International Interdependence and Business Cycle Transmission in the U.S. and East Asia : A Bayesian Network Approach

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Abstract

This paper explores the use of Bayesian Network Approach towards investigating the causality of international business cycle transmission in the U.S.and East Asian Countries. A Bayesian network is a graph-based model of joint multivariate probability distributions that captures properties of conditional independence between a set of variables. Such models are attractive for their ability to describe the causality with more than two variables and are suitable for the investigations of the international transmission mechanism of business cycles in the global economy. There is a strong evidence that the economic shock to the U.S. economy is transmitted not only to China via bilateral trade linkage, but also to Korea, Japan other East Asian countries via multilateral trade chains. in recent years. A crucial point from this analysis is that the highly complicated networks of trade flows, which derive from the production process being located in different countries, may be quite important to track the international transmission of business cycle.

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