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Does monetary policy matter for trade?

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ABSTRACT

This paper offers empirical evidence to shed light on the trade creation effect of inflation targeting regime. The existing empirical literature mostly focuses on the effect of exchange rate arrangements on trade. Bacchetta and van Wincoop (2000), however, highlight the important role of monetary policy on trade with a full equilibrium model. The literature on the effect of price and cost uncertainty on the behavior of risk-averse firms also suggests a possible negative effect of price level uncertainty on trade. Using the standard gravity model, we find that an inflation targeting regime has a trade creation effect on bilateral trade, but the effect is much more moderate than that under exchange-rate targeting. Unlike a direct peg, however, the moderate effect of inflation targeting exists in the bilateral trade between an inflation targeter and all of its trading partners. This moderate effect is therefore much larger at the multilateral level, suggesting the inflation targeting regime may not have a lower level of total trade than the exchange-rate targeting regime. This view is further supported by an empirical analysis of total trade under the two monetary policy regimes.

"…… for both trade and welfare a comparison across exchange-rate systems depends crucially on precisely how each system is implemented. For example, it can make a big difference whether a one-sided or cooperative peg is adopted, and how the degree of policy flexibility under a float is used to respond to idiosyncratic demand and supply shocks."

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Bacchetta and van Wincoop (2000)

1. Introduction

Bacchetta and van Wincoop (2000) highlight the important role of monetary policy on trade. In contrast to partial equilibrium models which usually formulate exchange rate volatility as exogenous, the full equilibrium approach in Bacchetta and van Wincoop (2000) models exchange rate volatility as a result of underlying monetary shocks. The standard argument for the negative impact of exchange rate volatility on trade under a floating rate is therefore compensated by the offsetting effect of monetary shock on demand in the full equilibrium model. Bacchetta and van Wincoop (2000) further show that a fixed exchange rate does not necessarily lead to more bilateral trade and the comparison of trade across exchange-rate regimes turns out to depend crucially on how the degree of monetary policy flexibility under a floating rate is used to respond to shocks. The work of Bacchetta and van Wincoop (2000), therefore, provide a motivation to examine the possible effect of monetary policy on trade.

The existing empirical studies, however, mostly focus on the effect of exchange rate arrangements on trade. The influential work of Rose (2000) and other subsequent studies of Rose and van Wincoop (2001), Glick and Rose (2002) and Frankel and Rose (2002) show that there is a strong positive effect of a common currency on trade. This conclusion is supported by Klein and Shambaugh (2006) and Adam and Cobham (2007) using more detailed classifications on exchange rate arrangements. In addition, Klein and Shambaugh (2006) find a positive effect of a fixed exchange rate on trade between a base country and a country that pegs to it (known as a direct peg relationship).

The inflation targeting monetary regime, as the major alternative to exchange-rate targeting policy, has been emerging in the recent decades. The possible effect of inflation targeting policy on trade, however, remains unexplored. The relevance of inflation to international trade could be understood with two sets of literature. First, Stockman (1985), Roldos (1992) and Chuang et al. (2005) examine the effect of inflation on trade using a cash-in-advance model. These studies suggest that inflation is regarded as a tax on the holdings of money for consumption and investment. Inflation, even if anticipated, therefore could affect the pattern and volume of trade through reduced labor supply and investment. The cash-in-advance model, however, has not provided a clear theoretical prediction on the relationship between inflation and trade. In most cases, such a relationship crucially depends on the initial trade pattern and the form of the production function in different sectors.

Second, since the work of Sandmo (1971) there has been a large body of literature studying the effect of price and cost uncertainty on the behavior of risk-averse firms. Clark (1973), Hooper and Kohlhagen (1978), Viaene and Zilcha (1998) and Dalal and Raju (2003) have extended the study on the effect of uncertainties to the trade sector. These studies mostly suggest a negative relationship between production and price or cost uncertainty. This negative relationship implies that a country with higher price level volatility is a less attractive market for overseas exporters. The cost uncertainty associated with the domestic price level volatility could also reduce the production of domestic exporting firms.

This paper offers empirical evidence to shed light on the effect of inflation targeting policy on trade. Based on the *de facto* classification of monetary policy regimes in Wong and Chong (2014), the effect of the inflation targeting regime on trade is empirically examined. Following the literature, the trade creation effect is first investigated at the bilateral level using the standard gravity model. Based on the findings in bilateral trade, this paper further studies a more policy relevant question of the total trade performance across the exchange-rate targeting and inflation targeting regimes.

The findings on the positive effects of currency unions and direct pegs on trade are replicated in this paper, assuring that the other findings are not merely a result of the specific dataset and the classification employed in this paper. Inflation targeting is found to have a positive effect on trade but is much more moderate than that under exchange-rate targeting. Unlike a direct peg, however, the moderate trade creation effect of inflation targeting exists in the bilateral trade between an inflation targeter and all of its trading partners. This suggests that the inflation targeting regime may not have a lower level of total trade than the exchange-rate targeting regime do. This view is also supported by an empirical analysis of total trade under the two monetary policy regimes.