

# ERSA Research Brief

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## Birth Order Effects on Education Attainment and Child Labour: Evidence from Lesotho

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Education (both school enrolment and achievement) is low in much of the developing world. Hence, over the past two decades, increasing education levels in these countries, particularly sub-Saharan Africa countries, has been of paramount importance. In order to achieve this goal, effective policy will depend on a better understanding of the nature of schooling decisions in these countries.

Given that childhood is the province of the household, differences in child outcomes emerge from an early age, in part due to the different environments chosen and created by families. Moreover, much of schooling decisions which affect later life outcomes take place within the family. Therefore, it is important to understand specific family factors responsible for these differences in child outcomes.

One of the family environment factors, birth order (that is, a child's order of birth), is a recurrent theme in the economics and psychology literatures. Even though any particular child's order of birth is biologically determined, parents can actively or passively choose to create different home environments for children of different birth orders, which will then affect their cognitive and non-cognitive skills' development. On the one hand, parents may enforce stricter disciplinary rules on the first-borns than later-borns, and thus lead to different educational outcomes between siblings. This constitutes passive differential investments on children. On the other hand, parents may purposefully invest relatively more on later-borns and/or boys because of cultural and/or economic pressures. For example, in most developing countries, older children may have to work in order to complement family income, or they may have to care for their younger siblings. This leads to a downward pressure on their school attainment, and an upward pressure on their labour force participation.

The available evidence on birth order effects on educational attainment, so far, shows a consistent divide between the developing world and the developed world: there tend to be negative birth order effects in developed countries, while there is evidence of positive birth order effects from developing countries.<sup>2</sup> Therefore, birth order effects on child outcomes appear to be context-specific, as it relates to countries' levels of development.

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<sup>2</sup> de Haan, Plug and Rosero, 2014. "Birth Order and Human Capital Development: Evidence from Ecuador", *Journal of Human Resource*, 49, 359-392

However, within less developed countries, there are heterogeneities in terms of social norms that shape parental preferences towards children of different birth orders, which may lead to different birth order effects. Thus, the evidence of positive birth order effects found in some developing countries, and the theories that aim to explain such effects, may not be generalised to other developing countries with different contexts. More importantly, the underlying causal mechanisms through which birth order affects educational attainment are still unsettled, and also appear to be context-specific.

This paper examines the effect of birth order on children's human capital accumulation (educational attainment and, relatedly, child labour) in Lesotho. I use the 2006 census data for children aged six to eighteen years. I employ family fixed effects models in order to purge any potential correlation between birth order and family size and any other unobserved family factors.

Different from the available evidence based on many other developing countries data, I find large and significant negative birth order effects on child educational attainment and child labour. I also find strong evidence that these birth order effects are largely transmitted through birth-spacing, and not family wealth, contrary to earlier evidence from other developing countries (for example, Ecuador, Ghana and Kenya) which shows that wealth is the underlying causal mechanism behind the positive, not negative, birth order effects on educational attainment and child labour. Surprisingly, the results affirm the negative birth order effects on educational attainment found in developed countries (for example, Norway and the United States). The difference with the latter evidence is however that, in the United States, family wealth, and not birth-spacing explains the negative birth order effect. Therefore, I tentatively conclude that these findings are consistent with the confluence model's predictions, even though I cannot rule out the hypothesis that first-borns do better because of being brought up under tougher parental disciplinary rules than their younger siblings.

There are two important implications of these results. First, there are large heterogeneities in developing countries with regard to birth order effects on human capital development. Therefore, there cannot be one-size-fits all policies designed to lessen the effect of birth on education and child labour. Second, in order to attenuate birth order effects and increase educational attainment of later-borns in Lesotho, it is essential that government designs policies targeted at improving school participation of later-borns, especially boys and those from larger families.