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Publication

A spatial model incorporating dynamic, endogenous network interdependence: A political science application

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We propose applying the multiparametric spatiotemporal autoregressive (m-STAR) model as a simple approach to estimating jointly the pattern of connectivity and the strength of contagion by that pattern, including the case where connectivity is endogenous to the dependent variable (selection). We emphasize substantively-theoretically guided (i.e., structural) specifications that can support analyses of estimated spatiotemporal responses to stochastic or covariate shocks and that can distinguish the possible sources of spatial association: common exposure, contagion, and selection (e.g., homophily. We illustrate this approach to dynamic, endogenous interdependence–which parallels models of network–behavior co-evolution in the longitudinal networks literature–with an empirical application that aims to disentangle the roles of economic interdependence, correlated external and internal stimuli, and EU membership in shaping labor market policies in developed democracies in recent years.