Regional business cycle synchronization in emerging and developing countries: Regional or global integration? Trade or financial integration? \(^\dagger\)

Chi Gong \(^a\), Soyoung Kim \(^b,\)*

\(^a\)School of Economics, Sichuan University, No. 24 South Section, First Ring Road Chengdu, Chengdu City, Sichuan Province 610065, China

\(^b\)Department of Economics, Seoul National University, San 56-1, Sillim-Dong, Gwanak-Gu, Seoul 151-746, Republic of Korea

**Abstract**

This paper examines the effects of regional versus global integration and trade versus financial integration on regional business cycle synchronization in three regions containing developing and emerging countries (East Asia, Latin America, and Central and Eastern Europe). The main empirical results are as follows: (1) strong and similar common global linkages, especially financial linkages, have significant positive effects on the synchronization of regional business cycles; (2) after controlling global linkages, regional trade integration has a positive effect on regional business cycle synchronization, whereas regional financial integration has a negative effect; and (3) although the direction for the effect of each type of integration is similar across regions, the relative importance of each in explaining regional business cycle synchronization is different. Specifically, while global financial linkages play the most important role in East Asia and Latin America, regional trade integration is most important in Central and Eastern Europe.

© 2018 Elsevier Ltd. All rights reserved.

1. Introduction

Economic linkages among countries around the world have rapidly increased in recent years through trade and financial integration. On the trade side, the accumulative increase in the volume of world trade is almost three times larger than that of world output from 1960 to 2010. Global trade as a percentage of global GDP has increased from 19% in 1980 to 24% in 2010. The rate of increase is even faster in emerging and developing economies, where it has grown from 6% in 1980 to 9% in 2010.\(^1\) On the financial side, the world’s total foreign assets jumped from 19% of global GDP in 1980 to 172.4% in 2011, and the world’s total portfolio investments increased from 19% of global GDP in 1997 to 55.5% in 2011.\(^2\) These figures show that there is a strong momentum behind the growth in trade and financial globalization.

This growth has also extended to regional economic linkages. Multiple trade agreements and trade unions, for example, ASEAN, NAFTA, MERCOSUR, and the EU, have been formed on a regional basis. In addition, regional financial and monetary

---

\(^\dagger\) Financial supports from LG Yonam Foundation and National Social Science Foundation of China (16CJL042) are gratefully acknowledged.

* Corresponding author.

E-mail addresses: gongchi@scu.edu.cn (C. Gong), soyoungkim@snu.ac.kr (S. Kim).

\(^1\) Data source is the World Economic Outlook Database.

\(^2\) Data source is the International Financial Statistics and Balance of Payment Statistics. The value of total foreign assets in 1980 is constructed by taking the sum of the values of foreign assets of all available countries from International Financial Statistics by the International Monetary Fund, while the value in 2011 is the world aggregate reported in the Balance of Payment Statistics by the International Monetary Fund.
integration and cooperation have also progressed. Monetary unions, for example, EMU, have frequently formed at the regional level. Further, repeated crises in emerging and developing countries, in addition to the recent global financial crisis, have facilitated regional financial and monetary integration and cooperation, especially in emerging and developing countries. CMIM (Chiang-Mai Initiative Multilateral) and ABMI (Asian Bond Market Initiative) are two regional financial cooperation in Asia created to reduce the possibility of future crises. Latin America has several types of regional monetary and financial cooperation, including the Latin American Integration Association’s clearing system for intraregional payments and the Latin American Reserve Fund. The European Bank Coordination “Vienna” Initiative is a framework for safeguarding the financial stability of emerging Europe.

Countries’ underlying economic relationships significantly affect their business cycle co-movement through trade and financial integration. In particular, various types of regional and global integration influence business cycle co-movement among the countries in a region. This paper analyzes the effects of economic integration on the business cycle co-movements of countries in three regions of the emerging/or developing world: East Asia (EA), Latin America (LA), and Central and Eastern Europe (CEE). We distinguish among the effects of various types of economic integration, specifically (1) trade versus financial integration, and (2) regional versus global integration (or integration within the region versus integration with major industrial countries outside the region). Following Frankel and Rose (1998), many studies have analyzed the effects of trade integration on business cycle synchronization. More recent studies following Imbs (2004, 2006) have examined the effects of both trade and financial integration. No prior studies, in this line of the literature following Imbs (2004, 2006), however, have analyzed the effects of regional integration and global linkages separately.

Separating the effects of regional and global integration is important. An economic event in the major industrial countries substantially affects emerging and developing countries through the economic linkages between the two groups of countries. Therefore, economic integration with industrial countries is likely to be important in explaining the business cycles of emerging and developing countries, as well as business cycle co-movements of the countries within a region. For example, a US recession may worsen the trade balance of two developing countries in a region and generate business cycle co-movements between those two countries. This effect of global economic integration on business cycle co-movements may be as important as the effects of regional economic integration. Because the effects of these two types of economic integration can be different, separating them is crucial to measure the precise effect of each type of integration. In addition, discovering the relative importance of regional versus global economic integration in explaining the business cycle co-movements of countries in a region is an important issue itself.

The issue of business cycle synchronization of countries in a region has various important implications for that region. When a region’s degree of business cycle synchronization is high, common policy responses and/or policy cooperation within the region can be emphasized to stabilize regional economic fluctuations. It is also an important criterion by which the costs of regional monetary integration are gauged; according to the theory of Optimum Currency Area (OCA) (Mundell, 1961), the cost of a monetary union is low when the business cycles of member countries are synchronized so that the common monetary policy can work more effectively for all member countries. As some researchers argue for the creation of regional monetary unions, the current analysis may provide important insights into the potential cost of the monetary integration under consideration.

The remainder of the paper is organized as follows. Section 2 briefly reports on the trend of economic integration and business cycle co-movements in each region under study. Section 3 reviews existing theory and develops the empirical methodology. Section 4 discusses the empirical results, and Section 5 concludes.

2. Trends in economic integration and business cycle synchronization

In this section, we briefly examine the trends in regional and global integration and trade and financial integration, as well as trends in regional business cycle co-movements for countries in EA, LA, and CEE.

2.1. Economic integration

Globalization and regional economic integration has gained momentum in recent decades. Many EA countries adopted an export-oriented economic development strategy that has led to strong trade integration with the world economy, especially with the major industrial countries. More recently, EA countries have begun to pursue regional economic cooperation, especially after Asian financial crisis, which has led to stronger regional integration. In contrast, most CEE countries are former

---

3 East Asia includes China, Japan, Korea, Malaysia, Thailand, Indonesia, the Philippines, Singapore, and Hong Kong; Central and Eastern Europe includes Albania, Bosnia, Bulgaria, Croatia, Czech, Hungary, Latvia, Lithuania, Macedonia, Poland, Romania, Slovakia, Slovenia, and Turkey; and Latin America includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Uruguay, and Venezuela. Throughout the paper, EA, CEE, and LA will include these countries unless specifically noted.


5 Hirata, Kose, and Otrok (2013) investigated the role of global, regional, and country-specific factors in explaining business cycle co-movements, to discuss a similar issue. They used a dynamic factor model, which is different from the empirical methodology used in this paper. In addition, they did not model trade and finance linkages separately.

6 For example, Mundell (2003), Kuroda (2004), and Ogawa and Shimizu (2011) discussed an Asian monetary union or a common Asian currency unit, while Hochreitera (2002), Edwards (2006), Hofstetter (2011) discussed a monetary union in Latin America.
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات