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Gender and Birth Order Effects on Intra-Household Schooling Choices and Educational Attainments in Kenya

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Many schooling decisions take place within the family. For instance, when faced with resource constraints, as it is the case in many developing countries, parents can send some of their children to work and let others concentrate on studying at school. Similarly, if resources become scarce, parents can send some of their children to fee paying private schools and let others attend public schools (which are generally free of charge in most developing countries following the free primary education policies). However, research on specific family characteristics that influence such children schooling decisions is still inconclusive and has not been fully exploited.

In this paper, we investigate the effects of the gender and order of birth of the child on the intra-household investments in, and educational outcomes of, children in Kenya. Public primary schools in Kenya do not charge user fees. The government also highly subsidizes secondary education. Given this, we measure intra-household education investments in children by household decision to enrol a child in a private school. We define educational outcomes by two variables: completed years of education and relative grade progression.

We use household survey data collected in 2012 by the Uwezo initiative¹ and gathered information on children aged 6-16 within the household. We apply the family fixed effects model to address the potential endogeneity of gender, birth order and even family size as well as accounting for the household level unobserved heterogeneity.

We do not find a female advantage in terms of private school enrolment. However, we find a consistent female advantage in terms of completed years of education and relative grade progression; this observation is in contrast with literature generally reported from developing countries. It is, however, in line with global trends which show that more girls are getting educated and the gender gap in education has narrowed considerably. In Kenya, for example, the Uwezo surveys have consistently shown that over time, more girls than boys are enrolling and progressing faster through school.

Regarding birth order, our results show significant negative effects of birth order on private school enrolment, completed years of education and relative grade progression. Relative to the first-born, all other latter-born children are less likely to be enrolled in private schools and are likely to complete less years of education. First-born children also make more progress than all latter-born children.

¹ Uwezo which means 'capability' in Kiswahili, is a non-governmental organization that aims to improve competencies in literacy and numeracy among children aged 6-16 years in Kenya. The Uwezo initiative has been implementing large-scale household surveys that assess literacy and numeracy competencies of school age children since 2009

Surprisingly, such first-born advantage seems to be in line with the findings in developed countries but not developing countries. Nevertheless, these results generally support a number of theoretical predictions. For instance, the first-borns, as posited by the confluence model, enjoy a higher intellectual environment which declines with entry of additional children. First-born children are also born into a family when limitations on the available parental resources such as finances and time are not thinly spread out among many children. Their cognitive ability and development is therefore more likely to be malleable at childhood, leading to better future outcomes.

We investigate the potential role of family wealth in propagating the gender and birth order effects we observe. Generally, we find that our gender effects are transmitted through family wealth. Regarding birth order, we find that the latter-born disadvantage in terms of our two measures of education outcomes (completed years of education and relative grade progression) is narrowed (attenuated or lessened) in richer households, relative to poor households. In terms of private school enrolment, the latter-born disadvantage is only narrowed among rich households in rural areas.

There are implications for policymakers from the finding that latter-born children, especially in poor and large households, lag behind in terms of education outcomes. This calls for efforts to sensitise the population on the importance of family planning. There is also need to institute interventions such as cash transfers and other financial assistance to large and poor families. Given that it is latter-born children who are most disadvantaged, such support systems should be designed to improve the conditions of latter-born children.

Our finding that there is a consistent female advantage in terms of completed years of education and relative grade progression means that initiatives to get girls into schools should be designed in cognizance that boys should not be left behind.

