008 | 0.012 | -0.02, 0.03 |
|  | Missing |  |  |  | -0.858 | 0.025 | -0.91, -0.81 | -0.604 | 0.024 | -0.65, -0.56 |
| Cumulative income deciles | 1 |  |  |  |  |  |  | -0.835 | 0.007 | -0.85, -0.82 |
|  | 2 |  |  |  |  |  |  | -0.606 | 0.007 | -0.62, -0.59 |
|  | 3 |  |  |  |  |  |  | -0.465 | 0.006 | -0.48, -0.45 |
|  | 4 |  |  |  |  |  |  | -0.377 | 0.006 | -0.39, -0.37 |
|  | 5 |  |  |  |  |  |  | -0.293 | 0.006 | -0.31, -0.28 |
|  | 6 |  |  |  |  |  |  | -0.223 | 0.006 | -0.23, -0.21 |
|  | 7 |  |  |  |  |  |  | -0.178 | 0.006 | -0.19, -0.17 |
|  | 8 |  |  |  |  |  |  | -0.124 | 0.006 | -0.14, -0.11 |
|  | 9 |  |  |  |  |  |  | -0.086 | 0.006 | -0.10, -0.07 |
|  | 10 [ref] |  |  |  |  |  |  | 0.000 |  |  |
| N |  | 749,939 |  |  | 749,939 |  |  | 749,939 |  |  |

TABLE S6. Linear regression: final parity regressed on IQ (categorical), fixed effects. Swedish men born 1951-1967.

| Variable | Category | Model 4 |  |  | Model 5 |  |  | Model 6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | -1.024 | 0.031 | -1.08, -0.96 | -0.963 | 0.031 | -1.02, -0.90 | -0.728 | 0.030 | -0.79, -0.67 |
|  | <74 | -0.571 | 0.027 | -0.62, -0.52 | -0.553 | 0.027 | -0.61, -0.50 | -0.387 | 0.027 | -0.44, -0.33 |
|  | 74-81 | -0.272 | 0.019 | -0.31, -0.24 | -0.260 | 0.019 | -0.30, -0.22 | -0.171 | 0.019 | -0.21, -0.13 |
|  | 81-89 | -0.124 | 0.016 | -0.15, -0.09 | -0.116 | 0.016 | -0.15, -0.09 | -0.067 | 0.015 | -0.10, -0.04 |
|  | 89-96 | -0.051 | 0.013 | -0.08, -0.02 | -0.047 | 0.014 | -0.07, -0.02 | -0.021 | 0.013 | -0.05, 0.00 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | 0.038 | 0.013 | 0.01, 0.06 | 0.031 | 0.013 | 0.01, 0.06 | 0.003 | 0.013 | -0.02, 0.03 |
|  | 111-119 | 0.080 | 0.015 | 0.05, 0.11 | 0.065 | 0.015 | 0.03, 0.09 | 0.013 | 0.015 | -0.02, 0.04 |
|  | 119-126 | 0.125 | 0.019 | 0.09, 0.16 | 0.099 | 0.019 | 0.06, 0.14 | 0.023 | 0.019 | -0.01, 0.06 |
|  | > 126 | 0.139 | 0.025 | 0.09, 0.19 | 0.097 | 0.026 | 0.05, 0.15 | -0.003 | 0.025 | -0.05, 0.05 |
|  | Missing | -0.252 | 0.028 | -0.31, -0.20 | -0.244 | 0.028 | -0.30, -0.19 | -0.180 | 0.027 | -0.23, -0.13 |
| Birth year | 1951 | 0.319 | 0.026 | 0.27, 0.37 | 0.331 | 0.039 | 0.25, 0.41 | 0.304 | 0.038 | 0.23, 0.38 |
|  | 1952 | 0.315 | 0.025 | 0.27, 0.36 | 0.323 | 0.036 | 0.25, 0.39 | 0.299 | 0.036 | 0.23, 0.37 |
|  | 1953 | 0.330 | 0.024 | 0.28, 0.38 | 0.336 | 0.034 | 0.27, 0.40 | 0.314 | 0.033 | 0.25, 0.38 |
|  | 1954 | 0.293 | 0.023 | 0.25, 0.34 | 0.301 | 0.032 | 0.24, 0.36 | 0.276 | 0.031 | 0.21, 0.34 |
|  | 1955 | 0.305 | 0.023 | 0.26, 0.35 | 0.311 | 0.030 | 0.25, 0.37 | 0.289 | 0.030 | 0.23, 0.35 |
|  | 1956 | 0.279 | 0.022 | 0.24, 0.32 | 0.283 | 0.029 | 0.23, 0.34 | 0.261 | 0.028 | 0.21, 0.32 |
|  | 1957 | 0.278 | 0.022 | 0.23, 0.32 | 0.283 | 0.027 | 0.23, 0.34 | 0.265 | 0.026 | 0.21, 0.32 |
|  | 1958 | 0.240 | 0.022 | 0.20, 0.28 | 0.244 | 0.026 | 0.19, 0.29 | 0.221 | 0.025 | 0.17, 0.27 |
|  | 1959 | 0.204 | 0.022 | 0.16, 0.25 | 0.208 | 0.025 | 0.16, 0.26 | 0.189 | 0.024 | 0.14, 0.24 |
|  | 1961 | 0.156 | 0.021 | 0.12, 0.20 | 0.156 | 0.023 | 0.11, 0.20 | 0.132 | 0.022 | 0.09, 0.18 |
|  | 1962 | 0.121 | 0.021 | 0.08, 0.16 | 0.121 | 0.022 | 0.08, 0.16 | 0.107 | 0.021 | 0.07, 0.15 |
|  | 1963 | 0.075 | 0.021 | 0.03, 0.12 | 0.074 | 0.021 | 0.03, 0.12 | 0.066 | 0.021 | 0.03, 0.11 |
|  | 1964 | 0.088 | 0.022 | 0.05, 0.13 | 0.087 | 0.022 | 0.04, 0.13 | 0.079 | 0.021 | 0.04, 0.12 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | -0.050 | 0.023 | -0.09, -0.01 | -0.052 | 0.023 | -0.10, -0.01 | -0.049 | 0.022 | -0.09, 0.00 |
|  | 1967 | -0.065 | 0.022 | -0.11, -0.02 | -0.067 | 0.023 | -0.11, -0.02 | -0.059 | 0.022 | -0.10, -0.02 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 |  |  |  | -0.005 | 0.011 | -0.03, 0.02 | -0.007 | 0.010 | -0.03, 0.01 |
|  | 3 |  |  |  | 0.010 | 0.018 | -0.03, 0.05 | 0.007 | 0.018 | -0.03, 0.04 |
|  | 4 |  |  |  | -0.002 | 0.027 | -0.05, 0.05 | -0.006 | 0.026 | -0.06, 0.05 |
|  | 5 |  |  |  | -0.017 | 0.037 | -0.09, 0.06 | -0.021 | 0.036 | -0.09, 0.05 |
|  | 6+ |  |  |  | -0.020 | 0.049 | -0.12, 0.08 | -0.020 | 0.048 | -0.11, 0.07 |
| Education | Primary ( $<9$ years) |  |  |  | -0.130 | 0.033 | -0.19, -0.07 | -0.078 | 0.032 | -0.14, -0.02 |
|  | Primary (9 years) |  |  |  | -0.059 | 0.013 | -0.08, -0.03 | -0.051 | 0.012 | -0.08, -0.03 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | -0.033 | 0.014 | -0.06, -0.01 | -0.053 | 0.014 | -0.08, -0.03 |
|  | Tertiary (13-15 years) |  |  |  | -0.001 | 0.014 | -0.03, 0.03 | -0.072 | 0.014 | -0.10, -0.05 |
|  | Tertiary ( $15+$ years) |  |  |  | 0.086 | 0.016 | 0.06, 0.12 | -0.014 | 0.016 | -0.04, 0.02 |
|  | Postgraduate (16-20 years) |  |  |  | 0.268 | 0.039 | 0.19, 0.34 | 0.127 | 0.038 | 0.05, 0.20 |
|  | Missing |  |  |  | -0.867 | 0.076 | -1.02, -0.72 | -0.583 | 0.073 | -0.73, -0.44 |
| Cumulative income deciles | 1 |  |  |  |  |  |  | -1.077 | 0.021 | -1.12, -1.04 |
|  | 2 |  |  |  |  |  |  | -0.795 | 0.020 | -0.83, -0.76 |
|  | 3 |  |  |  |  |  |  | -0.598 | 0.020 | -0.64, -0.56 |
|  | 4 |  |  |  |  |  |  | -0.495 | 0.020 | -0.53, -0.46 |
|  | 5 |  |  |  |  |  |  | -0.378 | 0.019 | -0.42, -0.34 |
|  | 6 |  |  |  |  |  |  | -0.295 | 0.019 | -0.33, -0.26 |
|  | 7 |  |  |  |  |  |  | -0.213 | 0.019 | -0.25, -0.18 |
|  | 8 |  |  |  |  |  |  | -0.137 | 0.019 | -0.17, -0.10 |
|  | 9 |  |  |  |  |  |  | -0.070 | 0.018 | -0.11, -0.03 |
|  | 10 [ref] |  |  |  |  |  |  | 0.000 |  |  |
| N |  | 217,055 |  |  |  | 217,055 |  |  | $217,055$ |  |

TABLE S7. Linear regression: final parity regressed on IQ (continuous), no fixed effects. Swedish men born 1951-1967.

| Variable | Category | Model 1 |  |  | Model 2 |  |  | Model 3 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ (stanine scale) |  | 0.034 | 0.001 | 0.032, 0.036 | 0.041 | 0.001 | 0.040, 0.043 | 0.018 | 0.001 | 0.016, 0.020 |
| Birth year | 1951 | 0.123 | 0.008 | 0.107, 0.140 | 0.105 | 0.008 | 0.089, 0.122 | 0.104 | 0.008 | 0.088, 0.120 |
|  | 1952 | 0.122 | 0.008 | 0.106, 0.138 | 0.102 | 0.008 | 0.086, 0.118 | 0.102 | 0.008 | 0.086, 0.118 |
|  | 1953 | 0.123 | 0.008 | 0.107, 0.139 | 0.104 | 0.008 | 0.088, 0.120 | 0.098 | 0.008 | 0.082, 0.114 |
|  | 1954 | 0.128 | 0.008 | 0.111, 0.144 | 0.107 | 0.008 | 0.091, 0.123 | 0.101 | 0.008 | 0.085, 0.117 |
|  | 1955 | 0.121 | 0.008 | $0.105,0.137$ | 0.101 | 0.008 | 0.085, 0.117 | 0.096 | 0.008 | 0.080, 0.112 |
|  | 1956 | 0.122 | 0.008 | 0.106, 0.138 | 0.101 | 0.008 | $0.085,0.117$ | 0.096 | 0.008 | 0.081, 0.112 |
|  | 1957 | 0.117 | 0.008 | 0.101, 0.133 | 0.097 | 0.008 | 0.081, 0.113 | 0.091 | 0.008 | 0.076, 0.107 |
|  | 1958 | 0.093 | 0.008 | 0.077, 0.109 | 0.075 | 0.008 | 0.059, 0.091 | 0.069 | 0.008 | 0.053, 0.084 |
|  | 1959 | 0.086 | 0.008 | 0.070, 0.102 | 0.067 | 0.008 | 0.050, 0.083 | 0.062 | 0.008 | 0.046, 0.078 |
|  | 1961 | 0.037 | 0.008 | 0.021, 0.054 | 0.025 | 0.008 | 0.009, 0.042 | 0.023 | 0.008 | 0.007, 0.039 |
|  | 1962 | 0.038 | 0.008 | 0.022, 0.053 | 0.028 | 0.008 | 0.012, 0.043 | 0.023 | 0.008 | 0.008, 0.038 |
|  | 1963 | 0.024 | 0.008 | 0.009, 0.040 | 0.018 | 0.008 | 0.003, 0.033 | 0.015 | 0.008 | 0.001, 0.030 |
|  | 1964 | 0.025 | 0.008 | 0.010, 0.040 | 0.023 | 0.008 | 0.008, 0.038 | 0.022 | 0.007 | 0.007, 0.036 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | -0.035 | 0.008 | -0.049, -0.020 | -0.031 | 0.007 | -0.045, -0.016 | -0.028 | 0.007 | -0.042, -0.014 |
|  | 1967 | -0.046 | 0.008 | -0.061, -0.031 | -0.040 | 0.008 | -0.055, -0.025 | -0.036 | 0.007 | -0.050, -0.021 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 |  |  |  | -0.027 | 0.004 | -0.034, -0.020 | -0.027 | 0.004 | -0.034, -0.020 |
|  | 3 |  |  |  | -0.068 | 0.005 | -0.078, -0.057 | -0.066 | 0.005 | -0.076, -0.056 |
|  | 4 |  |  |  | -0.117 | 0.009 | -0.134, -0.100 | -0.119 | 0.009 | -0.136, -0.102 |
|  | 5 |  |  |  | -0.181 | 0.014 | -0.209, -0.152 | -0.183 | 0.014 | -0.211, -0.156 |
|  | $6+$ |  |  |  | -0.147 | 0.019 | -0.185, -0.109 | -0.151 | 0.019 | -0.188, -0.113 |
| Sibling group size | 1 |  |  |  | -0.109 | 0.005 | -0.118, -0.099 | -0.083 | 0.005 | -0.093, -0.074 |
|  | 2 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 3 |  |  |  | 0.113 | 0.004 | 0.105, 0.121 | 0.119 | 0.004 | 0.111, 0.126 |
|  | 4 |  |  |  | 0.206 | 0.006 | 0.194, 0.218 | 0.223 | 0.006 | 0.212, 0.235 |
|  | 5 |  |  |  | 0.290 | 0.010 | 0.271, 0.310 | 0.318 | 0.010 | $0.298,0.337$ |
|  | $6+$ |  |  |  | 0.375 | 0.014 | 0.347, 0.403 | 0.410 | 0.014 | 0.382, 0.437 |
| Education | Primary ( $<9$ years) |  |  |  | -0.032 | 0.013 | -0.058, -0.006 | 0.003 | 0.013 | -0.022, 0.029 |
|  | Primary (9 years) |  |  |  | -0.004 | 0.005 | -0.014, 0.005 | 0.008 | 0.005 | -0.001, 0.017 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | -0.084 | 0.005 | -0.093, -0.074 | -0.105 | 0.005 | -0.115, -0.096 |
|  | Tertiary (13-15 years) |  |  |  | -0.052 | 0.005 | -0.061, -0.043 | -0.115 | 0.005 | -0.124, -0.107 |
|  | Tertiary ( $15+$ years) |  |  |  | -0.021 | 0.005 | -0.030, -0.011 | -0.098 | 0.005 | -0.108, -0.089 |
|  | Postgraduate (16-20 years) |  |  |  | 0.047 | 0.013 | 0.022, 0.072 | -0.047 | 0.012 | -0.071, -0.023 |
|  | Missing |  |  |  | -0.333 | 0.056 | -0.443, -0.223 | -0.200 | 0.054 | -0.306, -0.094 |
| Cumulative income deciles | 1 |  |  |  |  |  |  | -0.801 | 0.007 | -0.815, -0.787 |
|  | 2 |  |  |  |  |  |  | -0.585 | 0.007 | -0.598, -0.571 |
|  | 3 |  |  |  |  |  |  | -0.455 | 0.007 | -0.467, -0.442 |
|  | 4 |  |  |  |  |  |  | -0.367 | 0.006 | -0.379, -0.354 |
|  | 5 |  |  |  |  |  |  | -0.283 | 0.006 | -0.295, -0.270 |
|  | 6 |  |  |  |  |  |  | -0.213 | 0.006 | -0.225, -0.201 |
|  | 7 |  |  |  |  |  |  | -0.167 | 0.006 | -0.179, -0.155 |
|  | 8 |  |  |  |  |  |  | -0.113 | 0.006 | -0.125, -0.101 |
|  | 9 |  |  |  |  |  |  | -0.080 | 0.006 | -0.092, -0.069 |
|  | 10 [ref] |  |  |  |  |  |  | 0.000 |  |  |
| N |  | 712,265 |  |  |  | 712,265 |  |  | 712,265 |  |

TABLE S8. Linear regression: final parity regressed on IQ (continuous), fixed effects. Swedish men born 1951-1967.

| Variable | Category | Model 4 |  |  | Model 5 |  |  | Model 6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ (stanine scale)Birth year |  | 0.074 | 0.003 | 0.068, 0.080 | 0.073 | 0.003 | 0.066, 0.079 | 0.043 | 0.003 | 0.036, 0.049 |
|  | 1951 | 0.282 | 0.027 | 0.230, 0.335 | 0.293 | 0.040 | 0.213, 0.372 | 0.281 | 0.040 | 0.203, 0.358 |
|  | 1952 | 0.286 | 0.026 | $0.235,0.336$ | 0.294 | 0.038 | $0.219,0.368$ | 0.281 | 0.037 | 0.208, 0.354 |
|  | 1953 | 0.309 | 0.025 | 0.260, 0.358 | 0.316 | 0.036 | 0.247, 0.386 | 0.306 | 0.035 | 0.238, 0.374 |
|  | 1954 | 0.272 | 0.024 | $0.225,0.320$ | 0.281 | 0.033 | $0.215,0.346$ | 0.268 | 0.033 | 0.203, 0.332 |
|  | 1955 | 0.285 | 0.024 | $0.239,0.331$ | 0.291 | 0.031 | $0.230,0.353$ | 0.279 | 0.031 | 0.218, 0.339 |
|  | 1956 | 0.257 | 0.023 | 0.211, 0.303 | 0.263 | 0.030 | 0.204, 0.321 | 0.249 | 0.029 | 0.192, 0.307 |
|  | 1957 | 0.264 | 0.023 | 0.218, 0.309 | 0.269 | 0.028 | $0.214,0.325$ | 0.259 | 0.028 | $0.205,0.313$ |
|  | 1958 | 0.228 | 0.022 | 0.184, 0.272 | 0.233 | 0.027 | 0.181, 0.285 | 0.219 | 0.026 | 0.168, 0.270 |
|  | 1959 | 0.198 | 0.022 | 0.154, 0.242 | 0.202 | 0.026 | 0.152, 0.253 | 0.191 | 0.025 | 0.142, 0.241 |
|  | 1961 | 0.107 | 0.022 | 0.064, 0.151 | 0.110 | 0.024 | 0.063, 0.157 | 0.101 | 0.024 | $0.055,0.147$ |
|  | 1962 | 0.123 | 0.021 | 0.081, 0.165 | 0.125 | 0.023 | 0.081, 0.169 | 0.115 | 0.022 | 0.072, 0.159 |
|  | 1963 | 0.066 | 0.021 | 0.024, 0.108 | 0.067 | 0.022 | 0.024, 0.110 | 0.063 | 0.021 | 0.021, 0.105 |
|  | 1964 | 0.081 | 0.022 | 0.037, 0.126 | 0.082 | 0.023 | 0.038, 0.126 | 0.078 | 0.022 | 0.035, 0.121 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | -0.055 | 0.024 | -0.102, -0.009 | -0.056 | 0.024 | -0.103, -0.009 | -0.052 | 0.023 | -0.098, -0.006 |
|  | 1967 | -0.064 | 0.023 | -0.109, -0.018 | -0.065 | 0.024 | -0.112, -0.018 | -0.058 | 0.024 | -0.104, -0.011 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 |  |  |  | -0.004 | 0.011 | -0.026, 0.017 | -0.006 | 0.011 | -0.027, 0.016 |
|  | 3 |  |  |  | 0.015 | 0.019 | -0.023, 0.052 | 0.013 | 0.019 | -0.024, 0.050 |
|  | 4 |  |  |  | -0.001 | 0.028 | -0.056, 0.054 | -0.003 | 0.028 | -0.057, 0.051 |
|  | 5 |  |  |  | -0.011 | 0.038 | -0.085, 0.064 | -0.014 | 0.037 | -0.087, 0.060 |
|  | $6+$ |  |  |  | -0.002 | 0.051 | -0.101, 0.097 | -0.002 | 0.050 | -0.099, 0.096 |
| Education | Primary ( $<9$ years) |  |  |  | -0.028 | 0.036 | -0.098, 0.042 | 0.000 | 0.035 | -0.069, 0.070 |
|  | Primary (9 years) |  |  |  | -0.028 | 0.013 | -0.054, -0.002 | -0.029 | 0.013 | -0.055, -0.004 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | -0.057 | 0.015 | -0.086, -0.028 | -0.072 | 0.014 | -0.100, -0.044 |
|  | Tertiary (13-15 years) |  |  |  | -0.041 | 0.014 | -0.069, -0.012 | -0.101 | 0.014 | -0.129, -0.073 |
|  | Tertiary ( $15+$ years) |  |  |  | 0.032 | 0.016 | 0.000, 0.064 | -0.051 | 0.016 | -0.083, -0.019 |
|  | Postgraduate (16-20 years) |  |  |  | 0.178 | 0.040 | 0.099, 0.257 | 0.065 | 0.040 | -0.013, 0.143 |
|  | Missing |  |  |  | -0.378 | 0.134 | -0.640, -0.115 | -0.238 | 0.133 | -0.499, 0.023 |
| Cumulative income deciles | 1 |  |  |  |  |  |  | -1.016 | 0.022 | -1.059, -0.972 |
|  | 2 |  |  |  |  |  |  | -0.760 | 0.021 | -0.802, -0.719 |
|  | 3 |  |  |  |  |  |  | -0.574 | 0.021 | -0.614, -0.533 |
|  | 4 |  |  |  |  |  |  | -0.472 | 0.020 | -0.512, -0.432 |
|  | 5 |  |  |  |  |  |  | -0.358 | 0.020 | -0.398, -0.318 |
|  | 6 |  |  |  |  |  |  | -0.271 | 0.020 | -0.311, -0.232 |
|  | 7 |  |  |  |  |  |  | -0.192 | 0.020 | -0.231, -0.153 |
|  | 8 |  |  |  |  |  |  | -0.121 | 0.019 | -0.159, -0.083 |
|  | 9 |  |  |  |  |  |  | -0.061 | 0.019 | -0.099, -0.024 |
|  | 10 [ref] |  |  |  |  |  |  | 0.000 |  |  |
| N |  | 206,314 |  |  |  | 206,314 |  |  | 206,314 |  |

Table S9: Linear regression: final parity regressed on interaction between IQ (categorical) and deciles of cumulative income earned between ages 18 and 45. Model 19 without fixed effects, Model 20 including fixed effects. Swedish men born 1951-1967.

|  |  |  | Model 19 |  |  | Model 20 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| Income x IQ | Income Decile - 1 | Not tested | -1.675 | 0.018 | -1.709, -1.640 | -2.101 | 0.054 | -2.206, -1.996 |
| Interaction |  | $<74$ | -1.149 | 0.023 | -1.193, -1.104 | -1.568 | 0.061 | -1.689, -1.448 |
|  |  | 74-81 | -0.917 | 0.019 | -0.955, -0.879 | -1.289 | 0.054 | -1.395, -1.182 |
|  |  | 81-89 | -0.769 | 0.018 | -0.804, -0.733 | -1.066 | 0.051 | -1.165, -0.966 |
|  |  | 89-96 | -0.742 | 0.017 | -0.774, -0.709 | -1.023 | 0.048 | -1.117, -0.928 |
|  |  | 96-104 | -0.702 | 0.016 | -0.733, -0.671 | -0.930 | 0.047 | -1.023, -0.838 |
|  |  | 104-111 | -0.745 | 0.017 | -0.779, -0.711 | -0.924 | 0.052 | -1.025, -0.823 |
|  |  | 111-119 | -0.764 | 0.020 | -0.803, -0.724 | -0.900 | 0.059 | -1.016, -0.783 |
|  |  | 119-126 | -0.792 | 0.026 | -0.843, -0.742 | -0.908 | 0.073 | -1.050, -0.766 |
|  |  | $>126$ | -0.864 | 0.034 | -0.932, -0.797 | -0.894 | 0.094 | -1.078, -0.709 |
|  |  | Missing | -1.221 | 0.023 | -1.266, -1.177 | -1.621 | 0.068 | -1.754, -1.488 |
|  | Income Decile - 2 | Not tested | -1.368 | 0.025 | -1.417, -1.319 | -1.637 | 0.069 | -1.771, -1.502 |
|  |  | $<74$ | -1.001 | 0.023 | -1.047, -0.956 | -1.299 | 0.061 | -1.418, -1.179 |
|  |  | 74-81 | -0.713 | 0.019 | -0.750, -0.675 | -1.016 | 0.051 | -1.116, -0.916 |
|  |  | 81-89 | -0.580 | 0.017 | -0.614, -0.546 | -0.835 | 0.049 | -0.930, -0.739 |
|  |  | 89-96 | -0.539 | 0.016 | -0.570, -0.508 | -0.755 | 0.046 | -0.845, -0.664 |
|  |  | 96-104 | -0.511 | 0.015 | -0.540, -0.482 | -0.706 | 0.044 | -0.792, -0.619 |
|  |  | 104-111 | -0.512 | 0.017 | -0.545, -0.479 | -0.671 | 0.048 | -0.766, -0.575 |
|  |  | 111-119 | -0.511 | 0.019 | -0.549, -0.473 | -0.597 | 0.056 | -0.708, -0.486 |
|  |  | 119-126 | -0.541 | 0.026 | -0.592, -0.491 | -0.587 | 0.074 | -0.732, -0.442 |
|  |  | > 126 | -0.637 | 0.035 | -0.706, -0.568 | -0.643 | 0.100 | -0.839, -0.447 |
|  |  | Missing | -0.857 | 0.028 | -0.912, -0.801 | -1.159 | 0.074 | -1.305, -1.014 |
|  | Income Decile - 3 | Not tested | -1.008 | 0.035 | -1.076, -0.939 | -1.182 | 0.094 | -1.366, -0.998 |
|  |  | $<74$ | -0.715 | 0.028 | -0.769, -0.661 | -0.948 | 0.068 | -1.081, -0.816 |
|  |  | 74-81 | -0.531 | 0.019 | -0.569, -0.493 | -0.774 | 0.053 | -0.877, -0.671 |
|  |  | 81-89 | $-0.472$ | 0.017 | -0.505, -0.440 | -0.676 | 0.047 | -0.769, -0.583 |
|  |  | 89-96 | $-0.431$ | 0.015 | -0.461, -0.402 | -0.608 | 0.045 | -0.697, -0.519 |
|  |  | 96-104 | -0.400 | 0.014 | -0.427, -0.372 | -0.536 | 0.043 | -0.620, -0.451 |
|  |  | 104-111 | -0.408 | 0.016 | -0.439, -0.377 | -0.478 | 0.047 | -0.570, -0.387 |
|  |  | 111-119 | -0.448 | 0.018 | -0.484, -0.413 | -0.535 | 0.054 | -0.640, -0.429 |
|  |  | 119-126 | -0.433 | 0.024 | -0.480, -0.386 | -0.453 | 0.071 | -0.592, -0.314 |
|  |  | $>126$ | -0.432 | 0.037 | -0.505, -0.359 | -0.500 | 0.104 | -0.705, -0.296 |
|  |  | Missing | -0.510 | 0.032 | -0.572, -0.448 | -0.710 | 0.085 | -0.877, -0.542 |
|  | Income Decile - 4 | Not tested | $-0.773$ | 0.043 | $-0.858,-0.688$ | $-0.964$ | $0.108$ | $-1.175,-0.753$ |
|  |  | $<74$ | $-0.611$ | $0.029$ | $-0.667,-0.554$ | $-0.847$ | $0.073$ | $-0.990,-0.704$ |
|  |  | 74-81 | -0.395 | 0.020 | -0.433, -0.357 | -0.590 | 0.053 | -0.694, -0.485 |
|  |  | 81-89 | -0.367 | 0.016 | -0.399, -0.335 | -0.548 | 0.047 | -0.640, -0.457 |
|  |  | 89-96 | -0.335 | 0.015 | -0.364, -0.306 | -0.484 | 0.044 | -0.570, -0.397 |
|  |  | 96-104 | -0.340 | 0.014 | -0.366, -0.313 | -0.465 | 0.042 | -0.547, -0.383 |
|  |  | 104-111 | -0.340 | 0.015 | -0.369, -0.310 | -0.467 | 0.046 | -0.557, -0.376 |
|  |  | 111-119 | -0.350 | 0.018 | -0.385, -0.315 | -0.369 | 0.052 | -0.471, -0.266 |
|  |  | 119-126 | -0.345 | 0.023 | -0.390, -0.301 | -0.381 | 0.069 | -0.516, -0.246 |
|  |  | $>126$ | $-0.396$ | 0.034 | -0.463, -0.328 | $-0.439$ | $0.101$ | -0.636, -0.242 |
|  |  | Missing | -0.425 | 0.031 | -0.485, -0.365 | -0.558 | 0.088 | -0.730, -0.386 |
|  | Income Decile - 5 | Not tested | -0.680 | 0.045 | -0.769, -0.591 | -0.935 | 0.116 | -1.163, -0.708 |
|  |  | $<74$ | -0.429 | 0.033 | -0.493, -0.365 | -0.639 | 0.076 | -0.789, -0.490 |
|  |  | 74-81 | -0.330 | 0.020 | -0.370, -0.291 | -0.509 | 0.056 | -0.618, -0.401 |
|  |  | 81-89 | -0.273 | 0.016 | -0.304, -0.241 | -0.411 | 0.046 | -0.502, -0.320 |
|  |  | 89-96 | -0.248 | 0.014 | -0.276, -0.220 | -0.352 | 0.043 | -0.437, -0.267 |
|  |  | 96-104 | -0.242 | 0.013 | -0.268, -0.215 | -0.342 | 0.042 | -0.424, -0.260 |
|  |  | 104-111 | -0.270 | 0.015 | -0.299, -0.241 | -0.311 | 0.045 | -0.400, -0.222 |
|  |  | 111-119 | -0.288 | 0.017 | -0.322, -0.255 | -0.363 | 0.052 | -0.464, -0.261 |
|  |  | 119-126 | -0.315 | 0.022 | -0.359, -0.272 | -0.343 | 0.065 | -0.470, -0.217 |
|  |  | $>126$ | -0.299 | 0.032 | -0.362, -0.236 | -0.279 | 0.096 | -0.467, -0.092 |
|  |  | Missing | -0.287 | 0.031 | -0.347, -0.226 | -0.402 | 0.089 | -0.576, -0.229 |
|  |  |  |  |  |  |  | Continu | d on next page |

Table S9 - Continued from previous page


Table S9-Continued from previous page

|  |  | Model 19 |  |  | Model 20 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
|  | 1954 | 0.110 | 0.008 | 0.094, 0.125 | 0.264 | 0.031 | 0.203, 0.326 |
|  | 1955 | 0.106 | 0.008 | 0.091, 0.122 | 0.282 | 0.030 | 0.224, 0.339 |
|  | 1956 | 0.105 | 0.008 | 0.090, 0.120 | 0.254 | 0.028 | 0.199, 0.309 |
|  | 1957 | 0.100 | 0.008 | 0.085, 0.115 | 0.258 | 0.026 | 0.207, 0.310 |
|  | 1958 | 0.078 | 0.008 | 0.063, 0.093 | 0.215 | 0.025 | 0.166, 0.264 |
|  | 1959 | 0.069 | 0.008 | 0.053, 0.084 | 0.183 | 0.024 | $0.136,0.231$ |
|  | 1961 | 0.042 | 0.008 | 0.026, 0.057 | 0.124 | 0.022 | 0.080, 0.167 |
|  | 1962 | 0.025 | 0.008 | 0.010, 0.040 | 0.104 | 0.021 | 0.062, 0.146 |
|  | 1963 | 0.019 | 0.007 | 0.004, 0.034 | 0.063 | 0.021 | 0.023, 0.104 |
|  | 1964 | 0.029 | 0.007 | 0.015, 0.044 | 0.077 | 0.021 | 0.035, 0.118 |
|  | 1965 | 0.000 | (base) | 0.000, 0.000 | 0.000 | (base) | 0.000, 0.000 |
|  | 1966 | -0.027 | 0.007 | -0.041, -0.013 | -0.047 | 0.022 | -0.091, -0.003 |
|  | 1967 | -0.036 | 0.007 | -0.050, -0.022 | -0.058 | 0.022 | -0.102, -0.015 |
| Birth order | 1 [ref] | 0.000 | (base) | 0.000, 0.000 | 0.000 | (base) | 0.000, 0.000 |
|  | 2 | -0.026 | 0.003 | -0.033, -0.019 | -0.007 | 0.010 | -0.027, 0.014 |
|  | 3 | -0.066 | 0.005 | -0.077, -0.056 | 0.009 | 0.018 | -0.027, 0.044 |
|  | 4 | -0.121 | 0.008 | -0.137, -0.104 | -0.002 | 0.026 | -0.054, 0.049 |
|  | 5 | -0.183 | 0.014 | -0.210, -0.156 | -0.015 | 0.036 | -0.086, 0.055 |
|  | 6 | -0.161 | 0.019 | -0.198, -0.125 | -0.013 | 0.048 | -0.107, 0.081 |
| Sibling group size | 1 | -0.079 | 0.005 | -0.088, -0.070 |  |  |  |
|  | 2 [ref] | 0.000 | (base) | 0.000, 0.000 |  |  |  |
|  | 3 | 0.121 | 0.004 | 0.113, 0.128 |  |  |  |
|  | 4 | 0.229 | 0.006 | 0.217, 0.240 |  |  |  |
|  | 5 | 0.328 | 0.010 | 0.309, 0.347 |  |  |  |
|  | 6 | 0.435 | 0.014 | 0.408, 0.461 |  |  |  |
| N |  | 749,939 |  |  | 217,055 |  |  |

TABLE S10. Linear probability model: childlessness regressed on IQ (categorical), no fixed effects. Swedish men born 1951-1967.

| Variable | Category | Model 7 |  |  | Model 8 |  |  | Model 9 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | 0.373 | 0.004 | 0.365, 0.381 | 0.348 | 0.004 | 0.340, 0.356 | 0.269 | 0.004 | 0.262, 0.277 |
|  | <74 | 0.199 | 0.004 | 0.192, 0.205 | 0.193 | 0.004 | 0.186, 0.200 | 0.134 | 0.003 | 0.127, 0.140 |
|  | 74-81 | 0.083 | 0.002 | 0.079, 0.088 | 0.080 | 0.002 | 0.076, 0.085 | 0.048 | 0.002 | $0.044,0.052$ |
|  | 81-89 | 0.033 | 0.002 | 0.030, 0.037 | 0.031 | 0.002 | 0.028, 0.035 | 0.014 | 0.002 | 0.010, 0.017 |
|  | 89-96 | 0.015 | 0.002 | 0.012, 0.018 | 0.013 | 0.002 | 0.010, 0.016 | 0.005 | 0.002 | 0.002, 0.008 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | -0.002 | 0.001 | -0.005, 0.001 | -0.001 | 0.001 | -0.003, 0.002 | 0.007 | 0.001 | 0.004, 0.009 |
|  | 111-119 | 0.000 | 0.002 | -0.004, 0.003 | 0.003 | 0.002 | 0.000, 0.006 | 0.016 | 0.002 | 0.013, 0.019 |
|  | 119-126 | 0.002 | 0.002 | -0.002, 0.006 | 0.008 | 0.002 | 0.004, 0.012 | 0.027 | 0.002 | 0.023, 0.031 |
|  | > 126 | 0.011 | 0.002 | 0.006, 0.016 | 0.020 | 0.003 | 0.015, 0.025 | 0.044 | 0.003 | $0.039,0.049$ |
|  | Missing | 0.102 | 0.003 | 0.096, 0.109 | 0.097 | 0.003 | 0.090, 0.103 | 0.072 | 0.003 | 0.066, 0.078 |
| Birth year | 1951 | -0.024 | 0.003 | -0.029, -0.019 | -0.028 | 0.003 | -0.033, -0.023 | -0.024 | 0.003 | -0.029, -0.019 |
|  | 1952 | -0.024 | 0.003 | -0.029, -0.019 | -0.026 | 0.003 | -0.031, -0.021 | -0.023 | 0.003 | -0.028, -0.018 |
|  | 1953 | -0.022 | 0.003 | -0.027, -0.016 | -0.023 | 0.003 | -0.028, -0.018 | -0.018 | 0.003 | -0.023, -0.013 |
|  | 1954 | -0.021 | 0.003 | -0.026, -0.015 | -0.021 | 0.003 | -0.026, -0.016 | -0.017 | 0.003 | -0.022, -0.012 |
|  | 1955 | -0.016 | 0.003 | -0.021, -0.011 | -0.017 | 0.003 | -0.022, -0.011 | -0.013 | 0.003 | -0.018, -0.008 |
|  | 1956 | -0.014 | 0.003 | -0.019, -0.009 | -0.014 | 0.003 | -0.019, -0.009 | -0.010 | 0.003 | -0.015, -0.005 |
|  | 1957 | -0.013 | 0.003 | -0.018, -0.007 | -0.012 | 0.003 | -0.017, -0.007 | -0.008 | 0.003 | -0.013, -0.003 |
|  | 1958 | -0.011 | 0.003 | -0.016, -0.006 | -0.011 | 0.003 | -0.016, -0.005 | -0.006 | 0.003 | -0.011, -0.001 |
|  | 1959 | -0.010 | 0.003 | -0.015, -0.005 | -0.009 | 0.003 | -0.014, -0.004 | -0.006 | 0.003 | -0.011, 0.000 |
|  | 1961 | -0.010 | 0.003 | -0.015, -0.005 | -0.008 | 0.003 | -0.013, -0.003 | -0.003 | 0.003 | -0.008, 0.002 |
|  | 1962 | -0.001 | 0.003 | -0.006, 0.004 | 0.000 | 0.003 | -0.005, 0.005 | 0.002 | 0.003 | -0.003, 0.007 |
|  | 1963 | -0.003 | 0.003 | -0.008, 0.002 | -0.002 | 0.003 | -0.007, 0.003 | 0.000 | 0.002 | -0.005, 0.005 |
|  | 1964 | -0.009 | 0.002 | -0.014, -0.004 | -0.009 | 0.002 | -0.014, -0.004 | -0.007 | 0.002 | -0.012, -0.003 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | 0.002 | 0.002 | -0.003, 0.007 | 0.002 | 0.002 | -0.003, 0.007 | 0.001 | 0.002 | -0.004, 0.005 |
|  | 1967 | 0.003 | 0.003 | -0.001, 0.008 | 0.003 | 0.003 | -0.001, 0.008 | 0.002 | 0.002 | -0.002, 0.007 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 |  |  |  | 0.005 | 0.001 | 0.003, 0.008 | 0.005 | 0.001 | 0.003, 0.007 |
|  | 3 |  |  |  | 0.016 | 0.002 | 0.013, 0.020 | 0.016 | 0.002 | 0.012, 0.019 |
|  | 4 |  |  |  | 0.021 | 0.003 | 0.015, 0.026 | 0.021 | 0.003 | $0.016,0.026$ |
|  | 5 |  |  |  | 0.028 | 0.004 | 0.020, 0.036 | 0.029 | 0.004 | $0.021,0.037$ |
|  | 6+ |  |  |  | 0.025 | 0.005 | 0.015, 0.035 | 0.026 | 0.005 | $0.016,0.036$ |
| Sibling group size | 1 |  |  |  | 0.035 | 0.002 | 0.032, 0.038 | 0.024 | 0.002 | 0.021, 0.027 |
|  | 2 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 3 |  |  |  | -0.020 | 0.001 | -0.023, -0.018 | -0.022 | 0.001 | -0.024, -0.019 |
|  | 4 |  |  |  | -0.029 | 0.002 | -0.033, -0.025 | -0.035 | 0.002 | -0.039, -0.032 |
|  | 5 |  |  |  | -0.038 | 0.003 | -0.044, -0.033 | -0.048 | 0.003 | -0.054, -0.043 |
|  | 6+ |  |  |  | -0.043 | 0.004 | -0.051, -0.036 | -0.056 | 0.004 | -0.063, -0.049 |
| Education | Primary ( $<9$ years) |  |  |  | 0.052 | $0.004$ | $0.044,0.059$ | 0.030 | $0.004$ | $0.023,0.038$ |
|  | Primary (9 years) |  |  |  | 0.018 | 0.001 | 0.016, 0.021 | 0.011 | 0.001 | $0.008,0.013$ |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | 0.018 | 0.002 | 0.015, 0.021 | 0.027 | 0.002 | 0.024, 0.030 |
|  | Tertiary (13-15 years) |  |  |  | -0.004 | 0.001 | -0.007, -0.002 | 0.023 | 0.001 | 0.020, 0.026 |
|  | Tertiary (15+ years) |  |  |  | -0.005 | 0.002 | -0.008, -0.002 | 0.028 | 0.002 | $0.025,0.031$ |
|  | Postgraduate (16-20 years) |  |  |  | -0.028 | 0.004 | -0.036, -0.020 | 0.015 | 0.004 | $0.008,0.023$ |
|  | Missing |  |  |  | 0.371 | 0.009 | 0.353, 0.389 | 0.268 | 0.009 | 0.251, 0.284 |
| Cumulative income deciles | 1 |  |  |  |  |  |  | 0.324 | 0.002 | $0.320,0.329$ |
|  | 2 |  |  |  |  |  |  | 0.230 | 0.002 | $0.226,0.234$ |
|  | 3 |  |  |  |  |  |  | 0.171 | 0.002 | $0.167,0.175$ |
|  | 4 |  |  |  |  |  |  | 0.132 | 0.002 | 0.128, 0.136 |
|  | 5 |  |  |  |  |  |  | 0.100 | 0.002 | 0.096, 0.104 |
|  | 6 |  |  |  |  |  |  | 0.076 | 0.002 | $0.073,0.080$ |
|  | 7 |  |  |  |  |  |  | 0.059 | 0.002 | 0.056, 0.063 |
|  | 8 |  |  |  |  |  |  | 0.042 | 0.002 | $0.039,0.046$ |
|  | 9 |  |  |  |  |  |  | 0.026 | 0.002 | 0.022, 0.029 |
|  | 10 [ref] |  |  |  |  |  |  | 0.000 |  |  |
| N |  | 749,939 |  |  | 749,939 |  |  | 749,939 |  |  |

TABLE S11. Linear probability model: childlessness regressed on IQ (categorical), fixed effects. Swedish men born 1951-1967.

| Variable | Category | Model 10 |  |  | Model 11 |  |  | Model 12 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | 0.423 | 0.010 | 0.403, 0.443 | 0.394 | 0.010 | 0.374, 0.415 | 0.307 | 0.010 | 0.288, 0.327 |
|  | $<74$ | 0.228 | 0.008 | 0.211, 0.245 | 0.218 | 0.008 | 0.201, 0.235 | 0.158 | 0.008 | 0.142, 0.174 |
|  | 74-81 | 0.105 | 0.006 | 0.093, 0.116 | 0.098 | 0.006 | 0.086, 0.109 | 0.066 | 0.006 | 0.055, 0.077 |
|  | 81-89 | 0.044 | 0.005 | 0.035, 0.054 | 0.040 | 0.005 | 0.030, 0.049 | 0.022 | 0.005 | 0.013, 0.032 |
|  | 89-96 | 0.019 | 0.004 | 0.011, 0.027 | 0.017 | 0.004 | 0.008, 0.025 | 0.008 | 0.004 | 0.000, 0.016 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | -0.014 | 0.004 | -0.022, -0.005 | -0.010 | 0.004 | -0.018, -0.002 | 0.000 | 0.004 | -0.008, 0.008 |
|  | 111-119 | -0.023 | 0.005 | -0.032, -0.014 | -0.016 | 0.005 | -0.025, -0.006 | 0.002 | 0.005 | -0.007, 0.011 |
|  | 119-126 | -0.038 | 0.006 | -0.050, -0.026 | -0.027 | 0.006 | -0.039, -0.015 | -0.001 | 0.006 | -0.013, 0.011 |
|  | > 126 | -0.033 | 0.008 | -0.048, -0.017 | -0.016 | 0.008 | -0.032, 0.000 | 0.018 | 0.008 | 0.002, 0.033 |
|  | Missing | 0.113 | 0.009 | 0.095, 0.131 | 0.109 | 0.009 | 0.091, 0.127 | 0.085 | 0.009 | 0.068, 0.102 |
| Birth year | 1951 | -0.064 | 0.008 | -0.080, -0.048 | -0.091 | 0.012 | -0.115, -0.068 | -0.081 | 0.012 | -0.104, -0.058 |
|  | 1952 | -0.066 | 0.008 | -0.081, -0.051 | -0.090 | 0.011 | -0.112, -0.068 | -0.081 | 0.011 | -0.103, -0.060 |
|  | 1953 | -0.062 | 0.008 | -0.076, -0.047 | -0.082 | 0.011 | -0.103, -0.061 | -0.074 | 0.010 | -0.094, -0.054 |
|  | 1954 | -0.060 | 0.007 | -0.074, -0.045 | -0.079 | 0.010 | -0.099, -0.060 | -0.070 | 0.010 | -0.089, -0.051 |
|  | 1955 | -0.055 | 0.007 | -0.069, -0.041 | -0.072 | 0.009 | -0.090, -0.053 | -0.064 | 0.009 | -0.082, -0.046 |
|  | 1956 | -0.050 | 0.007 | -0.064, -0.036 | -0.064 | 0.009 | -0.082, -0.047 | -0.056 | 0.009 | -0.073, -0.039 |
|  | 1957 | -0.047 | 0.007 | -0.061, -0.033 | -0.060 | 0.009 | -0.077, -0.044 | -0.054 | 0.008 | -0.070, -0.038 |
|  | 1958 | -0.044 | 0.007 | -0.058, -0.031 | -0.056 | 0.008 | -0.072, -0.040 | -0.048 | 0.008 | -0.063, -0.032 |
|  | 1959 | -0.036 | 0.007 | -0.050, -0.023 | -0.047 | 0.008 | -0.062, -0.031 | -0.040 | 0.008 | -0.054, -0.025 |
|  | 1961 | -0.033 | 0.007 | -0.047, -0.020 | -0.039 | 0.007 | -0.054, -0.025 | -0.030 | 0.007 | -0.044, -0.017 |
|  | 1962 | -0.017 | 0.007 | -0.030, -0.004 | -0.022 | 0.007 | -0.035, -0.008 | -0.017 | 0.007 | -0.030, -0.003 |
|  | 1963 | -0.014 | 0.007 | -0.027, -0.001 | -0.017 | 0.007 | -0.031, -0.004 | -0.014 | 0.007 | -0.027, -0.001 |
|  | 1964 | -0.019 | 0.007 | -0.032, -0.005 | -0.020 | 0.007 | -0.034, -0.007 | -0.017 | 0.007 | -0.030, -0.004 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | 0.013 | 0.007 | -0.001, 0.028 | 0.016 | 0.007 | 0.001, 0.031 | 0.015 | 0.007 | 0.001, 0.029 |
|  | 1967 | 0.010 | 0.007 | -0.004, 0.024 | 0.015 | 0.007 | 0.000, 0.029 | 0.012 | 0.007 | -0.002, 0.026 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 |  |  |  | -0.007 | 0.003 | -0.014, -0.001 | -0.006 | 0.003 | -0.012, 0.000 |
|  | 3 |  |  |  | -0.012 | 0.006 | -0.023, -0.001 | -0.011 | 0.005 | -0.021, 0.000 |
|  | 4 |  |  |  | -0.016 | 0.008 | -0.032, 0.000 | -0.015 | 0.008 | -0.030, 0.001 |
|  | 5 |  |  |  | -0.023 | 0.011 | -0.045, -0.002 | -0.022 | 0.011 | -0.043, -0.001 |
|  | 6+ |  |  |  | -0.025 | 0.014 | -0.052, 0.003 | -0.024 | 0.014 | -0.051, 0.003 |
| Education | Primary ( $<9$ years) |  |  |  | 0.069 | 0.010 | 0.050, 0.088 | 0.050 | 0.009 | 0.032, 0.068 |
|  | Primary (9 years) |  |  |  | 0.028 | 0.004 | 0.020, 0.035 | 0.024 | 0.004 | 0.017, 0.032 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | 0.007 | 0.005 | -0.001, 0.016 | 0.014 | 0.004 | 0.006, 0.023 |
|  | Tertiary (13-15 years) |  |  |  | -0.014 | 0.004 | -0.022, -0.005 | 0.011 | 0.004 | 0.002, 0.019 |
|  | Tertiary (15+ years) |  |  |  | -0.035 | 0.005 | -0.045, -0.025 | 0.000 | 0.005 | -0.010, 0.010 |
|  | Postgraduate (16-20 years) |  |  |  | $-0.070$ | $0.012$ | $-0.094,-0.045$ | -0.020 | 0.012 | $-0.043,0.003$ |
|  | Missing |  |  |  | 0.380 | 0.023 | 0.335, 0.425 | 0.273 | 0.022 | 0.230, 0.315 |
| Cumulative income deciles | 1 |  |  |  |  |  |  | 0.390 | 0.007 | 0.377, 0.403 |
|  | 2 |  |  |  |  |  |  | 0.280 | 0.006 | 0.267, 0.292 |
|  | 3 |  |  |  |  |  |  | 0.206 | 0.006 | 0.194, 0.218 |
|  | 4 |  |  |  |  |  |  | 0.161 | 0.006 | $0.149,0.173$ |
|  | 5 |  |  |  |  |  |  | 0.118 | 0.006 | 0.106, 0.130 |
|  | 6 |  |  |  |  |  |  | 0.094 | 0.006 | 0.083, 0.106 |
|  | 7 |  |  |  |  |  |  | 0.068 | 0.006 | 0.057, 0.079 |
|  | 8 |  |  |  |  |  |  | 0.051 | 0.006 | 0.040, 0.062 |
|  | 9 |  |  |  |  |  |  | 0.026 | 0.005 | 0.015, 0.037 |
|  | 10 [ref] |  |  |  |  |  |  | 0.000 |  |  |
| N |  | 217,055 |  |  |  | 217,055 |  |  | 217,055 |  |

Table S12: Linear probability model: childlessness regressed on interaction between IQ (categorical) and deciles of cumulative income earned between ages 18 and 45. Model 21 without fixed effects, Model 22 including fixed effects. Swedish men born 1951-1967.

|  |  |  | Model 21 |  |  | Model 22 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| Income x IQ | Income Decile - 1 | Not tested | 0.700 | 0.006 | 0.688, 0.712 | 0.849 | 0.017 | 0.816, 0.882 |
| Interaction |  | $<74$ | 0.465 | 0.008 | 0.450, 0.480 | 0.610 | 0.019 | 0.573, 0.647 |
|  |  | 74-81 | 0.367 | 0.007 | 0.354, 0.380 | 0.459 | 0.017 | 0.426, 0.492 |
|  |  | 81-89 | 0.305 | 0.006 | 0.293, 0.316 | 0.404 | 0.016 | 0.373, 0.435 |
|  |  | 89-96 | 0.286 | 0.005 | 0.276, 0.297 | 0.368 | 0.015 | 0.338, 0.397 |
|  |  | 96-104 | 0.284 | 0.005 | 0.274, 0.294 | 0.349 | 0.015 | 0.320, 0.378 |
|  |  | 104-111 | 0.291 | 0.006 | 0.280, 0.303 | 0.351 | 0.016 | 0.319, 0.383 |
|  |  | 111-119 | 0.310 | 0.007 | 0.296, 0.323 | 0.331 | 0.019 | 0.294, 0.368 |
|  |  | 119-126 | 0.328 | 0.009 | 0.310, 0.346 | 0.350 | 0.024 | 0.302, 0.397 |
|  |  | > 126 | 0.347 | 0.013 | 0.323, 0.372 | 0.361 | 0.034 | 0.295, 0.427 |
|  |  | Missing | 0.514 | 0.008 | 0.498, 0.530 | 0.639 | 0.022 | 0.596, 0.683 |
|  | Income Decile - 2 | Not tested | 0.563 | 0.009 | 0.545, 0.580 | 0.658 | 0.023 | 0.614, 0.703 |
|  |  | $<74$ | 0.394 | 0.008 | 0.378, 0.410 | 0.470 | 0.019 | 0.432, 0.507 |
|  |  | 74-81 | 0.279 | 0.006 | 0.267, 0.291 | 0.371 | 0.016 | 0.340, 0.402 |
|  |  | 81-89 | 0.228 | 0.005 | 0.217, 0.239 | 0.295 | 0.015 | 0.266, 0.324 |
|  |  | 89-96 | 0.206 | 0.005 | 0.196, 0.215 | 0.269 | 0.014 | 0.242, 0.297 |
|  |  | 96-104 | 0.198 | 0.005 | 0.189, 0.207 | 0.260 | 0.013 | 0.233, 0.286 |
|  |  | 104-111 | 0.208 | 0.005 | 0.198, 0.219 | 0.248 | 0.015 | 0.219, 0.277 |
|  |  | 111-119 | 0.204 | 0.006 | 0.192, 0.217 | 0.238 | 0.018 | 0.203, 0.273 |
|  |  | 119-126 | 0.228 | 0.008 | 0.211, 0.244 | 0.240 | 0.023 | 0.195, 0.286 |
|  |  | > 126 | 0.259 | 0.012 | 0.235, 0.283 | 0.257 | 0.034 | 0.190, 0.323 |
|  |  | Missing | 0.364 | 0.010 | 0.345, 0.384 | 0.469 | 0.025 | 0.421, 0.518 |
|  | Income Decile - 3 | Not tested | 0.398 | 0.013 | 0.372, 0.423 | 0.455 | 0.032 | 0.392, 0.519 |
|  |  | $<74$ | 0.298 | 0.009 | 0.280, 0.315 | 0.369 | 0.021 | 0.328, 0.410 |
|  |  | 74-81 | 0.212 | 0.006 | 0.200, 0.224 | 0.281 | 0.016 | $0.250,0.311$ |
|  |  | 81-89 | 0.172 | 0.005 | 0.162, 0.183 | 0.230 | 0.014 | 0.201, 0.258 |
|  |  | 89-96 | 0.166 | 0.005 | 0.157, 0.175 | 0.230 | 0.013 | 0.203, 0.256 |
|  |  | 96-104 | 0.153 | 0.004 | 0.144, 0.161 | 0.186 | 0.013 | 0.160, 0.211 |
|  |  | 104-111 | 0.155 | 0.005 | 0.145, 0.164 | 0.187 | 0.014 | $0.159,0.215$ |
|  |  | 111-119 | 0.171 | 0.006 | 0.160, 0.183 | 0.202 | 0.017 | $0.169,0.235$ |
|  |  | 119-126 | 0.177 | 0.008 | 0.162, 0.193 | 0.180 | 0.023 | 0.135, 0.224 |
|  |  | $>126$ | 0.193 | 0.012 | 0.169, 0.217 | 0.233 | 0.032 | 0.171, 0.296 |
|  |  | Missing | 0.209 | 0.011 | 0.188, 0.229 | 0.260 | 0.027 | 0.207, 0.313 |
|  | Income Decile - 4 | Not tested | $0.307$ | 0.015 | 0.278, 0.337 | 0.389 | 0.036 | $0.318,0.460$ |
|  |  | $<74$ | $0.232$ | $0.010$ | $0.214,0.251$ | $0.295$ | $0.022$ | $0.252,0.339$ |
|  |  | 74-81 | 0.158 | 0.006 | 0.146, 0.170 | 0.212 | 0.016 | 0.181, 0.243 |
|  |  | 81-89 | 0.137 | 0.005 | 0.127, 0.147 | 0.187 | 0.014 | 0.159, 0.214 |
|  |  | 89-96 | 0.124 | 0.004 | 0.115, 0.133 | 0.175 | 0.013 | 0.149, 0.201 |
|  |  | 96-104 | 0.122 | 0.004 | 0.114, 0.130 | 0.157 | 0.013 | 0.133, 0.182 |
|  |  | 104-111 | 0.121 | 0.005 | 0.112, 0.130 | 0.156 | 0.014 | 0.128, 0.183 |
|  |  | 111-119 | 0.135 | 0.006 | 0.124, 0.146 | 0.145 | 0.016 | 0.113, 0.177 |
|  |  | 119-126 | 0.140 | 0.007 | 0.126, 0.155 | 0.145 | 0.021 | 0.104, 0.185 |
|  |  | $>126$ | 0.169 | 0.011 | 0.146, 0.191 | 0.171 | 0.033 | 0.107, 0.235 |
|  |  | Missing | 0.163 | 0.010 | 0.142, 0.183 | 0.219 | 0.028 | 0.164, 0.273 |
|  | Income Decile - 5 | Not tested | 0.273 | 0.016 | 0.242, 0.304 | 0.346 | 0.039 | 0.270, 0.423 |
|  |  | $<74$ | 0.179 | 0.010 | 0.159, 0.199 | 0.239 | 0.023 | 0.194, 0.284 |
|  |  | 74-81 | 0.130 | 0.006 | 0.118, 0.142 | 0.189 | 0.016 | 0.156, 0.221 |
|  |  | 81-89 | 0.097 | 0.005 | 0.088, 0.107 | 0.142 | 0.014 | 0.114, 0.169 |
|  |  | 89-96 | 0.086 | 0.004 | 0.078, 0.094 | 0.122 | 0.013 | 0.097, 0.147 |
|  |  | 96-104 | 0.086 | 0.004 | 0.078, 0.093 | 0.112 | 0.012 | 0.088, 0.136 |
|  |  | 104-111 | 0.100 | 0.004 | 0.091, 0.108 | 0.110 | 0.014 | 0.083, 0.136 |
|  |  | 111-119 | $0.107$ | 0.005 | 0.096, 0.117 | 0.125 | 0.016 | 0.094, 0.156 |
|  |  | 119-126 | 0.128 | 0.007 | 0.113, 0.142 | 0.119 | 0.021 | 0.078, 0.160 |
|  |  | $>126$ | 0.126 | 0.010 | 0.106, 0.146 | 0.124 | 0.029 | 0.066, 0.181 |
|  |  | Missing | 0.117 | 0.010 | 0.098, 0.136 | 0.136 | 0.028 | 0.082, 0.190 |
|  |  |  |  |  |  |  | Contin | d on next page |

Table S12 - Continued from previous page

|  |  |  | Model 21 |  |  | Model 22 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
|  | Income Decile - 6 | Not tested | 0.205 | 0.016 | 0.173, 0.237 | 0.233 | 0.040 | $0.155,0.312$ |
|  |  | $<74$ | 0.132 | 0.011 | 0.111, 0.153 | 0.174 | 0.025 | $0.125,0.224$ |
|  |  | 74-81 | 0.087 | 0.006 | 0.075, 0.099 | 0.136 | 0.016 | 0.103, 0.168 |
|  |  | 81-89 | 0.069 | 0.005 | 0.060, 0.078 | 0.102 | 0.014 | 0.075, 0.130 |
|  |  | 89-96 | 0.065 | 0.004 | 0.057, 0.073 | 0.096 | 0.013 | 0.071, 0.120 |
|  |  | 96-104 | 0.064 | 0.004 | 0.057, 0.072 | 0.100 | 0.012 | 0.076, 0.124 |
|  |  | 104-111 | 0.076 | 0.004 | 0.068, 0.084 | 0.094 | 0.013 | $0.068,0.120$ |
|  |  | 111-119 | 0.095 | 0.005 | 0.085, 0.104 | 0.112 | 0.015 | 0.082, 0.142 |
|  |  | 119-126 | 0.106 | 0.007 | 0.094, 0.119 | 0.108 | 0.020 | 0.070, 0.147 |
|  |  | > 126 | 0.126 | 0.010 | 0.107, 0.145 | 0.088 | 0.026 | 0.037, 0.139 |
|  |  | Missing | 0.075 | 0.009 | 0.057, 0.093 | 0.107 | 0.026 | 0.056, 0.158 |
|  | Income Decile - 7 | Not tested | 0.162 | 0.016 | 0.130, 0.194 | 0.214 | 0.041 | 0.134, 0.295 |
|  |  | $<74$ | 0.111 | 0.012 | 0.088, 0.134 | 0.174 | 0.029 | 0.117, 0.232 |
|  |  | 74-81 | 0.062 | 0.006 | 0.050, 0.074 | 0.110 | 0.017 | $0.077,0.143$ |
|  |  | 81-89 | 0.045 | 0.005 | 0.036, 0.055 | 0.081 | 0.014 | 0.054, 0.109 |
|  |  | 89-96 | 0.051 | 0.004 | 0.043, 0.060 | 0.072 | 0.013 | 0.047, 0.098 |
|  |  | 96-104 | 0.047 | 0.004 | 0.040, 0.055 | 0.073 | 0.012 | 0.049, 0.097 |
|  |  | 104-111 | 0.061 | 0.004 | 0.053, 0.068 | 0.068 | 0.013 | 0.043, 0.094 |
|  |  | 111-119 | 0.072 | 0.005 | 0.063, 0.081 | 0.070 | 0.015 | 0.041, 0.098 |
|  |  | 119-126 | 0.096 | 0.006 | 0.084, 0.108 | 0.064 | 0.018 | 0.028, 0.100 |
|  |  | $>126$ | 0.109 | 0.008 | 0.092, 0.125 | 0.098 | 0.026 | 0.047, 0.148 |
|  |  | Missing | 0.064 | 0.009 | 0.047, 0.081 | 0.071 | 0.025 | 0.022, 0.120 |
|  | Income Decile - 8 | Not tested | 0.138 | 0.016 | 0.105, 0.170 | 0.171 | 0.045 | 0.082, 0.259 |
|  |  | $<74$ | $0.076$ | 0.014 | 0.049, 0.103 | 0.156 | 0.033 | 0.092, 0.221 |
|  |  | 74-81 | 0.044 | 0.007 | 0.031, 0.057 | 0.097 | 0.019 | 0.059, 0.134 |
|  |  | 81-89 | 0.029 | 0.005 | 0.019, 0.038 | 0.060 | 0.015 | 0.032, 0.089 |
|  |  | 89-96 | 0.031 | 0.004 | 0.023, 0.039 | 0.043 | 0.013 | 0.017, 0.069 |
|  |  | 96-104 | 0.033 | 0.004 | 0.025, 0.040 | 0.052 | 0.012 | 0.028, 0.076 |
|  |  | 104-111 | 0.043 | 0.004 | 0.035, 0.050 | 0.056 | 0.013 | 0.032, 0.081 |
|  |  | 111-119 | 0.055 | 0.004 | 0.047, 0.064 | 0.052 | 0.014 | 0.025, 0.079 |
|  |  | 119-126 | 0.070 | 0.005 | 0.060, 0.081 | 0.048 | 0.016 | 0.016, 0.080 |
|  |  | > 126 | 0.098 | 0.007 | 0.084, 0.112 | 0.072 | 0.021 | 0.030, 0.114 |
|  |  | Missing | 0.062 | 0.009 | 0.045, 0.079 | 0.083 | 0.025 | 0.033, 0.132 |
|  | Income Decile - 9 | Not tested | 0.118 | 0.016 | 0.088, 0.149 | 0.126 | 0.045 | $0.039,0.214$ |
|  |  | $<74$ | 0.055 | 0.019 | 0.018, 0.092 | 0.138 | 0.043 | 0.053, 0.223 |
|  |  | 74-81 | 0.032 | 0.009 | 0.015, 0.050 | 0.076 | 0.023 | 0.030, 0.122 |
|  |  | 81-89 | 0.022 | 0.006 | 0.011, 0.033 | 0.058 | 0.017 | 0.024, 0.092 |
|  |  | 89-96 | 0.018 | 0.004 | 0.010, 0.027 | 0.015 | 0.014 | -0.013, 0.044 |
|  |  | 96-104 | 0.017 | 0.004 | 0.010, 0.025 | 0.029 | 0.012 | $0.005,0.054$ |
|  |  | 104-111 | 0.026 | 0.004 | 0.018, 0.033 | 0.024 | 0.012 | -0.001, 0.048 |
|  |  | 111-119 | 0.037 | 0.004 | 0.029, 0.044 | 0.014 | 0.013 | -0.011, 0.039 |
|  |  | 119-126 | 0.050 | 0.004 | 0.042, 0.059 | 0.021 | 0.015 | -0.008, 0.049 |
|  |  | > 126 | 0.080 | 0.006 | 0.069, 0.091 | 0.061 | 0.018 | 0.026, 0.096 |
|  |  | Missing | 0.036 | 0.008 | 0.021, 0.052 | 0.031 | 0.025 | -0.018, 0.081 |
|  | Income Decile - 10 | Not tested | 0.103 | 0.016 | 0.073, 0.134 | 0.095 | 0.046 | 0.005, 0.185 |
|  |  | $<74$ | 0.076 | 0.031 | 0.015, 0.137 | 0.114 | 0.090 | -0.062, 0.291 |
|  |  | 74-81 | 0.021 | 0.012 | -0.003, 0.045 | 0.061 | 0.035 | -0.009, 0.130 |
|  |  | 81-89 | 0.002 | 0.007 | -0.012, 0.015 | 0.030 | 0.023 | -0.015, 0.074 |
|  |  | 89-96 | 0.008 | 0.005 | -0.002, 0.018 | 0.030 | 0.017 | -0.003, 0.063 |
|  |  | 96-104 [ref] | 0.000 | (base) | 0.000, 0.000 | 0.000 | (base) | 0.000, 0.000 |
|  |  | 104-111 | 0.006 | 0.004 | -0.001, 0.013 | -0.002 | 0.012 | -0.026, 0.022 |
|  |  | 111-119 | 0.016 | 0.004 | $0.009,0.023$ | 0.005 | 0.012 | -0.019, 0.029 |
|  |  | 119-126 | 0.021 | 0.004 | 0.014, 0.029 | -0.015 | 0.013 | -0.041, 0.011 |
|  |  | > 126 | 0.031 | 0.004 | 0.023, 0.040 | -0.018 | 0.015 | -0.048, 0.011 |
|  |  | Missing | 0.014 | 0.007 | -0.001, 0.029 | -0.004 | 0.025 | -0.052, 0.044 |
| Birth year |  | 1951 | -0.019 | 0.003 | -0.024, -0.014 | -0.073 | 0.012 | -0.096, -0.050 |
|  |  | 1952 | -0.018 | 0.003 | -0.023, -0.013 | -0.075 | 0.011 | -0.096, -0.053 |
|  |  | 1953 | -0.014 | 0.003 | -0.019, -0.009 | -0.069 | 0.010 | -0.089, -0.049 |
|  |  |  |  |  |  |  | Contin | d on next page |

Table S12 - Continued from previous page

|  |  | Model 21 |  |  | Model 22 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
|  | 1954 | -0.014 | 0.003 | -0.019, -0.009 | -0.064 | 0.010 | -0.083, -0.045 |
|  | 1955 | -0.010 | 0.003 | -0.015, -0.005 | -0.060 | 0.009 | -0.078, -0.042 |
|  | 1956 | -0.008 | 0.003 | -0.013, -0.003 | -0.053 | 0.009 | -0.070, -0.036 |
|  | 1957 | -0.006 | 0.003 | -0.011, -0.001 | -0.050 | 0.008 | -0.067, -0.034 |
|  | 1958 | -0.005 | 0.003 | -0.010, 0.000 | -0.045 | 0.008 | -0.060, -0.029 |
|  | 1959 | -0.004 | 0.003 | -0.010, 0.001 | -0.037 | 0.008 | -0.052, -0.022 |
|  | 1961 | -0.001 | 0.003 | -0.006, 0.004 | -0.027 | 0.007 | -0.040, -0.013 |
|  | 1962 | 0.003 | 0.003 | -0.002, 0.008 | -0.015 | 0.007 | -0.029, -0.002 |
|  | 1963 | 0.001 | 0.002 | -0.004, 0.005 | -0.013 | 0.007 | -0.026, 0.000 |
|  | 1964 | -0.007 | 0.002 | -0.012, -0.002 | -0.016 | 0.007 | -0.030, -0.003 |
|  | 1965 | 0.000 | (base) | $0.000,0.000$ | $0.000$ | (base) | 0.000, 0.000 |
|  | 1966 | 0.001 | 0.002 | -0.004, 0.005 | 0.014 | $0.007$ | 0.000, 0.028 |
|  | 1967 | 0.003 | 0.002 | -0.002, 0.007 | 0.012 | 0.007 | -0.003, 0.026 |
| Birth order | 1 [ref] | 0.000 | (base) | 0.000, 0.000 | 0.000 | (base) | 0.000, 0.000 |
|  | 2 | 0.005 | 0.001 | 0.003, 0.007 | -0.006 | 0.003 | -0.012, 0.000 |
|  | 3 | 0.015 | 0.002 | 0.012, 0.018 | -0.011 | 0.005 | -0.021, 0.000 |
|  | 4 | 0.021 | 0.003 | 0.016, 0.026 | -0.015 | 0.008 | -0.031, 0.000 |
|  | 5 | 0.028 | 0.004 | 0.021, 0.036 | -0.023 | 0.011 | -0.044, -0.002 |
|  | 6 | 0.025 | 0.005 | 0.016, 0.035 | -0.027 | 0.014 | -0.054, 0.000 |
| Sibling group size | 1 | $0.023$ | $0.002$ | 0.020, 0.027 |  |  |  |
|  | 2 [ref] | $0.000$ | (base) | 0.000, 0.000 |  |  |  |
|  | 3 | -0.022 | 0.001 | -0.024, -0.019 |  |  |  |
|  | 4 | -0.036 | 0.002 | -0.039, -0.032 |  |  |  |
|  | 5 | -0.049 | 0.003 | -0.055, -0.044 |  |  |  |
|  | 6 | -0.058 | 0.004 | -0.065, -0.051 |  |  |  |
| N |  | 749,939 |  |  | 217,055 |  |  |

TABLE S13. Linear probability model: ever marrying by age 45 regressed on IQ (categorical), no fixed effects. Swedish men born 1951-1967.

| Variable | Category | Model 13 |  |  | Model 14 |  |  | Model 15 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | -0.284 | 0.004 | -0.292, -0.276 | -0.258 | 0.004 | -0.266, -0.250 | -0.167 | 0.004 | -0.175, -0.160 |
|  | $<74$ | -0.199 | 0.004 | -0.206, -0.192 | -0.179 | 0.004 | -0.186, -0.172 | -0.107 | 0.004 | -0.114, -0.100 |
|  | 74-81 | -0.111 | 0.003 | -0.116, -0.106 | -0.095 | 0.003 | -0.100, -0.089 | -0.055 | 0.003 | -0.060, -0.050 |
|  | 81-89 | -0.063 | 0.002 | -0.067, -0.059 | -0.050 | 0.002 | -0.055, -0.046 | -0.028 | 0.002 | -0.032, -0.024 |
|  | 89-96 | -0.033 | 0.002 | -0.037, -0.029 | -0.025 | 0.002 | -0.029, -0.021 | -0.014 | 0.002 | -0.018, -0.010 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | 0.028 | 0.002 | 0.024, 0.031 | 0.018 | 0.002 | 0.014, 0.021 | 0.008 | 0.002 | 0.005, 0.012 |
|  | 111-119 | 0.049 | 0.002 | 0.046, 0.053 | 0.028 | 0.002 | 0.024, 0.032 | 0.010 | 0.002 | 0.007, 0.014 |
|  | 119-126 | 0.073 | 0.002 | 0.069, 0.077 | 0.040 | 0.002 | 0.035, 0.045 | 0.015 | 0.002 | 0.010, 0.019 |
|  | $>126$ | 0.084 | 0.003 | 0.078, 0.089 | 0.039 | 0.003 | 0.033, 0.045 | 0.007 | 0.003 | 0.001, 0.013 |
|  | Missing | -0.065 | 0.004 | -0.072, -0.058 | -0.063 | 0.004 | -0.070, -0.056 | -0.035 | 0.003 | -0.042, -0.028 |
| Birth year | 1951 | 0.161 | 0.003 | 0.155, 0.167 | 0.165 | 0.003 | 0.159, 0.171 | 0.161 | 0.003 | 0.155, 0.167 |
|  | 1952 | 0.148 | 0.003 | 0.143, 0.154 | 0.152 | 0.003 | 0.146, 0.158 | 0.148 | 0.003 | 0.142, 0.154 |
|  | 1953 | 0.135 | 0.003 | 0.129, 0.141 | 0.137 | 0.003 | 0.131, 0.142 | 0.131 | 0.003 | 0.125, 0.137 |
|  | 1954 | 0.122 | 0.003 | 0.116, 0.128 | 0.124 | 0.003 | 0.118, 0.130 | 0.119 | 0.003 | 0.113, 0.124 |
|  | 1955 | 0.104 | 0.003 | 0.098, 0.110 | 0.106 | 0.003 | 0.100, 0.112 | 0.102 | 0.003 | 0.096, 0.108 |
|  | 1956 | 0.089 | 0.003 | 0.083, 0.095 | 0.091 | 0.003 | 0.085, 0.097 | 0.087 | 0.003 | 0.081, 0.092 |
|  | 1957 | 0.076 | 0.003 | 0.070, 0.082 | 0.077 | 0.003 | 0.071, 0.083 | 0.072 | 0.003 | 0.066, 0.078 |
|  | 1958 | 0.059 | 0.003 | 0.053, 0.065 | 0.060 | 0.003 | 0.054, 0.066 | 0.055 | 0.003 | 0.049, 0.061 |
|  | 1959 | 0.045 | 0.003 | 0.039, 0.051 | 0.046 | 0.003 | 0.040, 0.052 | 0.042 | 0.003 | 0.036, 0.048 |
|  | 1961 | 0.026 | 0.003 | 0.019, 0.032 | 0.025 | 0.003 | 0.019, 0.031 | 0.020 | 0.003 | 0.014, 0.026 |
|  | 1962 | 0.015 | 0.003 | 0.009, 0.021 | 0.014 | 0.003 | 0.008, 0.020 | 0.011 | 0.003 | 0.005, 0.017 |
|  | 1963 | 0.010 | 0.003 | 0.004, 0.016 | 0.009 | 0.003 | 0.003, 0.015 | 0.007 | 0.003 | 0.002, 0.013 |
|  | 1964 | 0.008 | 0.003 | 0.003, 0.014 | 0.008 | 0.003 | 0.003, 0.014 | 0.006 | 0.003 | 0.001, 0.012 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | -0.006 | 0.003 | -0.012, 0.000 | -0.006 | 0.003 | -0.012, 0.000 | -0.005 | 0.003 | -0.011, 0.001 |
|  | 1967 | 0.001 | 0.003 | -0.005, 0.006 | 0.000 | 0.003 | -0.006, 0.005 | 0.001 | 0.003 | -0.005, 0.007 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 |  |  |  | -0.002 | 0.001 | -0.004, 0.001 | -0.001 | 0.001 | -0.004, 0.001 |
|  | 3 |  |  |  | -0.002 | 0.002 | -0.006, 0.002 | -0.001 | 0.002 | -0.005, 0.003 |
|  | 4 |  |  |  | -0.001 | 0.003 | -0.007, 0.005 | -0.001 | 0.003 | -0.007, 0.005 |
|  | 5 |  |  |  | -0.011 | 0.005 | -0.021, -0.002 | -0.012 | 0.005 | -0.021, -0.002 |
|  | 6+ |  |  |  | -0.004 | 0.006 | -0.016, 0.008 | -0.005 | 0.006 | -0.017, 0.006 |
| Sibling group size | 1 |  |  |  | $-0.037$ | 0.002 | -0.040, -0.033 | $-0.024$ | 0.002 | -0.027, -0.020 |
|  | $2 \text { [ref] }$ |  |  |  | $0.000$ |  |  | $0.000$ |  |  |
|  | 3 |  |  |  | 0.016 | 0.002 | 0.013, 0.019 | 0.018 | 0.001 | 0.015, 0.021 |
|  | 4 |  |  |  | 0.017 | 0.002 | 0.013, 0.021 | 0.025 | 0.002 | 0.021, 0.029 |
|  | 5 |  |  |  | 0.020 | 0.003 | 0.013, 0.026 | 0.033 | 0.003 | 0.027, 0.039 |
|  | 6+ |  |  |  | 0.017 | 0.004 | 0.008, 0.025 | 0.033 | 0.004 | 0.025, 0.041 |
| Education | Primary ( $<9$ years) |  |  |  | -0.034 | 0.004 | -0.042, -0.025 | -0.009 | 0.004 | -0.017, -0.001 |
|  | Primary (9 years) |  |  |  | -0.019 | 0.002 | -0.022, -0.015 | -0.010 | 0.002 | -0.014, -0.007 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | $0.016$ | $0.002$ | 0.012, 0.020 | 0.003 | $0.002$ | $0.000,0.007$ |
|  | Tertiary (13-15 years) |  |  |  | 0.048 | 0.002 | 0.045, 0.051 | 0.012 | 0.002 | 0.009, 0.015 |
|  | Tertiary ( $15+$ years) |  |  |  | 0.071 | 0.002 | 0.067, 0.075 | 0.026 | 0.002 | 0.022, 0.030 |
|  | Postgraduate (16-20 years) |  |  |  | 0.106 | 0.004 | 0.097, 0.114 | 0.049 | 0.004 | 0.040, 0.057 |
|  | Missing |  |  |  | -0.307 | 0.009 | -0.324, -0.290 | -0.193 | 0.008 | -0.210, -0.177 |
| Cumulative income deciles | 1 |  |  |  |  |  |  | -0.390 | 0.002 | -0.395, -0.385 |
|  | 2 |  |  |  |  |  |  | -0.297 | 0.002 | -0.302, -0.292 |
|  | 3 |  |  |  |  |  |  | -0.230 | 0.002 | -0.235, -0.225 |
|  | 4 |  |  |  |  |  |  | -0.186 | 0.002 | -0.191, -0.182 |
|  | 5 |  |  |  |  |  |  | -0.147 | 0.002 | -0.152, -0.142 |
|  | 6 |  |  |  |  |  |  | -0.116 | 0.002 | -0.121, -0.111 |
|  | 7 |  |  |  |  |  |  | -0.088 | 0.002 | -0.093, -0.084 |
|  | 8 |  |  |  |  |  |  | -0.062 | 0.002 | -0.066, -0.057 |
|  | 9 |  |  |  |  |  |  | -0.038 | 0.002 | -0.042, -0.033 |
|  | 10 [ref] |  |  |  |  |  |  | 0.000 |  | -0.02, 0.033 |
| N |  | 749,939 |  |  |  | 749,939 |  | 749,939 |  |  |

TABLE S14. Linear probability model: ever marrying by age 45 regressed on IQ (categorical), fixed effects. Swedish men born 1951-1967.

| Variable | Category | Model 16 |  |  | Model 17 |  |  | Model 18 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | -0.297 | 0.010 | -0.318, -0.277 | -0.269 | 0.010 | -0.289, -0.249 | -0.182 | 0.010 | -0.201, -0.163 |
|  | $<74$ | -0.178 | 0.009 | -0.195, -0.161 | -0.164 | 0.009 | -0.181, -0.146 | -0.101 | 0.009 | -0.118, -0.084 |
|  | 74-81 | -0.100 | 0.006 | -0.113, -0.088 | -0.089 | 0.006 | -0.102, -0.077 | -0.055 | 0.006 | -0.068, -0.043 |
|  | 81-89 | -0.051 | 0.005 | -0.061, -0.041 | -0.043 | 0.005 | -0.053, -0.033 | -0.024 | 0.005 | -0.035, -0.014 |
|  | 89-96 | -0.026 | 0.005 | -0.035, -0.017 | -0.022 | 0.005 | -0.031, -0.012 | -0.012 | 0.005 | -0.021, -0.003 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | 0.021 | 0.005 | 0.012, 0.030 | 0.015 | 0.005 | 0.006, 0.024 | 0.004 | 0.004 | -0.004, 0.013 |
|  | 111-119 | 0.043 | 0.005 | 0.033, 0.053 | 0.029 | 0.005 | 0.019, 0.040 | 0.010 | 0.005 | 0.000, 0.020 |
|  | 119-126 | 0.066 | 0.006 | 0.054, 0.078 | 0.045 | 0.006 | 0.033, 0.058 | 0.017 | 0.006 | 0.004, 0.029 |
|  | > 126 | 0.062 | 0.008 | 0.045, 0.078 | 0.033 | 0.009 | 0.016, 0.050 | -0.005 | 0.008 | -0.021, 0.012 |
|  | Missing | -0.068 | 0.010 | -0.087, -0.050 | -0.066 | 0.009 | -0.084, -0.047 | -0.042 | 0.009 | -0.060, -0.024 |
| Birth year | 1951 | 0.176 | 0.008 | 0.159, 0.192 | 0.198 | 0.013 | $0.173,0.223$ | 0.188 | 0.013 | $0.164,0.213$ |
|  | 1952 | 0.164 | 0.008 | 0.147, 0.180 | 0.184 | 0.012 | 0.160, 0.207 | 0.175 | 0.012 | 0.152, 0.198 |
|  | 1953 | 0.157 | 0.008 | 0.141, 0.172 | 0.174 | 0.011 | 0.152, 0.196 | 0.166 | 0.011 | 0.144, 0.187 |
|  | 1954 | 0.140 | 0.008 | 0.124, 0.155 | 0.157 | 0.011 | 0.136, 0.178 | 0.148 | 0.010 | 0.127, 0.168 |
|  | 1955 | 0.123 | 0.008 | 0.108, 0.138 | 0.138 | 0.010 | 0.119, 0.158 | 0.130 | 0.010 | 0.111, 0.149 |
|  | 1956 | 0.102 | 0.008 | 0.087, 0.117 | 0.116 | 0.010 | 0.097, 0.135 | 0.107 | 0.009 | 0.089, 0.126 |
|  | 1957 | 0.093 | 0.008 | 0.079, 0.108 | 0.106 | 0.009 | 0.088, 0.123 | 0.099 | 0.009 | 0.081, 0.116 |
|  | 1958 | 0.079 | 0.007 | 0.065, 0.094 | 0.090 | 0.009 | 0.073, 0.107 | 0.081 | 0.008 | 0.065, 0.098 |
|  | 1959 | 0.058 | 0.007 | 0.044, 0.073 | 0.068 | 0.008 | 0.051, 0.084 | 0.061 | 0.008 | 0.044, 0.077 |
|  | 1961 | 0.040 | 0.007 | 0.026, 0.055 | 0.046 | 0.008 | 0.030, 0.061 | 0.037 | 0.008 | 0.022, 0.051 |
|  | 1962 | 0.016 | 0.007 | 0.002, 0.030 | 0.020 | 0.008 | 0.005, 0.035 | 0.015 | 0.007 | 0.000, 0.029 |
|  | 1963 | 0.013 | 0.007 | -0.001, 0.027 | 0.015 | 0.007 | 0.001, 0.029 | 0.012 | 0.007 | -0.002, 0.026 |
|  | 1964 | 0.015 | 0.007 | 0.001, 0.030 | 0.016 | 0.007 | 0.001, 0.031 | 0.013 | 0.007 | -0.002, 0.027 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | $1966$ | $-0.005$ | $0.008$ | $-0.021,0.011$ | -0.007 | 0.008 | $-0.022,0.009$ | -0.006 | 0.008 | -0.021, 0.010 |
|  | $1967$ | $-0.014$ | $0.008$ | $-0.029,0.001$ | -0.017 | 0.008 | -0.033, -0.002 | -0.014 | 0.008 | -0.030, 0.001 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 |  |  |  | 0.000 | 0.004 | -0.007, 0.007 | -0.001 | 0.003 | -0.008, 0.006 |
|  | 3 |  |  |  | 0.010 | 0.006 | -0.002, 0.022 | 0.009 | 0.006 | -0.002, 0.021 |
|  | 4 |  |  |  | 0.022 | 0.009 | 0.005, 0.039 | 0.021 | 0.009 | 0.004, 0.038 |
|  | 5 |  |  |  | 0.013 | 0.012 | -0.010, 0.037 | 0.012 | 0.012 | -0.011, 0.035 |
|  | 6+ |  |  |  | 0.022 | 0.016 | -0.008, 0.053 | 0.022 | 0.015 | -0.007, 0.052 |
| Education | Primary ( $<9$ years) |  |  |  | -0.056 | $0.011$ | $-0.076,-0.035$ | -0.037- | $0.010$ | $-0.057,-0.017$ |
|  | Primary (9 years) |  |  |  | -0.028 | 0.004 | -0.037, -0.020 | -0.026 | 0.004 | $-0.034,-0.018$ |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | 0.010 | 0.005 | 0.001, 0.020 | 0.003 | 0.005 | -0.006, 0.012 |
|  | Tertiary (13-15 years) |  |  |  | 0.038 | 0.005 | 0.029, 0.048 | 0.012 | 0.005 | 0.003, 0.021 |
|  | Tertiary (15+ years) |  |  |  | 0.068 | 0.005 | 0.058, 0.078 | 0.031 | 0.005 | 0.021, 0.041 |
|  | Postgraduate (16-20 years) |  |  |  | 0.109 | 0.013 | 0.084, 0.135 | 0.057 | 0.013 | 0.032, 0.082 |
|  | Missing |  |  |  | -0.319 | 0.025 | -0.367, -0.271 | -0.218 | 0.024 | -0.265, -0.171 |
| Cumulative income deciles | 1 |  |  |  |  |  |  | -0.396 | 0.007 | -0.410, -0.382 |
|  | 2 |  |  |  |  |  |  | -0.307 | 0.007 | -0.320, -0.294 |
|  | 3 |  |  |  |  |  |  | -0.231 | 0.007 | -0.244, -0.218 |
|  | 4 |  |  |  |  |  |  | -0.185 | 0.007 | -0.198, -0.172 |
|  | 5 |  |  |  |  |  |  | -0.143 | 0.007 | -0.156, -0.130 |
|  | 6 |  |  |  |  |  |  | -0.112 | 0.006 | -0.125, -0.100 |
|  | 7 |  |  |  |  |  |  | -0.076 | 0.006 | -0.089, -0.064 |
|  | 8 |  |  |  |  |  |  | -0.055 | 0.006 | -0.067, -0.042 |
|  | 9 |  |  |  |  |  |  | -0.029 | 0.006 | -0.040, -0.017 |
|  | 10 [ref] |  |  |  |  |  |  | 0.000 |  |  |
| N |  | 217,055 |  |  |  | 217,055 |  |  | 217,055 |  |

TABLE S 15. Linear regression: final parity regressed on IQ (categorical), stratified by having ever married by age 45 , without fixed effects. Swedish men born 1951-1967.

| Variable | Category | Never Married |  |  |  |  |  | Ever Married |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Model 23 |  |  | Model 24 |  |  | Model 25 |  |  | Model 26 |  |  |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | -0.772 | 0.011 | -0.793, -0.751 | -0.585 | 0.011 | -0.607, -0.563 | -0.236 | 0.018 | -0.270, -0.201 | -0.215 | 0.018 | -0.250, -0.181 |
|  | <74 | -0.397 | 0.012 | -0.421, -0.374 | -0.308 | 0.012 | -0.331, -0.284 | -0.086 | 0.015 | -0.115, -0.056 | -0.077 | 0.015 | -0.107, -0.047 |
|  | 74-81 | -0.146 | 0.010 | -0.165, -0.128 | -0.104 | 0.010 | -0.123, -0.085 | -0.009 | 0.009 | -0.026, 0.008 | -0.010 | 0.009 | -0.027, 0.007 |
|  | 81-89 | -0.043 | 0.008 | -0.060, -0.027 | -0.027 | 0.008 | $-0.043,-0.011$ | 0.001 | 0.007 | -0.012, 0.014 | -0.001 | 0.007 | $-0.014,0.012$ |
|  | 89-96 | -0.013 | 0.008 | -0.028, 0.001 | -0.007 | 0.007 | $-0.022,0.007$ | 0.000 | 0.006 | -0.011, 0.011 | -0.003 | 0.006 | -0.014, 0.008 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | -0.044 | 0.008 | -0.059, -0.030 | -0.043 | 0.007 | -0.058, -0.029 | -0.008 | 0.005 | -0.017, 0.002 | -0.005 | 0.005 | -0.015, 0.005 |
|  | 111-119 | -0.094 | 0.008 | -0.110, -0.077 | -0.088 | 0.009 | -0.105, -0.072 | -0.006 | 0.005 | -0.017, 0.004 | -0.003 | 0.006 | -0.014, 0.008 |
|  | 119-126 | -0.153 | 0.010 | -0.174, -0.133 | -0.148 | 0.011 | -0.169, -0.127 | -0.001 | 0.006 | -0.013, 0.011 | 0.000 | 0.007 | -0.013, 0.013 |
|  | >126 | -0.218 | 0.014 | -0.245, -0.191 | $-0.217$ | 0.014 | -0.244, -0.189 | -0.001 | 0.008 | -0.017, 0.014 | -0.008 | 0.008 | -0.025, 0.008 |
|  | Missing | -0.324 | 0.013 | -0.349, -0.299 | -0.238 | 0.012 | -0.262, -0.213 | -0.015 | 0.011 | -0.037, 0.008 | -0.010 | 0.011 | $-0.032,0.012$ |
| Birth year | 1951 | $-0.244$ | $0.013$ | -0.270, -0.218 | $-0.209$ | 0.013 | $-0.235,-0.183$ | 0.035 | $0.009$ | $0.017,0.052$ | 0.035 | 0.009 | $0.017,0.052$ |
|  | $1952$ | $-0.201$ | $0.013$ | $-0.226,-0.175$ | $-0.173$ | $0.013$ | $-0.199,-0.148$ | $0.039$ | $0.009$ | $0.022,0.057$ | $0.038$ | $0.009$ | $0.021,0.055$ |
|  | 1953 | $-0.173$ | 0.013 | -0.198, -0.148 | -0.154 | 0.013 | $-0.179,-0.130$ | 0.050 | 0.009 | 0.033, 0.068 | 0.048 | 0.009 | 0.030, 0.065 |
|  | 1954 | -0.156 | 0.013 | -0.181, -0.131 | -0.142 | 0.013 | $-0.166,-0.117$ | 0.067 | 0.009 | 0.050, 0.085 | 0.064 | 0.009 | 0.046, 0.081 |
|  | 1955 | -0.130 | 0.012 | -0.154, -0.105 | -0.121 | 0.012 | $-0.145,-0.096$ | 0.079 | 0.009 | 0.061, 0.096 | 0.076 | 0.009 | 0.058, 0.094 |
|  | 1956 | -0.096 | 0.012 | -0.120, -0.072 | -0.092 | 0.012 | -0.116, -0.069 | 0.088 | 0.009 | 0.070, 0.105 | 0.084 | 0.009 | 0.067, 0.102 |
|  | 1957 | -0.073 | 0.012 | -0.096, -0.049 | -0.072 | 0.012 | -0.096, -0.049 | 0.094 | 0.009 | 0.077, 0.112 | 0.090 | 0.009 | 0.073, 0.108 |
|  | 1958 | -0.037 | 0.012 | -0.061, -0.014 | -0.042 | 0.012 | -0.065, -0.019 | 0.071 | 0.009 | 0.053, 0.088 | 0.067 | 0.009 | 0.050, 0.085 |
|  | 1959 | -0.030 | 0.012 | -0.054, -0.007 | -0.033 | 0.012 | -0.057, -0.010 | 0.071 | 0.009 | 0.053, 0.089 | 0.068 | 0.009 | 0.049, 0.086 |
|  | 1961 | 0.006 | 0.012 | -0.017, 0.029 | -0.008 | 0.011 | $-0.030,0.015$ | 0.051 | 0.009 | 0.033, 0.069 | 0.048 | 0.009 | 0.030, 0.066 |
|  | 1962 | -0.019 | 0.011 | -0.041, 0.003 | -0.023 | 0.011 | -0.044, -0.001 | 0.042 | 0.009 | 0.024, 0.060 | 0.040 | 0.009 | 0.022, 0.058 |
|  | 1963 | 0.007 | 0.011 | -0.015, 0.029 | 0.004 | 0.011 | $-0.017,0.026$ | 0.019 | 0.009 | 0.002, 0.037 | 0.018 | 0.009 | 0.001, 0.035 |
|  | 1964 | 0.039 | 0.011 | 0.018, 0.061 | 0.034 | 0.011 | 0.013, 0.055 | 0.015 | 0.009 | $-0.002,0.032$ | 0.014 | 0.009 | $-0.003,0.031$ |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | -0.009 | 0.011 | -0.030, 0.012 | -0.008 | 0.010 | -0.029, 0.012 | -0.034 | 0.009 | -0.050, -0.017 | -0.033 | 0.009 | -0.050, -0.016 |
|  | 1967 | -0.018 | 0.011 | -0.039, 0.003 | $-0.015$ | 0.010 | $-0.036,0.006$ | -0.053 | 0.008 | -0.069, -0.036 | -0.051 | 0.008 | $-0.068,-0.035$ |
| size | 1 | -0.075 | 0.007 | -0.088, -0.061 | -0.056 | 0.007 | -0.070, -0.043 | -0.063 | 0.005 | -0.073, -0.052 | -0.059 | 0.005 | -0.070, -0.048 |
|  | 2 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 3 | 0.086 | 0.006 | 0.074, 0.098 | 0.089 | 0.006 | 0.077, 0.101 | 0.107 | 0.004 | 0.099, 0.116 | 0.108 | 0.004 | 0.099, 0.116 |
|  | 4 | 0.156 | 0.009 | 0.138, 0.174 | 0.166 | 0.009 | 0.148, 0.184 | 0.214 | 0.007 | 0.201, 0.227 | 0.216 | 0.007 | 0.203, 0.229 |
|  | 5 | 0.232 | 0.015 | 0.203, 0.261 | 0.244 | 0.015 | 0.215, 0.273 | 0.306 | 0.011 | 0.285, 0.327 | 0.309 | 0.011 | $0.288,0.330$ |
|  | 6+ | 0.308 | 0.020 | 0.269, 0.346 | 0.329 | 0.019 | $0.291,0.367$ | 0.423 | 0.016 | 0.392, 0.454 | 0.426 | 0.016 | 0.395, 0.456 |
| Birth order | 1 [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
|  | 2 | $-0.031$ |  | -0.042, -0.021 | -0.033 | 0.005 | $-0.043,-0.022$ | -0.022 | 0.004 | -0.029, -0.014 | -0.022 | 0.004 | $-0.030,-0.015$ |
|  | 3 | $-0.087$ | $0.008$ | $-0.103,-0.071$ | $-0.085$ | $0.008$ | $-0.101,-0.069$ | -0.055 | $0.006$ | $-0.067,-0.044$ | -0.056 | 0.006 | $-0.067,-0.044$ |
|  | 4 | $-0.125$ | $0.013$ | $-0.150,-0.099$ | -0.127 | 0.013 | $-0.153,-0.102$ | -0.116 | $0.010$ | -0.134, -0.097 | -0.116 | 0.010 | $-0.135,-0.097$ |
|  | 5 | $-0.182$ | 0.021 | $-0.223,-0.141$ | -0.182 | 0.021 | $-0.223,-0.142$ | -0.163 | 0.016 | -0.195, -0.132 | -0.164 | 0.016 | $-0.195,-0.132$ |
|  | $6+$ | -0.155 | 0.027 | -0.209, -0.101 | -0.160 | 0.027 | $-0.214,-0.107$ | -0.152 | 0.022 |  | -0.153 | 0.022 | $-0.195,-0.111$ |
| Education | Primary ( $<9$ years) |  |  |  | -0.064 | 0.016 | $-0.096,-0.032$ |  |  |  | 0.020 | 0.015 | -0.009, 0.049 |
|  | Primary (9 years) |  |  |  | -0.008 | 0.006 | $-0.021,0.004$ |  |  |  | 0.027 | 0.005 | 0.016, 0.038 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | -0.154 | 0.007 | -0.168, -0.140 |  |  |  | -0.066 | 0.005 | -0.076, -0.055 |
|  | Tertiary (13-15 years) |  |  |  | -0.152 | 0.007 | $-0.166,-0.138$ |  |  |  | -0.079 | 0.005 | -0.089, -0.069 |
|  | Tertiary ( $15+$ years) |  |  |  | -0.198 | 0.008 | -0.213, -0.182 |  |  |  | -0.044 | 0.005 | $-0.054,-0.034$ |
|  | Postgraduate (16-20 years) |  |  |  | -0.177 | 0.024 | -0.223, -0.130 |  |  |  | 0.015 | 0.013 | -0.010, 0.040 |
|  | Missing |  |  |  | -0.339 | 0.020 | -0.378, -0.300 |  |  |  | -0.134 | 0.072 | $-0.276,0.007$ |
| Cumulative income deciles | 1 |  |  |  | -0.675 | 0.011 | $-0.697,-0.653$ |  |  |  | -0.217 | 0.010 | $-0.235,-0.198$ |
|  | 2 |  |  |  | -0.529 | 0.011 | $-0.551,-0.507$ |  |  |  | -0.160 | 0.008 | -0.176, -0.144 |
|  | 3 |  |  |  | -0.444 | 0.012 | -0.466, -0.421 |  |  |  | -0.126 | 0.007 | $-0.140,-0.112$ |
|  | 4 |  |  |  | -0.379 | 0.012 | $-0.401,-0.356$ |  |  |  | -0.111 | 0.007 | $-0.124,-0.097$ |
|  | 5 |  |  |  | -0.298 | 0.012 | -0.321, -0.274 |  |  |  | -0.094 | 0.007 | $-0.107,-0.081$ |
|  | 6 |  |  |  | -0.230 | 0.012 | -0.254, -0.206 |  |  |  | -0.069 | 0.007 | $-0.082,-0.057$ |
|  | 7 |  |  |  | -0.192 | 0.012 | -0.216, -0.168 |  |  |  | -0.060 | 0.006 | -0.073, -0.048 |
|  | 8 |  |  |  | -0.128 | 0.012 | -0.153, -0.104 |  |  |  | -0.045 | 0.006 | $-0.057,-0.033$ |
|  | 9 |  |  |  | -0.083 | 0.013 | $-0.108,-0.058$ |  |  |  | -0.038 | 0.006 | $-0.049,-0.027$ |
|  | 10 [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
| N |  | 279,701 |  |  | 279,701 |  |  | 470,238 |  |  | 470,238 |  |  |

TABLE S16. Linear probability model: childlessness regressed on IQ (categorical), stratified by having ever married by age 45, without fixed effects. Swedish men born 1951-1967.

| Variable | Category | Never Married |  |  |  |  |  | Ever Married |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Model 27 |  |  | Model 28 |  |  | Model 29 |  |  | Model 30 |  |  |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | 0.382 | 0.005 | 0.373, 0.391 | 0.289 | 0.005 | 0.279, 0.299 | 0.094 | 0.005 | 0.084, 0.103 | 0.081 | 0.005 | 0.072, 0.091 |
|  | <74 | 0.188 | 0.005 | 0.178, 0.198 | 0.142 | 0.005 | $0.132,0.152$ | 0.066 | 0.004 | 0.059, 0.073 | 0.051 | 0.004 | 0.044, 0.058 |
|  | 74-81 | 0.074 | 0.004 | 0.066, 0.082 | 0.052 | 0.004 | 0.044, 0.060 | 0.024 | 0.002 | 0.020, 0.028 | 0.016 | 0.002 | 0.012, 0.020 |
|  | 81-89 | 0.019 | 0.003 | 0.012, 0.026 | 0.010 | 0.003 | 0.003, 0.017 | 0.008 | 0.001 | $0.006,0.011$ | 0.004 | 0.002 | 0.001, 0.007 |
|  | 89-96 | 0.004 | 0.003 | -0.002, 0.010 | 0.000 | 0.003 | -0.006, 0.007 | 0.004 | 0.001 | 0.001, 0.006 | 0.002 | 0.001 | -0.001, 0.004 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | $0.000$ |  |  | $0.000$ |  |  |
|  | 104-111 | 0.018 | 0.003 | 0.012, 0.025 | 0.019 | 0.003 | 0.012, 0.025 | 0.001 | 0.001 | -0.001, 0.003 | 0.003 | 0.001 | 0.001, 0.005 |
|  | 111-119 | 0.046 | 0.004 | 0.039, 0.053 | 0.045 | 0.004 | 0.038, 0.052 | 0.002 | 0.001 | -0.001, 0.004 | 0.005 | 0.001 | 0.003, 0.008 |
|  | 119-126 | 0.081 | 0.004 | 0.072, 0.090 | 0.080 | 0.005 | $0.071,0.089$ | 0.004 | 0.002 | 0.001, 0.007 | 0.009 | 0.002 | 0.006, 0.012 |
|  | > 126 | 0.115 | 0.006 | 0.104, 0.127 | 0.115 | 0.006 | $0.103,0.127$ | 0.010 | 0.002 | $0.006,0.013$ | 0.016 | 0.002 | 0.012, 0.020 |
|  | Missing | 0.159 | 0.006 | 0.148, 0.170 | 0.116 | 0.005 | $0.106,0.127$ | 0.020 | 0.003 | 0.015, 0.026 | 0.018 | 0.003 | 0.012, 0.023 |
| Birth year | 1951 | 0.106 | 0.006 | 0.095, 0.118 | 0.089 | 0.006 | $0.078,0.100$ | 0.006 | 0.002 | 0.002, 0.010 | 0.006 | 0.002 | 0.001, 0.010 |
|  | 1952 | 0.088 | 0.006 | 0.077, 0.098 | 0.074 | 0.005 | 0.063, 0.084 | 0.006 | 0.002 | 0.002, 0.010 | 0.005 | 0.002 | 0.001, 0.009 |
|  | 1953 | 0.077 | 0.005 | 0.066, 0.087 | 0.067 | 0.005 | 0.057, 0.077 | 0.005 | 0.002 | 0.001, 0.009 | 0.004 | 0.002 | 0.000, 0.009 |
|  | 1954 | 0.070 | 0.005 | 0.059, 0.080 | 0.062 | 0.005 | 0.051, 0.072 | 0.001 | 0.002 | -0.003, 0.005 | 0.001 | 0.002 | -0.003, 0.005 |
|  | 1955 | 0.061 | 0.005 | 0.051, 0.072 | 0.056 | 0.005 | 0.046, 0.066 | 0.002 | 0.002 | -0.002, 0.006 | 0.002 | 0.002 | -0.002, 0.006 |
|  | 1956 | 0.050 | 0.005 | 0.040, 0.060 | 0.048 | 0.005 | 0.038, 0.057 | 0.002 | 0.002 | -0.003, 0.006 | 0.001 | 0.002 | -0.003, 0.006 |
|  | 1957 | 0.042 | 0.005 | 0.032, 0.052 | 0.041 | 0.005 | 0.031, 0.051 | 0.000 | 0.002 | -0.004, 0.004 | 0.000 | 0.002 | -0.004, 0.004 |
|  | 1958 | 0.027 | 0.005 | 0.017, 0.036 | 0.028 | 0.005 | 0.019, 0.038 | 0.001 | 0.002 | -0.003, 0.005 | 0.001 | 0.002 | -0.003, 0.005 |
|  | 1959 | 0.020 | 0.005 | 0.010, 0.030 | 0.021 | 0.005 | $0.011,0.030$ | -0.001 | 0.002 | -0.005, 0.004 | 0.000 | 0.002 | -0.005, 0.004 |
|  | 1961 | 0.002 | 0.005 | -0.008, 0.011 | 0.008 | 0.005 | -0.001, 0.017 | 0.000 | 0.002 | -0.004, 0.005 | 0.001 | 0.002 | -0.004, 0.005 |
|  | 1962 | 0.010 | 0.005 | 0.001, 0.019 | 0.012 | 0.005 | 0.003, 0.021 | 0.002 | 0.002 | -0.003, 0.006 | 0.002 | 0.002 | -0.002, 0.006 |
|  | 1963 | 0.004 | 0.005 | -0.005, 0.013 | 0.005 | 0.005 | -0.004, 0.014 | 0.000 | 0.002 | -0.004, 0.005 | 0.001 | 0.002 | -0.003, 0.005 |
|  | 1964 | $-0.014$ | 0.005 | -0.023, -0.005 | -0.011 | 0.004 | -0.020, -0.002 | 0.000 | 0.002 | -0.004, 0.004 | 0.000 | 0.002 | -0.004, 0.004 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | -0.004 | 0.005 | -0.013, 0.005 | -0.004 | 0.004 | -0.013, 0.004 | 0.002 | 0.002 | -0.002, 0.006 | 0.002 | 0.002 | -0.002, 0.006 |
|  | 1967 | 0.004 | 0.005 | -0.005, 0.013 | 0.003 | 0.004 | -0.006, 0.011 | 0.003 | 0.002 | -0.001, 0.007 | 0.003 | 0.002 | -0.001, 0.007 |
| Sibling group size | 1 | 0.030 | 0.003 | 0.024, 0.036 | 0.021 | 0.003 | 0.016, 0.027 | $0.015$ | 0.001 | 0.013, 0.018 | 0.013 | 0.001 | 0.010, 0.016 |
|  | 2 [ref] | 0.000 |  |  | 0.000 |  |  | $0.000$ |  |  | $0.000$ |  |  |
|  | 3 | -0.026 | 0.003 | -0.032, -0.021 | -0.028 | 0.003 | -0.033, -0.023 | -0.008 | 0.001 | -0.010, -0.006 | -0.009 | 0.001 | -0.011, -0.007 |
|  | 4 | -0.043 | 0.004 | -0.050, -0.035 | -0.048 | 0.004 | -0.055, -0.040 | -0.012 | 0.001 | -0.015, -0.009 | -0.014 | 0.001 | -0.017, -0.012 |
|  | 5 | -0.062 | 0.006 | -0.073, -0.050 | -0.068 | 0.006 | -0.079, -0.057 | -0.015 | 0.002 | -0.019, -0.010 | -0.018 | 0.002 | -0.023, -0.014 |
|  | 6+ | -0.075 | 0.007 | -0.089, -0.060 | -0.086 | 0.007 | -0.100, -0.071 | -0.017 | 0.003 | -0.023, -0.012 | -0.022 | 0.003 | -0.027, -0.016 |
| Birth order | 1 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 | 0.012 | 0.002 | 0.008, 0.017 | 0.013 | 0.002 | 0.008, 0.017 | 0.000 | 0.001 | -0.001, 0.002 | 0.000 | 0.001 | -0.001, 0.002 |
|  | 3 | 0.032 | 0.003 | 0.026, 0.039 | 0.031 | 0.003 | 0.025, 0.038 | 0.006 | 0.001 | 0.004, 0.009 | 0.006 | 0.001 | 0.004, 0.009 |
|  | 4 | 0.041 | 0.005 | 0.031, 0.052 | 0.042 | 0.005 | 0.032, 0.053 | 0.008 | 0.002 | 0.004, 0.012 | 0.009 | 0.002 | $0.005,0.013$ |
|  | 5 | 0.052 | 0.008 | 0.036, 0.068 | 0.052 | 0.008 | 0.037, 0.068 | 0.009 | 0.003 | 0.003, 0.016 | 0.010 | 0.003 | 0.004, 0.016 |
|  | 6+ | 0.055 | 0.010 | 0.035, 0.075 | 0.057 | 0.010 | 0.037, 0.077 | 0.005 | 0.004 | -0.003, 0.013 | 0.006 | 0.004 | -0.002, 0.014 |
| Education | Primary ( ${ }^{\text {9 }}$ 9 years) |  |  |  | 0.047 | 0.007 | 0.034, 0.060 |  |  |  | -0.002 | 0.003 | -0.008, 0.005 |
|  | Primary (9 years) |  |  |  | 0.010 | 0.003 | 0.005, 0.015 |  |  |  | 0.001 | 0.001 | -0.001, 0.004 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | 0.064 | 0.003 | 0.058, 0.071 |  |  |  | 0.005 | 0.001 | 0.003, 0.008 |
|  | Tertiary (13-15 years) |  |  |  | 0.063 | 0.003 | 0.056, 0.069 |  |  |  | 0.006 | 0.001 | 0.003, 0.008 |
|  | Tertiary ( $15+$ years) |  |  |  | 0.092 | 0.003 | 0.085, 0.098 |  |  |  | 0.009 | 0.001 | 0.006, 0.011 |
|  | Postgraduate (16-20 years) |  |  |  | 0.086 | 0.010 | 0.066, 0.106 |  |  |  | 0.006 | 0.003 | 0.000, 0.012 |
|  | Missing |  |  |  | 0.182 | 0.008 | 0.166, 0.198 |  |  |  | 0.038 | 0.018 | 0.002, 0.074 |
| Cumulative income deciles | 1 |  |  |  | 0.310 | 0.005 | $0.301,0.319$ |  |  |  | 0.096 | 0.002 | 0.092, 0.101 |
|  | 2 |  |  |  | 0.240 | 0.005 | 0.231, 0.249 |  |  |  | 0.069 | 0.002 | 0.065, 0.072 |
|  | 3 |  |  |  | 0.199 | 0.005 | 0.190, 0.208 |  |  |  | 0.045 | 0.002 | 0.042, 0.049 |
|  | 4 |  |  |  | 0.167 | 0.005 | 0.157, 0.176 |  |  |  | 0.032 | 0.002 | 0.029, 0.035 |
|  | 5 |  |  |  | 0.130 | 0.005 | 0.120, 0.139 |  |  |  | 0.024 | 0.002 | 0.021, 0.028 |
|  | 6 |  |  |  | 0.102 | 0.005 | 0.092, 0.112 |  |  |  | 0.018 | 0.001 | $0.015,0.021$ |
|  | 7 |  |  |  | 0.085 | 0.005 | 0.075, 0.095 |  |  |  | 0.013 | 0.001 | 0.010, 0.016 |
|  | 8 |  |  |  | 0.060 | 0.005 | 0.050, 0.070 |  |  |  | 0.011 | 0.001 | $0.008,0.013$ |
|  | 9 |  |  |  | 0.035 | 0.005 | $0.025,0.045$ |  |  |  | 0.006 | 0.001 | 0.004, 0.009 |
|  | 10 [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
| N |  | 279,701 |  |  | 279,701 |  |  | 470,238 |  |  | 470,238 |  |  |

TABLE S 17. Linear regression: final parity regressed on IQ (categorical), stratified by having ever married by age 45, with fixed effects. Swedish men born 1951-1967.

| Variable | Category | Never Married |  |  |  |  |  | Ever Married |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Model 31 |  |  | Model 32 |  |  | Model 33 |  |  | Model 34 |  |  |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | -0.965 | 0.054 | -1.070, -0.859 | -0.666 | 0.055 | -0.774, -0.558 | -0.290 | 0.058 | -0.405, -0.176 | -0.259 | 0.058 | -0.372, -0.145 |
|  | <74 | -0.589 | 0.048 | -0.683, -0.494 | -0.417 | 0.048 | -0.511, -0.323 | -0.156 | 0.048 | -0.250, -0.063 | -0.121 | 0.048 | -0.214, -0.028 |
|  | 74-81 | -0.289 | 0.039 | -0.364, -0.213 | -0.207 | 0.038 | -0.282, -0.131 | -0.097 | 0.029 | -0.153, -0.040 | -0.077 | 0.029 | -0.134, -0.021 |
|  | 81-89 | -0.099 | 0.034 | -0.166, -0.031 | $-0.054$ | 0.034 | -0.121, 0.013 | -0.038 | 0.023 | -0.083, 0.006 | -0.029 | 0.023 | -0.074, 0.015 |
|  | 89-96 | -0.012 | 0.031 | -0.073, 0.049 | 0.012 | 0.031 | -0.048, 0.072 | -0.007 | 0.019 | -0.044, 0.030 | -0.002 | 0.019 | -0.039, 0.035 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | -0.024 | 0.033 | -0.088, 0.041 | -0.051 | 0.032 | -0.114, 0.013 | 0.004 | 0.018 | -0.032, 0.039 | -0.003 | 0.018 | -0.038, 0.033 |
|  | 111-119 | 0.005 | 0.040 | -0.073, 0.083 | -0.043 | 0.040 | -0.121, 0.035 | 0.040 | 0.020 | 0.001, 0.080 | 0.027 | 0.021 | -0.013, 0.068 |
|  | 119-126 | -0.017 | 0.052 | -0.119, 0.085 | -0.072 | 0.052 | -0.174, 0.029 | 0.041 | 0.025 | -0.007, 0.090 | 0.019 | 0.025 | -0.030, 0.069 |
|  | >126 | 0.057 | 0.073 | -0.087, 0.200 | -0.071 | 0.073 | -0.214, 0.072 | 0.060 | 0.032 | -0.003, 0.124 | 0.028 | 0.033 | -0.037, 0.093 |
|  | Missing | -0.423 | 0.060 | -0.540, -0.306 | -0.326 | 0.057 | -0.438, -0.215 | -0.024 | 0.042 | -0.106, 0.057 | -0.020 | 0.041 | -0.101, 0.062 |
| Birth year | 1951 | -0.128 | 0.094 | -0.311, 0.055 | -0.079 | 0.092 | $-0.258,0.101$ | 0.178 | 0.054 | 0.071, 0.284 | 0.169 | 0.054 | 0.062, 0.275 |
|  | 1952 | -0.062 | 0.086 | -0.230, 0.107 | -0.019 | 0.085 | $-0.185,0.147$ | 0.186 | 0.051 | 0.086, 0.286 | 0.179 | 0.051 | 0.079, 0.279 |
|  | 1953 | -0.063 | 0.080 | -0.220, 0.093 | -0.022 | 0.078 | -0.175, 0.130 | 0.210 | 0.048 | 0.116, 0.304 | 0.203 | 0.048 | 0.109, 0.297 |
|  | 1954 | -0.094 | 0.075 | $-0.241,0.052$ | -0.065 | 0.073 | $-0.208,0.079$ | 0.169 | 0.045 | 0.081, 0.257 | 0.162 | 0.045 | 0.074, 0.251 |
|  | 1955 | 0.004 | 0.069 | -0.131, 0.140 | 0.026 | 0.068 | -0.107, 0.159 | 0.237 | 0.043 | 0.153, 0.320 | 0.230 | 0.043 | 0.146, 0.313 |
|  | 1956 | 0.031 | 0.065 | -0.096, 0.158 | 0.038 | 0.063 | $-0.086,0.162$ | 0.201 | 0.040 | 0.122, 0.280 | 0.194 | 0.040 | $0.115,0.273$ |
|  | 1957 | 0.062 | 0.061 | -0.058, 0.182 | 0.073 | 0.060 | $-0.044,0.190$ | 0.244 | 0.038 | 0.169, 0.319 | 0.238 | 0.038 | 0.162, 0.313 |
|  | 1958 | 0.035 | 0.058 | -0.079, 0.149 | 0.043 | 0.057 | -0.069, 0.154 | 0.175 | 0.037 | 0.103, 0.247 | 0.168 | 0.037 | 0.096, 0.239 |
|  | 1959 | 0.032 | 0.054 | -0.074, 0.137 | 0.030 | 0.053 | -0.073, 0.134 | 0.172 | 0.036 | 0.102, 0.241 | 0.167 | 0.036 | 0.097, 0.236 |
|  | 1961 | 0.110 | 0.049 | 0.015, 0.206 | 0.099 | 0.048 | 0.006, 0.193 | 0.092 | 0.033 | 0.027, 0.157 | 0.086 | 0.033 | 0.021, 0.151 |
|  | 1962 | 0.018 | 0.047 | -0.074, 0.110 | 0.017 | 0.046 | $-0.073,0.106$ | 0.151 | 0.032 | 0.088, 0.214 | 0.145 | 0.032 | 0.082, 0.208 |
|  | 1963 | 0.040 | 0.045 | -0.048, 0.129 | 0.032 | 0.044 | -0.054, 0.118 | 0.053 | 0.032 | -0.010, 0.116 | 0.051 | 0.032 | -0.011, 0.114 |
|  | 1964 | 0.081 | 0.046 | -0.009, 0.172 | 0.078 | 0.045 | $-0.010,0.167$ | 0.039 | 0.033 | -0.025, 0.103 | 0.035 | 0.033 | -0.028, 0.099 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | -0.106 | 0.048 | -0.201, -0.011 | -0.102 | 0.047 | -0.194, -0.010 | -0.055 | 0.035 | -0.123, 0.014 | -0.053 | 0.035 | -0.122, 0.015 |
|  | 1967 | -0.034 | 0.050 | -0.132, 0.063 | -0.035 | 0.048 | -0.129, 0.059 | -0.060 | 0.034 | -0.128, 0.007 | -0.056 | 0.034 | -0.123, 0.011 |
| Birth order | 1 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  | -0.128,0.07 | 0.000 |  | -0.12, 0.01 |
|  | 2 | -0.001 | 0.024 | -0.049, 0.046 | -0.008 | 0.024 | -0.055, 0.039 | 0.003 | 0.015 | -0.026, 0.032 | 0.002 | 0.015 | -0.027, 0.031 |
|  | 3 | -0.051 | 0.040 | -0.130, 0.028 | -0.052 | 0.039 | $-0.129,0.026$ | 0.024 | 0.026 | -0.026, 0.074 | 0.022 | 0.026 | -0.028, 0.072 |
|  | 4 | -0.065 | 0.057 | $-0.177,0.048$ | -0.069 | 0.056 | -0.179, 0.042 | 0.014 | 0.038 | $-0.060,0.088$ | 0.013 | 0.037 | -0.061, 0.086 |
|  | 5 | -0.074 | 0.077 | $-0.224,0.076$ | -0.076 | 0.075 | $-0.223,0.071$ | 0.022 | 0.052 | -0.079, 0.124 | 0.021 | 0.052 | -0.081, 0.122 |
|  | 6+ | -0.132 | 0.099 | $-0.326,0.062$ | -0.115 | 0.098 | $-0.307,0.076$ | -0.007 | 0.068 | -0.140, 0.127 | -0.005 | 0.068 | -0.139, 0.129 |
| Education | Primary ( $<9$ years) |  |  |  | -0.187 | 0.069 | $-0.322,-0.052$ |  |  |  | 0.060 | 0.048 | -0.034, 0.154 |
|  | Primary (9 years) |  |  |  | -0.064 | 0.026 | -0.114, -0.014 |  |  |  | 0.005 | 0.019 | -0.032, 0.041 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
|  | Secondary (12 years) |  |  |  | -0.105 | 0.033 | -0.170, -0.041 |  |  |  | -0.036 | 0.019 | -0.074, 0.002 |
|  | Tertiary (13-15 years) |  |  |  | -0.107 | 0.034 | -0.174, -0.040 |  |  |  | -0.097 | 0.019 | -0.134, -0.060 |
|  | Tertiary ( $15+$ years) |  |  |  | -0.113 | 0.040 | $-0.192,-0.035$ |  |  |  | -0.050 | 0.021 | $-0.091,-0.008$ |
|  | Postgraduate (16-20 years) |  |  |  | -0.106 | 0.127 | $-0.354,0.143$ |  |  |  | 0.114 | 0.049 | $0.017,0.210$ |
|  | Missing |  |  |  | -0.334 | 0.114 | $-0.558,-0.111$ |  |  |  | 0.185 | 0.212 | -0.232, 0.601 |
| Cumulative income deciles | 1 |  |  |  | -1.036 | 0.056 | $-1.146,-0.926$ |  |  |  | -0.394 | 0.034 | -0.461, -0.328 |
|  | 2 |  |  |  | -0.751 | 0.056 | -0.860, -0.641 |  |  |  | -0.299 | 0.029 | -0.357, -0.242 |
|  | 3 |  |  |  | -0.600 | 0.057 | $-0.712,-0.489$ |  |  |  | -0.206 | 0.028 | -0.260, -0.151 |
|  | 4 |  |  |  | -0.511 | 0.057 | -0.623, -0.399 |  |  |  | -0.191 | 0.027 | -0.243, -0.138 |
|  | 5 |  |  |  | -0.389 | 0.057 | $-0.501,-0.276$ |  |  |  | -0.183 | 0.026 | -0.234, -0.132 |
|  | 6 |  |  |  | -0.315 | 0.059 | $-0.430,-0.200$ |  |  |  | -0.143 | 0.025 | -0.192, -0.093 |
|  | 7 |  |  |  | -0.247 | 0.059 | $-0.362,-0.132$ |  |  |  | -0.080 | 0.025 | -0.128, -0.032 |
|  | 8 |  |  |  | -0.168 | 0.060 | $-0.286,-0.050$ |  |  |  | -0.041 | 0.024 | -0.088, 0.006 |
|  | 9 |  |  |  | -0.080 | 0.061 | -0.199, 0.040 |  |  |  | -0.023 | 0.023 | -0.068, 0.022 |
|  | 10 [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
| N |  | 80,457 |  |  | 80,457 |  |  | 136,598 |  |  | 136,598 |  |  |

TABLE S18. Linear probability model: childlessness regressed on IQ (categorical), stratified by having ever married by age 45, with fixed effects. Swedish men born 1951-1967.

| Variable | Category | Never Married |  |  |  |  |  | Ever Married |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Model 35 |  |  | Model 36 |  |  | Model 37 |  |  | Model 38 |  |  |
|  |  | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI | $\beta$ | SE | 95\% CI |
| IQ | Not tested | 0.490 | 0.022 | 0.447, 0.533 | 0.357 | 0.023 | 0.313, 0.401 | 0.094 | 0.015 | 0.066, 0.123 | 0.083 | 0.014 | 0.055, 0.111 |
|  | <74 | 0.269 | 0.019 | 0.231, 0.308 | 0.195 | 0.019 | 0.157, 0.233 | 0.064 | 0.010 | 0.044, 0.083 | 0.051 | 0.010 | 0.031, 0.070 |
|  | 74-81 | 0.138 | 0.016 | 0.107, 0.169 | 0.102 | 0.016 | 0.072, 0.132 | 0.037 | 0.006 | 0.025, 0.049 | 0.030 | 0.006 | 0.018, 0.042 |
|  | 81-89 | 0.054 | 0.014 | 0.027, 0.081 | 0.034 | 0.014 | 0.008, 0.061 | 0.013 | 0.005 | 0.003, 0.022 | 0.009 | 0.005 | -0.001, 0.018 |
|  | 89-96 | 0.019 | 0.013 | -0.006, 0.043 | 0.008 | 0.012 | -0.016, 0.032 | 0.006 | 0.004 | -0.003, 0.014 | 0.003 | 0.004 | -0.005, 0.012 |
|  | 96-104 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 104-111 | 0.001 | 0.014 | -0.026, 0.028 | 0.013 | 0.013 | -0.013, 0.039 | -0.006 | 0.004 | -0.014, 0.002 | -0.003 | 0.004 | -0.011, 0.005 |
|  | 111-119 | 0.000 | 0.017 | -0.033, 0.032 | 0.020 | 0.016 | -0.012, 0.053 | -0.009 | 0.005 | -0.018, 0.000 | -0.004 | 0.005 | -0.013, 0.005 |
|  | 119-126 | 0.017 | 0.022 | -0.025, 0.060 | 0.041 | 0.021 | -0.001, 0.083 | -0.007 | 0.006 | -0.019, 0.004 | 0.000 | 0.006 | -0.012, 0.011 |
|  | > 126 | -0.003 | 0.031 | -0.062, 0.057 | 0.052 | 0.030 | -0.007, 0.111 | -0.012 | 0.008 | -0.027, 0.003 | -0.003 | 0.008 | -0.018, 0.012 |
|  | Missing | 0.196 | 0.025 | 0.147, 0.244 | 0.153 | 0.024 | $0.106,0.199$ | 0.018 | 0.010 | -0.001, 0.037 | 0.017 | 0.010 | -0.002, 0.036 |
| Birth year | 1951 | 0.029 | 0.037 | -0.044, 0.103 | 0.008 | 0.037 | -0.064, 0.081 | -0.015 | 0.012 | -0.039, 0.008 | -0.016 | 0.012 | -0.040, 0.008 |
|  | 1952 | -0.020 | 0.035 | -0.088, 0.048 | -0.038 | 0.034 | -0.105, 0.029 | -0.022 | 0.012 | -0.045, 0.001 | -0.023 | 0.012 | -0.045, 0.000 |
|  | 1953 | -0.009 | 0.033 | -0.073, 0.055 | -0.026 | 0.032 | -0.088, 0.037 | -0.022 | 0.011 | -0.044, -0.001 | -0.022 | 0.011 | -0.043, -0.001 |
|  | 1954 | 0.002 | 0.030 | -0.058, 0.062 | -0.010 | 0.030 | -0.069, 0.048 | -0.021 | 0.010 | -0.041, -0.001 | -0.020 | 0.010 | -0.040, 0.000 |
|  | 1955 | -0.009 | 0.028 | -0.064, 0.047 | -0.018 | 0.027 | -0.072, 0.036 | -0.027 | 0.010 | -0.046, -0.009 | -0.026 | 0.010 | -0.045, -0.008 |
|  | 1956 | -0.029 | 0.026 | -0.080, 0.023 | -0.032 | 0.026 | -0.082, 0.019 | -0.020 | 0.009 | -0.038, -0.002 | -0.018 | 0.009 | -0.036, 0.000 |
|  | 1957 | -0.015 | 0.025 | -0.064, 0.034 | -0.020 | 0.024 | -0.068, 0.028 | -0.029 | 0.009 | -0.046, -0.012 | -0.028 | 0.009 | -0.045, -0.011 |
|  | 1958 | -0.025 | 0.024 | -0.071, 0.021 | -0.029 | 0.023 | -0.074, 0.016 | -0.017 | 0.008 | -0.034, -0.001 | -0.016 | 0.008 | -0.032, 0.000 |
|  | 1959 | -0.030 | 0.022 | -0.074, 0.013 | -0.030 | 0.022 | -0.073, 0.013 | -0.015 | 0.008 | -0.031, 0.001 | -0.014 | 0.008 | -0.029, 0.002 |
|  | 1961 | -0.058 | 0.020 | -0.097, -0.019 | -0.053 | 0.020 | -0.091, -0.014 | -0.006 | 0.008 | -0.021, 0.008 | -0.005 | 0.007 | -0.020, 0.010 |
|  | 1962 | -0.017 | 0.019 | -0.055, 0.021 | -0.016 | 0.019 | -0.053, 0.021 | -0.017 | 0.007 | -0.031, -0.002 | -0.015 | 0.007 | -0.030, -0.001 |
|  | 1963 | -0.008 | 0.019 | -0.045, 0.029 | -0.004 | 0.018 | -0.040, 0.032 | -0.013 | 0.007 | -0.027, 0.002 | -0.012 | 0.007 | -0.026, 0.002 |
|  | 1964 | -0.042 | 0.019 | -0.079, -0.005 | -0.041 | 0.019 | -0.077, -0.004 | -0.003 | 0.007 | -0.017, 0.012 | -0.002 | 0.007 | -0.016, 0.012 |
|  | 1965 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 1966 | 0.021 | 0.020 | -0.018, 0.061 | 0.020 | 0.020 | -0.018, 0.059 | 0.010 | 0.008 | -0.006, 0.026 | 0.010 | 0.008 | -0.006, 0.025 |
|  | 1967 | 0.007 | 0.021 | -0.033, 0.047 | 0.007 | 0.020 | -0.032, 0.046 | 0.004 | 0.008 | -0.011, 0.020 | 0.004 | 0.008 | -0.012, 0.019 |
| Birth order | 1 [ref] | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  | 0.000 |  |  |
|  | 2 | -0.007 | 0.010 | -0.026, 0.012 | -0.004 | 0.010 | -0.023, 0.015 | -0.009 | 0.003 | -0.016, -0.003 | -0.009 | 0.003 | -0.016, -0.003 |
|  | 3 | 0.004 | 0.016 | -0.027, 0.036 | 0.005 | 0.016 | -0.026, 0.036 | -0.012 | 0.006 | -0.023, -0.001 | -0.011 | 0.006 | -0.022, 0.000 |
|  | 4 | 0.007 | 0.023 | -0.039, 0.052 | 0.008 | 0.023 | -0.036, 0.053 | -0.016 | 0.008 | -0.032, -0.001 | -0.016 | 0.008 | -0.031, 0.000 |
|  | 5 | -0.010 | 0.031 | -0.071, 0.050 | -0.010 | 0.030 | -0.069, 0.049 | -0.024 | 0.011 | -0.046, -0.003 | -0.023 | 0.011 | -0.044, -0.002 |
|  | 6+ | 0.008 | 0.039 | -0.068, 0.084 | 0.001 | 0.038 | -0.074, 0.075 | -0.027 | 0.014 | -0.054, 0.000 | -0.026 | 0.014 | -0.053, 0.001 |
| Education | Primary ( $<9$ years) |  |  |  | 0.078 | 0.026 | 0.027, 0.129 |  |  |  | 0.015 | 0.010 | -0.004, 0.034 |
|  | Primary (9 years) |  |  |  | 0.027 | 0.010 | 0.007, 0.047 |  |  |  | 0.000 | 0.004 | -0.008, 0.007 |
|  | Secondary (10-11 years) [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
|  | Secondary ( 12 years) |  |  |  | 0.033 | 0.014 | 0.006, 0.059 |  |  |  | 0.005 | 0.004 | -0.004, 0.014 |
|  | Tertiary (13-15 years) |  |  |  | 0.042 | 0.014 | $0.013,0.070$ |  |  |  | 0.007 | 0.004 | -0.001, 0.016 |
|  | Tertiary (15+ years) |  |  |  | 0.047 | 0.017 | $0.013,0.080$ |  |  |  | 0.003 | 0.005 | -0.006, 0.013 |
|  | Postgraduate (16-20 years) |  |  |  | 0.020 | 0.052 | -0.082, 0.121 |  |  |  | 0.002 | 0.012 | -0.021, 0.024 |
|  | Missing |  |  |  | 0.209 | 0.043 | 0.124, 0.294 |  |  |  | -0.008 | 0.055 | -0.115, 0.099 |
| Cumulative income deciles | 1 |  |  |  | 0.436 | 0.023 | $0.391,0.481$ |  |  |  | 0.120 | 0.008 | 0.104, 0.135 |
|  | 2 |  |  |  | 0.323 | 0.023 | 0.278, 0.367 |  |  |  | 0.073 | 0.007 | 0.060, 0.086 |
|  | 3 |  |  |  | 0.248 | 0.023 | $0.203,0.294$ |  |  |  | 0.050 | 0.006 | $0.038,0.062$ |
|  | 4 |  |  |  | 0.206 | 0.023 | 0.160, 0.252 |  |  |  | 0.040 | 0.006 | 0.028, 0.052 |
|  | 5 |  |  |  | 0.167 | 0.024 | 0.121, 0.213 |  |  |  | 0.027 | 0.006 | 0.016, 0.039 |
|  | 6 |  |  |  | 0.127 | 0.024 | 0.081, 0.173 |  |  |  | 0.028 | 0.006 | 0.017, 0.039 |
|  | 7 |  |  |  | 0.091 | 0.024 | 0.045, 0.138 |  |  |  | 0.010 | 0.005 | -0.001, 0.021 |
|  | 8 |  |  |  | 0.072 | 0.024 | $0.024,0.119$ |  |  |  | 0.014 | 0.005 | 0.003, 0.024 |
|  | 9 |  |  |  | 0.041 | 0.025 | -0.008, 0.090 |  |  |  | 0.002 | 0.005 | -0.008, 0.013 |
|  | 10 [ref] |  |  |  | 0.000 |  |  |  |  |  | 0.000 |  |  |
| N |  | 80,457 |  |  | 80,457 |  |  | 136,598 |  |  | 136,598 |  |  |

