Spatial Dependence in Regional Business Cycles: Evidence from Mexican States*

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Abstract

We model business cycles with spatial dependence across regions. A region-specific shock tends to propagate toward the neighboring regions. In consequence, spatial proximity may result in spatial similarity in regional business cycles. To investigate the propagation process, we introduce spatial autoregressive process into a Markov switching model. A feature of the model is to enable us to simulate spatial spillover effects and thus we show how the economic crisis in 2008–2009 spread across Mexican states. We find that business cycles across Mexican states are spatially dependent, and regime switch to recession in a state deteriorates the neighboring economies.

JEL classifications: C33, E32.
Keywords: Spatial Dependence, Spatial Spillover Effects, Regional Business Cycles, Markov Switching Model, Markov Chain Monte Carlo

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