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Does financial development ‘lead' economic growth? A vector auto-regression appraisal

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Abstract

Using a Vector Autoregression (VAR) approach, several hypotheses are re-examined suggested by the literature concerning the relationship between financial development and economic growth, investment and productivity. The models use quarterly time-series data from ten OECD countries and China. Innovation accounting or variance decomposition and impulse response function analysis is applied to examine interrelationships between variables in the VAR system and, therefore, differs from the more usual Granger causality approach. In particular, it examines the relationship between financial development proxied by total credit. At best, weak support is found for the hypothesis that financial development ‘leads' economic growth.

Notes

Any significant 'on average' relationship across different countries is likely to be sensitive to the addition or deletion of a few observations in the sample.

The Microfit program sets the 'shock' equal to one standard deviation of the particular time-series used to 'shock' the VAR system.

This is not a test of hypothesis in the manner of a Granger causality test that has well defined test statistics and critical values.

Productivity is the weighted average of labour productivity and capital productivity where the weights are the shares of these factors in GDP.

Investment and productivity are not independent because investment plant and equipment often embodies new technology that raises productivity.

The measure is slightly different from Levine and Zervos (1998) who differentiate between credit to the public and private sectors. Because of data limitations, we treat total credit as credit to the private sector.

Overnight cash rate.

It is arguable that this proxy is less than ideal for measuring stock market development. Whilst some countries in the sample have an extensive range of stock market data that would be useful for measuring development, others do not. In using a common indicator one is left with little other than a price index.

The authors will make available a detailed Data Appendix on request.

The term 'repressed' was used by McKinnon (1993) who used it when governments impose usury restrictions on interest rates, have compulsory credit allocations, have state monopoly of loan applications, and regulate financial institutions and foreign exchange markets.

Other 'high performing' Asian economies with less open financial systems have less reliable and more limited data thus restricting the scope for econometric modelling.

Except the USA and Canada.

The study points out, however, that trade 'shocks' affect productivity more than other variable used according to variance decomposition analysis.