Parental Income, College Attendance, and First Birth Timing

Abstract

Whereas previous studies have estimated first birth differentials by race and education, the present study is the first to do so by parental income. The NLSY97 is employed to examine first birth timing across parental income quartiles among a recent cohort of U.S. women. Women from the lowest parental income quartile experience earlier first births, and higher hazards of first birth, relative to women in the middle parental income quartiles. Women in the highest parental income quartile exhibit the latest, and lowest hazard, of first birth. The relationship between parental income and fertility timing is examined through the intervening variable of college attendance.

Extended Abstract

INTRODUCTION

In this paper, I will explore the effects of parental income on the timing of first birth by [first delaying family formation] through facilitating college attendance, and then accelerating family formation after college by reducing or eliminating the student debt repayment barrier to family formation. Previous research by Reeder & Kahn (2012) suggests that the burden of student loan debt may be associated with delays in first birth timing. I hypothesize that timing and occurrence of family formation among youth from lower- and lower-middle income families will be much more heterogeneous than that for youth from higher-income families. I also hypothesize that race/ethnic differences in the distribution of parental income will explain substantial amounts of the variability of profiles of first birth timing by race/ethnicity. Earlier work (Chen and Morgan 1991) documents a divergence in first birth timing between white and nonwhite women, wherein nonwhite women have earlier first births, on average. Though average age at first birth has increased for all woman, non-Hispanic white women continue to have later first births relative to Hispanic or non-Hispanic black women (Matthews, Brady, & Hamilton 2009).

Parental resources are important in the transition to adulthood, both for their ability to prepare children for and to finance a college education. This financing may be either by parents

paying education costs directly or knowing that parents can help with loan debt later is increasingly important factor in college completion. The evidence on whether parental income affects college enrollment is mixed. Acemoglu & Pischke (2000) find that a 10% increase in parental income is associated with a less than 2% increase in college enrollment. Furthermore, Ellwood & Kane (2000) show that differences in college enrollment by parental income disappear after controlling for high school achievement. Yet among those enrolled in college, parental income impacts college completion. Students from families in the highest income quartile were 13 percentage points more likely to graduate within 6 years of first enrollment than students in the lowest income quartile, though this narrowed to 6 percentage points after controlling for student characteristics (Bowen et al. 2009). Because parents' resources differ, and because fewer resources may strain college attendance and completion (Reisel 2011). First birth hazards and distributions by educational attainment in the U.S. differ markedly by a woman's educational attainment (Sullivan 2005). As has been shown in other country contexts (Ni Bhrolchain and Beaujouan 2012), the effect of education includes the depressing effect on fertility while enrolled in fulltime studies.

Parental income may also impact fertility timing by shaping young adults' preferences and through the level of parents' financial support. According to the Easterlin (1969) hypothesis, young adult's standard-of-living preferences are shaped by their parents' resources (e.g., income). Easterlin predicted that a young adult's parents' resources and his/her own number of children were inversely related. Arieke & Liefbroer (2009) argue that this same argument can apply to fertility timing; young adults with higher standard-of-living aspirations will postpone first births until they have achieved their material aspirations. Alternatively, parental income may be inversely related to age at first birth, as high-income parents are more likely to provide

financial support to their adult children compared to lower-income parents (Knijn & Liefbroer 2006). Relatedly, young adults from low-income homes are more likely to leave their origin family and start their own families because remaining in their parental home is unappealing (Wu 1996).

DATA AND METHOD

I use women from the 1997 National Longitudinal Survey of Youth (NLSY97) cohort (n=4,385) to first estimate first birth hazards by age across three parental income groups (the lowest quartile, the middle two quartile, and the top quartile). By 2011 (the latest round of data available), respondents range from age 26 to 31[1]. Parental income was collected in a separate questionnaire issued to parents of NLSY97 respondents. Parents report their total income from wages, salary, commissions and tips, and when applicable, their spouse's income. To construct the parental income variable, I sum the responding parent's income and their spouse's income. From the first birth hazards, I compute first birth life tables (e.g., Chen and Morgan 1991) to derive distributions of first birth timing by parental income quartile.

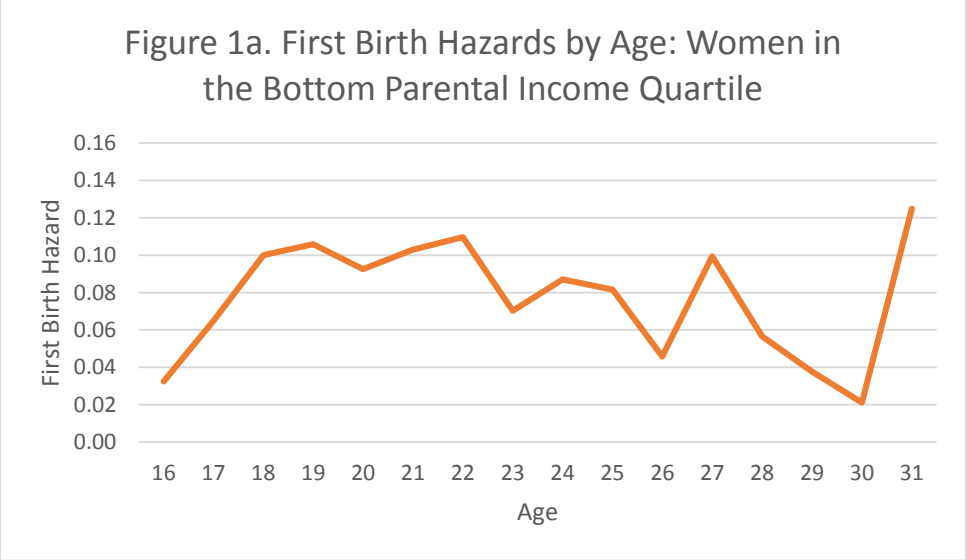
Next, I model the effect of parental income on the distribution of first birth timing through the mediating process of parental income on college attendance. I will estimate three equations, including race/ethnicity as a predictor variable in each case: 1) an equation to estimate college attendance according to parental income quartiles; 2a) a first birth hazard conditional on not attending college, by parental income quartile; and 2b) a first birth hazard conditional on attending college, again by parental income quartile. I then simulate a model of first birth hazards derived from each of these paths (college attending or not), by parental income and race/ethnicity, and conduct counterfactual simulations to decompose the contributions of parental

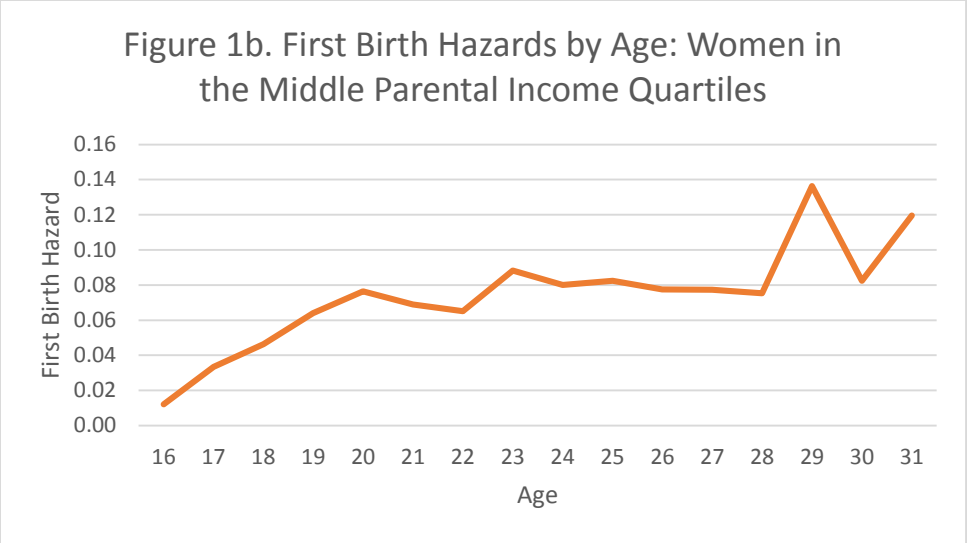
[1] As of the 2011 round of the NLSY97, 6 women were 32 years old by the time they were interviewed.

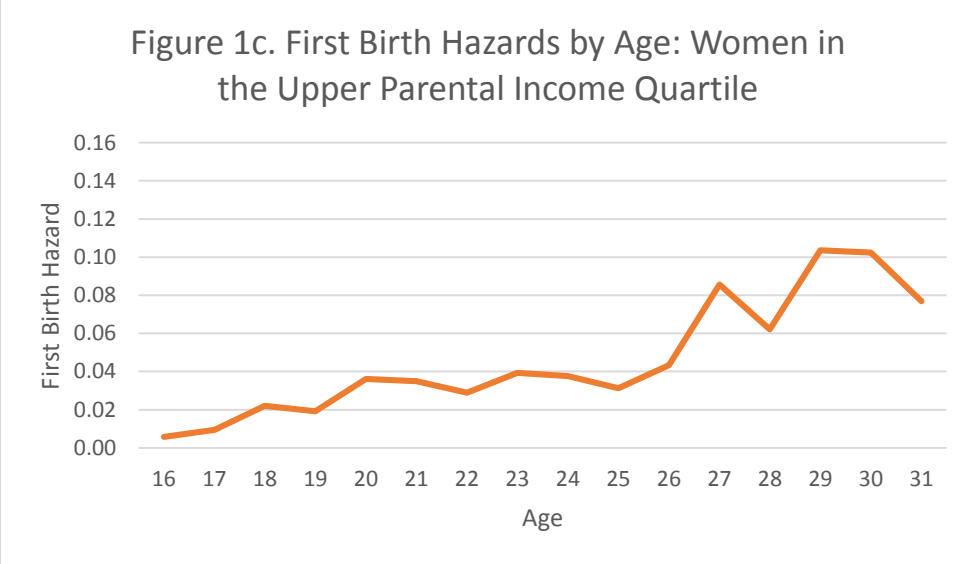
income to age at first birth through (1) altering the propensity to attend college and (2) through altering the hazard of first birth given college attendance or non-attendance.

RESULTS

I present the overall hazard of first birth by three parental income groups (lower quartile, middle two quartiles, and upper quartile) in this extended abstract. The hazards indicate that the timing of first birth increases monotonically with parental income (see Figures 1a, 1b, and 1c). Women in the lowest parental income quartile exhibit higher hazards of first birth at younger ages compared to women in the middle income quartiles, and women in the middle income quartiles exhibit higher hazards of first birth throughout their 20s compared to women in the highest parental income quartile.







References

Acemoglu, D. and Pischke, J. F. 2000. "Changes in the Wage Structure, Family Income, and Children's Education," NBER Working Papers No. 7986.

Bowen, W., Chingos, M., and McPherson, M. 2009. *Crossing the Finish Line: Completing College at America's Universities.* Princeton University Press.

Chen, R.B., and S.P. Morgan. 1991. "Recent Trends in the Timing of First Births in the United States," *Demography* 28(4):513-33.

Easterlin, Richard A. 1969. "Towards a Socioeconomic Theory of Fertility: A Survey of Recent Research on Economic Factors in American Fertility," in Samuel J. Behrman, Leslie Corsa, Jr., and Ronald Freedman (eds), *Fertility and Family Planning: A World View*. Ann Arbor: University of Michigan Press, pp. 127-156.

Ellwood, D. and Kane, T. 2000. "Who Is Getting a College Education? Family Background and the Growing Gaps in Enrollment," in *Securing the Future: Investing in Children from Birth to College,* eds. S. Danziger and J. Waldfogel. New York: Russell Sage Foundation

Knijn, Trudie C. M. and Aart C. Liefbroer. 2006. "More Kin than Kind: Instrumental Support in Families", in Pearl A. Dykstra, Matthijs Kalmijn, Trudie C. M. Knijn, Aafke E. Komter, Aart C. Liefbroer, and Clara H. Mulder (eds), *Family Solidarity in the Netherlands*. Amsterdam Dutch University Press, pp. 89-105.

Matthews, T.J., Brady, M.S., & Hamilton, E. 2009. "Delayed Childbearing: More Women are Having their First Child Later in Life." NCHS Data Brief No. 21.

Ni Bhrolchain, M., and E. Beaujouan (2012) "Fertility Postponement is largely Due to Rising Educational Enrolment." *Population Studies*

Reeder, Lori and Kahn, Joan R. 2012. "The Effects of Student Loan Debt on the Transition to Parenthood," Presented at the American Sociological Association Annual Meeting, Denver CO, August 2012.

Reisel, L. 2011. "Two Paths to Inequality in Educational Outcomes: Family Background and Educational Selection in the United States and Norway." *Sociology of Education* 84: 261-280.

Rijken, Arieke J. and Aart C Liefbroer. 2009. "Influences of the family of origin on the timing and quantum of fertility in the Netherlands." *Population Studies* 63: 71-85.

Sullivan, R. 2005. "The Age Pattern of First-birth Rates among U.S. women: The Bimodal 1990s." *Demography* 42(2):259-273.