

The El Niño Southern Oscillation and Economic Growth in the Developing World

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Abstract

The El Niño Southern Oscillation (ENSO) affects weather patterns around the globe, and thus can be an important driver of economic growth. The effect, moreover, can be particularly evident in developing countries, which tend to be clustered in the ENSO affected regions, and are known to be most susceptible to climate fluctuations. Using annual data spanning 1981–2013 period, we investigate the effect of ENSO anomalies on economic growth in 77 developing countries. We find that extreme ENSO events can result in up to three percent annual growth reduction. The effect appears to be most pronounced in the case of the back-to-back El Niño-s as well as the La Niña–El Niño two-year span, but such scenarios tend to occur infrequently. During the more likely El Niña–La Niña pattern, or the back-to-back La Niña-s, the effect remains to be most damaging for countries in the tropical Asia. Findings of this study have two important implications. From the modeling standpoint, we find that the ENSO effects are nonlinear and heterogeneous across different regions of the world. From the policy-making standpoint, because ENSO shocks can have varying and possibly opposite effect in different affected regions, we conclude that there may be opportunities for short-term adjustments to climate shock management and international aid programs, depending on the existing state and the expected intermediate-term pattern of the ENSO cycle.

Keywords: Developing Countries; Economic Growth; El Niño Southern Oscillation; Nonlinear Effect

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