



## **Endogenous Business Cycles and the Economic Response to Exogenous Shocks**

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In this paper, we investigate the macroeconomic response to exogenous shocks, namely natural disasters and stochastic productivity shocks. To do so, we make use of an endogenous business cycle model in which cyclical behavior arises from the investment–profit instability; the amplitude of this instability is constrained by the increase in labor costs and the inertia of production capacity and thus results in a finite-amplitude business cycle. This model is found to exhibit a larger response to natural disasters during expansions than during recessions, because the exogenous shock amplifies pre-existing disequilibria when occurring during expansions, while the existence of unused resources during recessions allows for damping the shock. Our model also shows a higher output variability in response to stochastic productivity shocks during expansions than during recessions. This finding is at odds with the classical real-cycle theory, but it is supported by the analysis of quarterly U.S. Gross Domestic Product series; the latter series exhibits, on average, a variability that is 2.6 times larger during expansions than during recessions.