Bilateral Trade Balance between Korea and Her Trading Partners: the J-curve Effect

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Abstract

The primary purpose of this paper is to examine the short-run and long-run relationships between trade balance and real exchange rate using bilateral data for Korea vis-à-vis ten of her major trading partners on a quarterly basis over the period of 1990Q1 to 2008Q1. Based on the ARDL bounds test, we find evidence of cointegration for 7 out of the 10 trading partners. The result also shows that a depreciation of the won leads to a long-run improvement in Korea's bilateral trade balance vis-à-vis the USA, Japan, Germany, China and the UK. Our finding of the long-run negative (positive) relationship between domestic (foreign) income and the domestic bilateral trade balance appears to be supportive of the general view, in the case of Korea, that emphasizes the demand effect of both domestic and foreign income on the domestic trade balance.

The evidence of short-run J-curve phenomenon is present rather weakly in Korea's bilateral trade with the UK, Germany and China. A real depreciation of the won, however, leads to an initial improvement in Korea's bilateral trade balance with many countries.

Key Words: Bounds Tests, Real Depreciation, Bilateral Trade Balance, J-curve

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I. Introduction

Since the breakdown of the Bretton Woods pegged-rate system in 1973, a lot of countries have chosen a variety of exchange rate regimes, and thus exchange rates have fluctuated a great deal. Although the exchange rate-based stabilization measure was one of the most important macroeconomic policies during the fixed exchange rate regime, many developed and developing countries actively consider devaluation (or depreciation) under a regime of floating exchange rate in order to cope with unfavorable trade balances. This is based on the common belief that the real exchange rate is one of the key determinants of a country's trade balance. However, real exchange rate depreciation is believed to produce an improvement in the trade balance in the long run after a short period of deterioration. This effect of the real exchange rate on the trade balance is referred to as the J-curve phenomenon.

The rationale behind conventional wisdom on the J-curve is rooted in an elasticity approach to balance of payments adjustment. If the short-run price elasticities of import and export demand in absolute terms are sufficiently low, the trade balance will fall initially in response to a currency depreciation. Since the price elasticities for import and export demand, however, may change over time, the trade balance will improve eventually when the price elasticities are higher as time passes, resulting in the J-curve.

Several studies explain the low initial elasticities, causing the J-curve effect on the trade balance, after observing the deterioration of the US trade balance in 1972, followed by the devaluation of the dollar in 1971. For example, Junz and Rhomberg (1973) describe the process between depreciation and its ultimate effect on the trade balance in terms of five adjustment lags: recognition lag of the changed situation, decision lag to change real variables, delivery lag, replacement lag of inventories and materials, and production lag.¹

There have been considerable studies that analyzed the J-curve phenomenon by using aggregate or bilateral data for different country sets and time spans. To the best of our knowledge, the J-curve for Korea, however, has not been tested yet on a bilateral basis, though a few studies included Korea as a trading partner of the country under

¹ Magee (1973) attributes the causes of J-curve phenomenon to three adjustment periods: currency contract period, pass-through period, and the sluggish quantity response period.