

Supply Constraints and Inflation Dynamics: Evidence from Indian States

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Abstract

This paper investigates the relative contribution of demand pressures, supply shocks, and supply constraints in driving inflation across 28 Indian states from 2001 to 2020, using a hybrid New Keynesian Phillips Curve framework. Demand pressure is proxied by output gap and fiscal deficit. We differentiate between supply constraints measured through infrastructure deficiencies in electricity, irrigation, and transportation and supply shocks such as oil price fluctuations and rainfall variability. Using panel GMM estimation, we find that supply constraints are the dominant drivers of inflation across Indian states. These constraints exert a significantly stronger influence on state-level inflation compared to traditional demand-side pressures. Our results remain robust to alternative inflation indicators and hold for both the full sample and subsamples of low-income and high-income states. By establishing the primacy of supply constraints in inflation dynamics, our findings underscore the need for state-specific policy interventions to alleviate supply constraints for effective inflation management.

Keywords: Inflation; Output Gap; Phillips Curve; Supply Shock; Supply Constraint; Economic Infrastructure