



Monetary policy credibility and exchange rate pass-through: Some evidence from emerging countries



Abdul Aleem ^{a,b,*}, Amine Lahiani ^{c,d}

^a Department of Economics, University of Alberta, Edmonton, Alberta T6G 2H4, Canada

^b Centre d'économie de l'Université Paris Nord, Université Paris XIII, France

^c LEO, Université d'Orléans, 6 Avenue du Parc Floral, 45100 Orléans, France

^d ESC Rennes School of Business, 2 rue Robert d'Arbrissel, 35065 Rennes Cedex, France

ARTICLE INFO

Article history:

Accepted 27 June 2014

Available online xxxx

Keywords:

Exchange rate pass-through

Emerging countries

Monetary policy

ABSTRACT

Considering external constraints on monetary policy in emerging countries, we propose a semi-structural vector autoregressive model with exogenous variables (VARX) to examine the exchange rate pass-through to domestic prices. We demonstrate that a lower exchange rate pass-through is associated with a credible monetary policy aiming at controlling inflation. The empirical results suggest that the exchange rate pass-through is higher in Latin American countries than in East Asian countries. The exchange rate pass-through has declined after the adoption of an inflation targeting monetary policy.

© 2014 Elsevier B.V. All rights reserved.

1. Introduction

Excessive monetary creation has been traditionally considered as an important factor of instability in both the exchange rate and domestic prices. The correlation between the exchange rate and prices is strong in a non-credible monetary policy. Until the 1990s, many emerging countries were characterized by non-credible monetary policy because of fiscal dominance and time inconsistency problems due to discretionary monetary policy. In the 1990s, emerging countries in East Asia and Latin America suffered from financial crises. In the post-crisis period, some countries adopted inflation targeting policies to achieve monetary policy credibility, which resulted in a decline in exchange rate pass-through. In a survey conducted by the Bank for International Settlements, ten out of fifteen emerging countries' central banks reported a decline in the exchange rate pass-through (Mihaljek and Klau, 2008). In several countries, the main reason for the decline was identified as the introduction of inflation targeting policy.

Previous empirical studies showed that the decline in exchange rate pass-through is a result of a low inflationary environment. Taylor (2000) argued that if firms set prices for several periods in advance, they will respond less to an increase in costs if the latter is perceived to be less persistent. A credible monetary policy that aims at controlling

inflation lowers the exchange rate pass-through by reducing the perceived persistence of those shocks affecting firms' costs. In this view, exchange rate pass-through depends on the credibility of the monetary policy regime.

Following a monetary policy rule increases a central bank's credibility. When a central bank adopts an inflation targeting policy, it announces an inflation target. It acts aggressively to stabilize domestic inflation and to keep inflation around its target. If domestic currency depreciation increases import prices, the central bank will increase its policy rate to stop any increase in general price level. This monetary policy behavior will anchor inflationary expectations in the economy. Firms will be less likely to increase their prices in response to an increase in import prices, as they find that this increase in import prices is temporary.

Previous empirical studies have used simultaneous equation models to examine the exchange rate pass-through in emerging countries.¹ However, these models are often misspecified due to the imposition of inappropriate restrictions. These studies have treated foreign variables as endogenous variables in the vector autoregression (VAR) model. By imposing restrictions on contemporaneous effects of the exchange rate, prices, and the output gap, respectively, on foreign variables, such as oil prices, these studies have examined the exchange rate pass-through in industrialized and emerging countries. Thus, the domestic variables have no

* Corresponding author at: Department of Economics, University of Alberta, Edmonton, Alberta T6G 2H4, Canada. Tel.: +1 780 492 4405; fax: +1 780 492 3300.

E-mail addresses: aleem1@ualberta.ca (A. Aleem), amine.lahiani@univ-orleans.fr (A. Lahiani).

¹ Bhundia (2002), Leigh and Rossi (2002), Billmeier and Bonato (2004), Korhonen and Wachtel (2005), Zorzi et al. (2007), Ito and Sato (2008).

contemporaneous effect on foreign variables but they can affect the foreign variables with lags. However, oil prices are not affected even in the lagged periods by any variable of a small non-oil producing emerging country.

In this paper we develop a semi-structural vector autoregressive model with exogenous variables (VARX) to examine the exchange rate pass-through in three East Asian and two Latin American emerging countries, namely; Philippines, South Korea, Thailand, Brazil, and Mexico. Using the central bank's reaction function, we impose contemporaneous identification restrictions on a set of variables relevant for exchange rate pass-through. In order to have more credible monetary policy these countries have introduced inflation targeting policies in late 1990s and early 2000s. After the transition to inflation targeting policy, these countries experienced a decline in the level of inflation and its volatility. It made these countries particularly suitable to examine the effects of an increase in monetary policy credibility on exchange rate pass-through. To our knowledge there is no work done in the context of the relationship between monetary policy credibility and exchange rate pass-through in emerging countries by using the semi-structural VARX model. More specifically, the paper examines whether a credible monetary policy aiming at controlling inflation reduces the exchange rate pass-through. We estimate the exchange rate pass-through in different monetary policy regimes. We focus on the measure of the aggregate price level associated with the monetary policy, which is the consumer price index.

The paper proceeds as follows. In Section 2, we analyze the monetary policies of emerging countries. In Section 3, we discuss the link between monetary policy credibility and exchange rate pass-through. In Section 4, we examine previous empirical studies which have used vector autoregressive method to estimate exchange rate pass-through. In Section 5, we propose a benchmark semi-structural VARX model to estimate the exchange rate pass-through in emerging countries. We examine the exchange rate pass-through to domestic prices during different monetary policy regimes. We conclude in Section 6.

2. An overview of monetary policy in emerging countries: a quest for highly credible monetary policy

Many East Asian and Latin American emerging countries have higher inflation than developed countries. In the 1990s, monetary policies in the emerging countries under consideration underwent important changes. Currency and financial crises in some East Asian and Latin American countries during this time induced changes concerning the choice of monetary regimes. Several emerging countries switched from exchange rate based stabilization and monetary targeting policies to an inflation targeting policy. Among the East Asian countries, South Korea was the first that adopted an inflation targeting policy on April 1, 1998, just 5 months after the devaluation of the won, the South Korean currency. The Bank of Korea set the first inflation target at 9% with a tolerance interval of $\pm 1\%$. The Bank gradually reduced the inflation target to 3% in 2007 with a tolerance interval of $\pm 0.5\%$. Other countries switched to inflation targeting framework at later dates. The Bank of Thailand implemented the flexible inflation targeting framework in May 2000. Under flexible inflation targeting, emphasis was given to maintaining inflation within the target range such that the economy could grow along a sustainable path in the long run. The Monetary Policy Committee set the target inflation range at 0.0–3.5% until December 2008. The Monetary Policy Committee narrowed the target range to 0.5%–3% in 2009. Bangko Sentral ng Pilipinas (PSB), the Central Bank of the Philippines, used the monetary targeting policy until 2001. The Bank switched to the inflation targeting framework on January 24, 2002. The Bank set an inflation target at 4.5%–5.5%. In 2008, the

Bank started setting point targets of inflation with a tolerance interval of $\pm 1\%$.

The two Latin American countries, Brazil and Mexico, continued exchange rate based stabilization and monetary targeting policies until the end of the nineties. Mexico used monetary aggregates to control inflation until 1998, and then switched to the inflation targeting policy in January 1999.² The Bank of Mexico set a target inflation at 13% in 1999. The Bank gradually reduced the target inflation to 3% in 2003. In Brazil the exchange rate based stabilization program, “the real plan”, reduced the inflation from 2000% in 1994 to 1.5% in 1998 (Levin et al., 2004). At the end of 1998, the Brazilian currency, the real, came under speculative attack and in January 1999 the real depreciated sharply. In June 1999 the Brazilian Central Bank implemented the inflation targeting framework, and set an inflation target at 8% with tolerance intervals of $\pm 2\%$. The Bank gradually reduced the inflation target to 4.5% in 2005.

Fig. 1 depicts the evolution of the annual rate of inflation and the average of the period for each of these emerging countries from January 1994 to November 2009. Dashed lines depict average inflation in the pre-inflation targeting period and inflation targeting period. For all countries, the pre-inflation targeting period is characterized by a higher rate of inflation, whereas the inflation targeting period is characterized by lower rate of inflation.

Table 1 shows inflation variability during the pre-inflation targeting period and the inflation targeting period. Inflation variability has declined in all countries except for South Korea after the transition to an inflation targeting policy. Since South Korea adopted the inflation targeting policy immediately after the currency crisis, inflation was volatile in the first year after switching to the inflation targeting policy. It resulted in higher inflation variability in the inflation targeting regime than the pre-inflation targeting regime. The Latin American countries have higher and more volatile rates of inflation than East Asian countries.

3. Monetary policy credibility and exchange rate pass-through

Inflation targeting policy involves four main elements: (1) an institutional commitment to price stability as the primary goal of monetary policy; (2) the public announcement of inflation targets; (3) increased communication with the public about the plans and objectives of the Central Bank, and (4) increased accountability of the central bank for attaining those objectives. Table A in the Appendix A describes these features of inflation targeting in the five countries examined in the paper. All central banks have these elements of inflation targeting framework. These features of inflation targeting framework reduce the time inconsistency problem and increase the credibility of a central bank (Levin et al., 2004; Mishkin, 2009). A credible monetary policy reduces both the level of inflation and inflation volatility. Recent empirical work demonstrates a positive relationship between inflationary regimes and exchange rate pass-through. Choudhri and Hakura (2001) found a positive and significant association between the average inflation and exchange rate pass-through in 71 countries. Devereux and Yetman (2002) argued that the frequency of price changes depends on monetary policy regime. A credible monetary policy reduces the frequency of price changes. Gagnon and Ihrig (2004), and Murchison (2009) found an explicit link between the aggressiveness of monetary policy in achieving its inflation targets and exchange rate pass-through.

In order to describe the decline in exchange rate pass-through due to an increase in monetary policy credibility to control inflation, empirical studies either used cross-sectional data or they

² Levin et al. (2004), Frenkel and Rapetti, (2010).

Download English Version:

<https://daneshyari.com/en/article/5054160>

Download Persian Version:

<https://daneshyari.com/article/5054160>

[Daneshyari.com](https://daneshyari.com)