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Japan and the World Economy
18 (2006) 143–157
Japan and the WORLD ECONOMY
www.elsevier.com/locate/econbase

Financial integration and consumption risk sharing in East Asia

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Received 27 December 2003; received in revised form 27 September 2004; accepted 24 October 2004

Abstract

This paper estimates the degree of consumption risk sharing and analyzes the channels of consumption risk sharing among the 10 East Asian countries. Estimation results show that a bulk of cross-sectional variance of GDP, about 80 percent, is not smoothed within the region which suggests that the degree of consumption risk sharing is far from complete and very low in the region. Capital markets play a minimal role and credit markets provide a positive but limited role. These results imply that the market channels do not function well in smoothing idiosyncratic output shocks. To be consistent, we also found that the potential welfare gains from consumption risk sharing within East Asia are quite large. Compared to the OECD countries, the degree of risk sharing achieved is lower and the potential gains are larger in the East Asian countries, but the degree of risk sharing and the potential gains are similar in relatively more developed East Asian countries.

JEL classification: F02; F36; F41

Keywords: Consumption risk sharing; East Asia; Financial integration; Risk sharing gains

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0922-1425/$ – see front matter
doi:10.1016/j.japwor.2004.10.001

1. Introduction

The theory of optimum currency areas (OCA), developed by Mundell (1961), McKinnon (1963) and Kenen (1969), has been extensively used as a benchmark framework for the discussion of a currency union. In particular, the incidence of idiosyncratic shocks across the member countries is a critical determinant of the design of optimum currency areas (Bayoumi and Eichengreen, 1993, p. 195). When asymmetric output shocks occur across the member countries of a currency union, monetary policy cannot be tailored to an individual country's particular disturbances. Hence, it is less costly for the economies to form a common currency area if their business cycles are synchronized.[1] However, even in an integrated economy like the United States—which can be considered a successful currency union—regional shocks can be large. Then, do countries have to take asymmetric shocks as given? Are there any ways to reduce the negative effects of asymmetric shocks? In fact, even when the countries have asymmetric business cycles, consumption does not have to follow asymmetric shocks. Countries can share country-specific output shocks through various arrangements in financial markets which is known as "consumption risk sharing". Therefore, a high degree of consumption risk sharing can substitute synchronized business cycles as a condition for a successful currency union.[2]

There are various channels of consumption risk sharing. First, countries can share country-specific risks via cross-ownership of productive assets (portfolio diversification), facilitated by developed capital markets. Second, countries can smooth their consumption by adjusting their non-contingent asset holdings, for example, through lending and borrowing in international credit markets (intertemporal trade). Third, governments or international organizations can arrange fiscal transfer system that can serve as a vehicle for further income and consumption smoothing.[3]

A number of previous studies have analyzed the role of these channels in providing consumption risk sharing across regions or countries. A study by Asdrubali et al. (1996) develops a framework for assessing how much regional shocks are smoothed by the above three markets, including market and non-market channels. They used decomposition of cross-sectional variance of GDP for the case of U.S. states. For the period 1963–1990, they found that 39 percent of regional income shocks are smoothed by the capital markets, 23 percent are smoothed by the credit markets, and 13 percent are smoothed by the federal government. The 25 percent remain unsmoothed. In sum, although perfect insurance is not achieved, there is considerable risk sharing among the U.S. states. Capital markets are more important than credit market as means of smoothing regional shocks in the U.S. Still, credit itself is nearly twice as important as net transfers from the federal fiscal system. Thus, market channels evidently play an enormous role.

[1] Monetary policies can be considered as a source of economic disturbances. In this case, a currency union can reduce country-specific shocks from independent monetary policies by adopting a single monetary policy.

[2] The possibility of international risk sharing implies that the similarity of shocks is not a strict condition for sharing a common currency if all the members of currency union are financially integrated and hold claims on each others' outputs (Karlinger, 2002).

[3] Some studies call the second channel "intertemporal consumption smoothing" or "intertemporal trade" as opposed to narrowly defined "risk sharing" like the first channel. In this paper, we call all these channels "consumption risk sharing" channels or "consumption smoothing" channels.