Is the Opportunity Cost Model Overstated? The Role of Biological and Social Constraints in Fertility Intentions and Outcomes

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Much of the popular focus on fertility in the United States, as well as the subject of academic research, concerns highly educated women of older reproductive age who have very low fertility. The established opportunity cost model addresses the reasons for lowered fertility among highly educated women: high earnings (or potential earnings) increase the cost of children and lead to lowered fertility. However, little if any empirical research has focused on identifying the role of biological and social constraints versus opportunity costs in low fertility among such women. Social constraints might prevent these women from having children while unmarried, and biological constraints could play a role as marriage and hence childbearing is shifted to older and less fecund ages.

In this paper, we quantify the extent to which low fertility rates are a consequence of opportunity costs versus social and biological constraints. Distinguishing the relative importance of these explanations will lead to a deeper understanding of the forces that shape fertility, and will shed light on the reasons for low fertility among highly educated women in the United States. In particular, we intend to determine whether such low fertility is intended, as suggested by the opportunity cost theory, or an unintended consequence of biological and social constraints.

Using panel datasets from the National Survey of Family Growth (NSFG) and the National Survey of Families and Households (NSFH), we examine women's stated fertility goals at an initial period, and compare these to their subsequent fertility outcomes, and to their stated fertility goals after a number of years. Concentrating on women in their later reproductive years, we investigate which groups' initial stated fertility intentions remained unmet, and which groups' intentions changed with age or parity.

First, we employ a variety of descriptive statistics to isolate the issues at play before moving into the multivariate regression models. Using the NSFH data, we examine fertility intentions by age group, marital status, and parity. We find that fertility intentions are more commonly unmet among better-educated women. Among women who had intended another child at the time of the first panel but did not have one in the interval between the first and second panel (about six years), older women were more likely to revise downward their initial stated intentions. This downward revision at older ages suggests that biological constraints may be playing a role. Unmarried women were also more likely to revise downwards, suggesting that social constraints – the lack of a partner and/or a preference for having children only within marriage – could also be at play.

Second, we use the NSFG data to follow cohorts of women in single-year age designations over 2 years, observing how expected completed fertility compares with

total completed fertility. In most cases, stated intentions decrease with time to converge with completed fertility – our analysis focuses on comparing the rate of that decrease at different ages.

Finally, we include the newly available third wave of the NSFH data in estimating several models of fertility outcomes, using logistic regression to identify the determinants of achieving one's stated fertility intentions, as well as the determinants of revising downward those intentions in the event they are not met. We pay special attention to changes in marital status during each interim period, and to the influence of education, age, and the original stated fertility goals of the women's spouses/partners. The first set of models concentrates on women who stated during the first survey an intention to have at least one (more) child, examining the characteristics of women who succeeded in doing so during the interim periods between surveys.

In the second set of models, in which we examine women's propensity to revise down their stated fertility intentions, the use of panel data allows us to avoid some, but not all, of the endogeneity issues in such work. Do professional and highly educated women have low fertility goals because of their low fertility expectations, or do they have low fertility goals as a deliberate choice emphasizing work and career over childbearing and parenting? While we cannot determine the direction of causation for fertility goals in the initial year of each survey, we can compare changes in fertility goals that take place between the first interview and the subsequent interviews several years later. A reduction in fertility intentions as a consequence of experience during the intervening years, all else equal, would suggest that low fertility stems from experience rather than from a deliberate choice.

Our preliminary findings suggest that the opportunity cost model, while still relevant, is overstated. That is, many highly educated women modify their fertility goals in light of their fertility experience, and/or do not achieve their desired fertility because of biological and social constraints. These social constraints derive from an unwillingness to have children while unmarried. The biological constraints are a consequence of delayed childbearing to older and less fecund ages.