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Impact of Natural Shocks on Children’s Well-being in Ethiopia

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Climate change causes great concern that more frequent natural shocks will occur in the future. Poverty renders natural shocks circumstances even more insufferable. Ethiopia has a long history of natural disasters such as droughts, floods, frost, crop pests, and crop failures. Natural shocks tend to affect children disproportionately harder than adults (Kousky C., 2016). Such natural shocks may have irreversible effects on long-term child welfare. They lead to deterioration of living conditions through limited access to safe drinking water, sanitation and electricity. In the short run, children may suffer from injuries from the disaster; in the long run, they may suffer from illness arising from malnutrition caused by disruptions in food supply or worsening of economic conditions. Moreover, children’s education may be interrupted through destruction of schools and pushing them into labor force to provide supplementary income to help their families under such adverse circumstances.

Prior research has primarily focused on the impact of single, large disaster events (Datar et al., 2013) but very little is known about how moderate natural shocks, which are more typical, affect children’s well-being. Moreover, although a number of studies have investigated the effects of shocks on children’s health, living conditions and educational outcomes separately, there is no evidence on effects of such shocks on children’s overall well-being. In this paper, we focus on the impact of natural shocks on children’s overall well-being in Ethiopia.

We use a unique, child-level panel data set from Ethiopia. The Young Lives panel data has been compiled over the last 14 years, from 2002 to 2016. We use panel data from the last five

rounds (2002, 2006, 2009, 2013 and 2016) is available. Our data includes areas in Ethiopia hit by major droughts in 2002-2003, such as Oromia and SNNP regions and adversely impacted the food security of millions of households and left them vulnerable to shocks in subsequent years motivated our study. Using child-level panel data from rural areas of Ethiopia, we analyze effects of natural shocks on health and educational outcomes in early childhood with average age between 1 to 12 years old.

We consider natural shocks including hydrological shocks (flooding), geophysical shocks (erosion), climatological shocks (drought, frost) and agricultural shocks (pests on crops, crop failure). Camfield et al., (2010) define well-being of children ‘as the realization of children’s rights and the fulfilment of the opportunity for every child to be all she or he can be in the light of a child’s abilities, potential and skills’. We use a multidimensional framework to measure well-being by taking into consideration wealth, health and education outcomes among children (Dhongde et al., 2019).

Data on health outcomes includes anthropometric information on variables such as weight-for-age and height-for-age z-scores and whether a child is considered underweight or stunting. We also include data on whether a child experienced serious injury or illness since the previous round. Household’s standard of living is assessed by using data on access to drinking water, sanitation and electricity. Data on educational outcomes includes school enrollment, highest grade attainment and reading and writing level. We plan to use fixed effects panel regression model (Berhane et al., 2015). The results of the study will provide insights on how households in Ethiopia designed coping mechanisms to mitigate the impact of natural shocks on children and will have important policy implications.

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