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Trade Competition and Real Exchange Rates

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6.1 Introduction

The formation of the European Monetary Union (EMU) in 1999 was hailed as a milestone in the history of international monetary affairs. While the traditional theory of optimum currency areas (OCA) focuses on static efficiency gains as the benefit of monetary union, recent studies stress the possibility that currency union boosts trade among member countries and helps synchronize their business cycles, thus obviating the need for national monetary policy (Frankel and Rose 1998). Such dynamic effects of monetary unification should presumably be more substantial when member countries share a similar industrial structure and engage in extensive intra-industry trade (Baldwin 1989; Allen et al. 1998).

Moreover, although the general public often attaches a sentimental value to the national legal tender, this psychological barrier to currency union may be more easily overcome if firms in each country have a large number of competitors in other prospective member countries and if people feel that unstable exchange rates can threaten their job security. Other things being equal, therefore, monetary union is more likely to prove successful – both economically and politically – among countries that trade a wide range of similar products with one another.

Although the degree of trade competition among two or more countries is often measured by their gross trade volume and/or similarity of their export products, the quality of information contained in these indicators is not clear. This chapter proposes a set of new indices for international trade competition and estimates their values for a group of East Asian countries. In recent years, interest in a regional exchange rate regime has been growing in East Asia, as in many other parts of the world. Whereas the recent discussion about exchange rate policy coordination in East Asia has its roots in the contagious currency crises that swept the region in 1997–98, it also seems to reflect a perception that the industrial and export structures of the regional economies are now sufficiently competitive as to call for an explicit mechanism with which to prevent currency manipulation and competitive devaluation. Using our new
trade competition indices as a guide, we examine how the East Asian countries' external competitive relationship has evolved during the past decade and what this evolution implies for their exchange rate policies. As part of this discussion, we also develop a set of real effective exchange rate indices that embed our competitiveness indicators.

The rest of this chapter is organized as follows. In the next section, we briefly survey the existing indicators of international trade competitiveness and define a set of alternative indices. Section 6.3 estimates our competition indices for ten East Asian countries and documents recent changes in the competitive structure of individual countries. While our indices are closely related to the notion of intra-industry trade, growing international production sharing and intra-firm trade complicate the relationship between intra-industry trade and international competitiveness. In Section 6.4, we thus look more closely at what lies behind the observed cross-country and time-series variation in our competition indices, focusing in particular on evidence from Japan. Section 6.5 develops a series of real effective exchange rate indices that embed our competition indices and examines the past movement of the external values of the East Asian currencies. Section 6.6 summarizes the findings of this chapter.

6.2 Measuring international trade competition

This chapter considers a situation in which goods produced in the home country $i$ compete for customers with goods produced in foreign countries $j = 1, 2, \ldots, n$ in their own markets and/or some third countries, and develop a series of indices that measure the relative importance of countries $j = 1, 2, \ldots, n$ as the home country’s competitors. Such indices are useful for describing compactly a country’s external competitive relationship and can be used as an input to discussion over exchange rate policy. Although the existing literature offers a number of such indices, they are not without their shortcomings. Perhaps the most straightforward measure is the share of each foreign country $j$ in the home country’s aggregate trade, i.e.

$$w_j = \frac{X_i^j + X_j^i}{\sum_j (X_i^j + X_j^i)}$$

(6.1)

where $X_i^j$ denotes the value of exports from country $i$ to country $j$. As this index satisfies the following equality

$$\sum_j w_j = 1$$

(6.2)

it is used frequently as the weight of country $j$’s currency when computing the effective value of the home currency.

The foregoing index, however, possesses a number of shortcomings as a measure of trade competitiveness. First of all, a pair of countries generally