The determinants of business cycle correlations: a comparison between OECD and non-OECD economies

Styliani Christodouloupoulou
Department of Economics, University of Essex, Wivenhoe Park, Essex, Colchester CO4 3SQ, United Kingdom, (schris@essex.ac.uk).

Introduction

• In their seminal paper Frankel and Rose (1998) studied the relationship between business cycle correlations and trade intensity arguing that both business cycle synchronization and trade intensity are endogenous.
• They find a large and positive effect of trade intensity on business cycle correlations.
• Theoretically, the trade effect is ambiguous depending on the nature of the shocks and the patterns of specialization induced in production due to opening to trade.
• Many studies (Baxter and Kouparitsas 2004, Calderon et al. 2002, Inklaar et al. 2006) considered other potential determinants such as industrial similarity, monetary/fiscal policy similarity, the degree of financial integration, country characteristics such as distance, language proximity, institutional differences, free trade agreements and currency unions membership.
• Depending on the variables and estimation methods used, different sets of the above variables robustly determine with trade intensity the business cycle correlations.
• We give weight on the role of monetary policy, labour market differences and contract enforcement in determining business cycle synchronization.

Data and Methods

• We employ annual data (1973-1997) for 76 OECD and non-OECD economies.
• The dependent variable in our model is a measure of the bilateral correlation between the detrended real GDP series for the two countries in each country pair.
• Data are taken IMF IFS (real GDP, nominal GDP, budget deficits, GDP deflator), the Penn World Tables (real GDP, openness), IMF Direction of Trade Statistics (bilateral trade intensity), World Bank (money supply, rule of law).
• Other datasets used are taken from Andrew Rose’s website (gravity variables), The World Factbook (legal origin), LaPorta et al. (1998) (labour of law), Feenstra et al. (2005) (industrial similarity), Lane and al. (2005) considered other potential determinants such as industrial similarity, financial integration, country characteristics such as distance, language proximity, institutional differences, free trade agreements and currency unions membership.
• For the full sample of countries (both OECD and non-OECD economies), two countries with similar industrial structure, that are members of a regional trade agreement, closer to each other, share a common border and are both industrialized nations experience highly correlated business cycles. Monetary policy fosters more trade and it can be said that it has an indirect effect on business cycles.

Conclusions

• Bilateral trade intensity is found to play a robust role only in the case of OECD economies in line with previous literature.
• Industrial similarity has an effect in all samples, except for the non-OECD sample.
• Monetary policy has only an indirect effect on business cycles through fostering trade.
• Different variables used as proxies for institutions (contract enforcement, labour market rigidities, legal origin) fail to explain robustly output correlations.
• We could say that there are different factors affecting OECD and non-OECD samples.
• The above results are supported by the fact that more trade is taking place between economies in the North than in the South.
• In our study the regional trade agreement was found significant in the sample with all the economies than the sample including just non-OECD economies consistent with Fiess (2007).
• Economic structure and physical characteristics seem to play a more important role than policy and institutions on business cycle correlations.

Literature Cited

Fiess, N., The World Bank Economic Review 21(1), 49-72

Acknowledgements

Dr. Alejandro Canuel, Mr. Ray E. Bailey, Dr. Konstantinos Drakos, Mr. Christaan Fons-Rosen.

Fig. 1 Ten Highest Output Growth Correlations

Fig. 2 Ten Lowest Output Growth Correlations