Who is more likely to give their children a head start in life? Explaining seasonal variations in births

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Abstract

BACKGROUND
It is well established that children born at the start of the year tend to achieve better in school, on average, than children born at the end of the year. It has also been shown that those born early in the year, has higher income during their early working years. Further, although disputed, some studies have shown that children born in the period May-October have significantly higher IQ than children born between November and April. It has also been shown that on the Northern Hemisphere, people born in autumn live longer than those born in spring.

OBJECTIVE
The aim is to identify what factors among parents are affecting the propensity to be born early or late in the calendar year. The study aims at identifying and describing the overall seasonal variation in births as well as showing what characteristics of the parents makes them more likely to plan their childbearing so that their children is born early in the year.

METHODS
Predicted probabilities of having a birth were estimated for each calendar month using multinomial logistic regression on Swedish register data containing information on 2 488 493 births taking place between 1985 and 2007.

RESULTS
In agreement with previous research, the study shows that for the entire population, births are most likely to take place in March and April and that the probability after these months steadily decreases and are the lowest in December. The results show that maternal education, maternal country of birth, parity and maternal age are associated with the propensity to be born early or late in the calendar year. Mothers with higher education, mothers being Swedish or Scandinavian-born, births of second or third orders, and mothers being aged 20 to 35 increases the likelihood of a birth early in the year. Mothers with lower education, mothers born in Africa or Middle East, births of first, fourth (or higher) orders, and the mother being younger than 20 or older than 35 is associated with a lower likelihood of being born early in the year.

CONCLUSIONS
This study contributes to the existing understanding of childbearing by systematically investigate and showing what factors are associated with planning of childbearing. A non-negligible proportion of the seasonal variation in births can be attributed to factors such as education and ethnicity. The study sheds new light on the discussion whether childbearing is driven by rational choice or not.

Fig. 1 - Predicted probabilities of birth month by mother's education

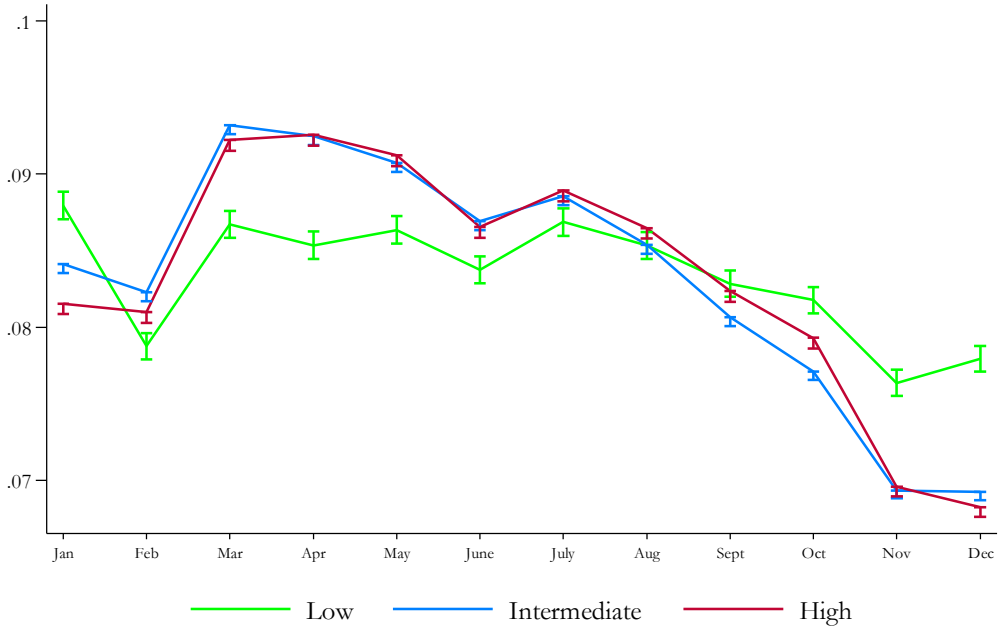

Fig. 2 - Predicted probabilities of birth month by mother's parity

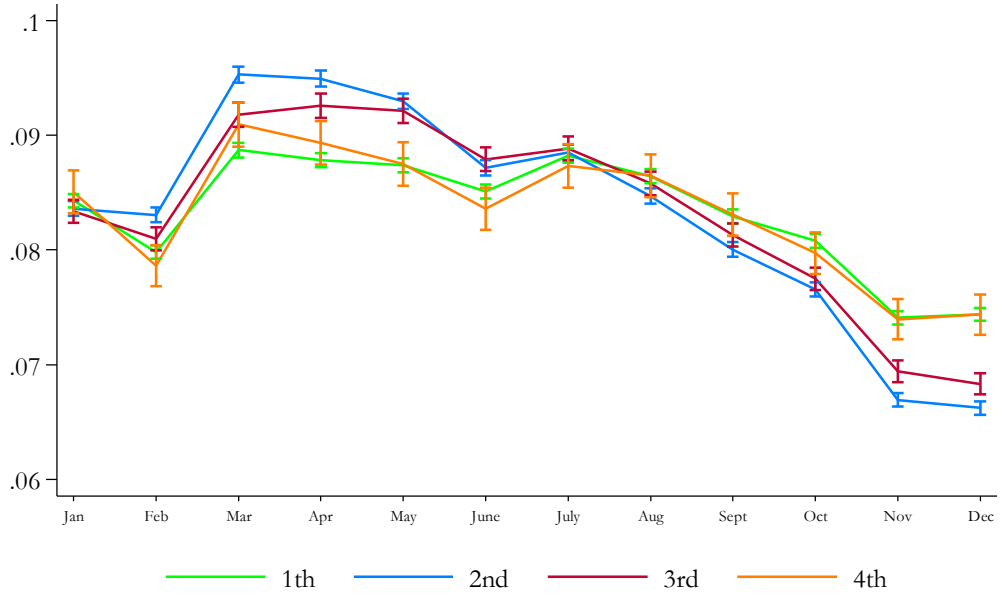

Fig. 3 - Predicted probabilities of birth month by mother's country of birth

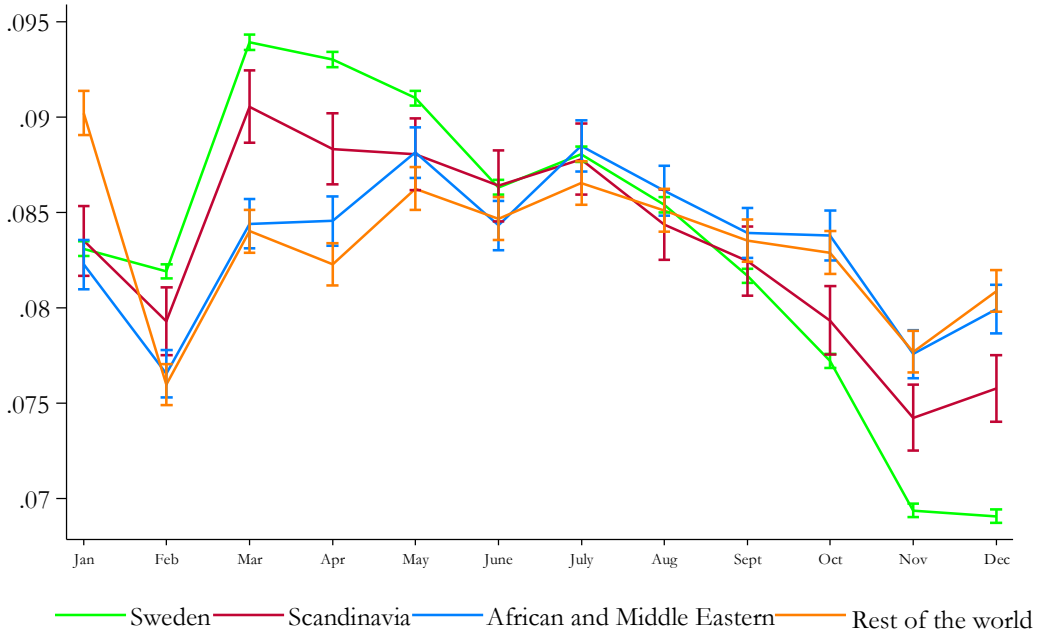

Fig. 4 - Predicted probabilities of birth month by mother's age