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Removing foreign direct investment's exchange rate risk in developing economies: the case for a foreign exchange custodian board

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Abstract

This paper proposes a system design (foreign exchange custodian board) that may stimulate foreign direct investment (FDI) in developing economies through the removal of foreign investors' exchange rate risk in investment outlay. For any expected distribution of exchange rate on any interval around the starting exchange rate, there exists a non-negative custodian service charge that both the developing economy and foreign investors can benefit from the proposed system. When the increase in domestic factors' value added caused by FDI is sufficiently large, the developing economy will benefit even in the absence of any custodian service charge.

JEL classification: F21; O10

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1. Introduction

Recent empirical studies on foreign direct investment (FDI) have generally suggested that FDIs will have positive impacts on the host country's productivity and economic

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growth.[2] In addition, there is empirical evidence that FDIs may be hindered by the foreign investors' perceived exchange rate risk in the host country.[3] Thus, the existence of system designs for removing or reducing the exchange rate risk of FDI in the developing economies will greatly stimulate the growth of these economies. Foreign investors will also benefit from the removal or reduction of the exchange rate risk.

Unfortunately, most, if not all, developing economies do not have a sufficiently developed foreign exchange futures or option market for foreign investors to hedge the exchange rate risk of their FDIs. It is also unlikely that these developing economies can promote the development of such markets for FDI in the near future. Hence, this paper recommends the establishment of a foreign exchange custodian board by the government of the developing economy as a mean to remove foreign investors' exchange rate risk in their investment outlays.

In Section 2, we outline the proposed design and explain its potential contribution. In Sections 3–5, we specify the assumptions and prove the hypotheses in a more rigorous manner. In particular, Section 3 shows that provision of such custodian service will attract more FDIs into the developing economy. Nevertheless, provision of the service is not without costs. In Section 4, we show that if the augmentation of domestic factors' value added due to FDI is sufficiently large, the benefits of the proposed system to the developing economy will outweigh the costs. In addition, Section 5 shows that, for any expected distribution of exchange rate on any interval around the starting exchange rate, there exists a non-negative and optimal custodian service charge ρ^* that both the developing economy and foreign investors can benefit from the proposed system. To facilitate the exposition, we also include numerical examples whenever necessary. Section 6 will discuss the limitations and potential extensions of the study. Section 7 states the conclusions.

2. The proposed system and the intuition behind it

2.1. Conditions that the proposed system may benefit the developing economy and foreign investors

Before outlining our proposed system, we first sketch the conditions under which the proposed system may benefit the developing economy and foreign investors:

(a) One necessary condition is that there exists at least one investment project i in the developing economy whose rate of return measured in percentage, $R(i)$, is greater than the exchange rate risk-

[2] See Balasubramanyam, Salisu, and Sapsford (1996), Blomstrom, Lipsey, and Zejan (1994), Borensztein, De Gregorio, and Lee (1998) and De Gregorio (1992) for the effect on economic growth; and see Barrell and Pain (1997), Chaung and Lin (1999), Cassiers, De Ville, & Solar (1996), Mody and Wang (1997) and World Bank (1997, 1993) for the effect on productivity. For empirical studies on individual countries in Asia, see Authukorala and Menon (1995), Bende-Nabende and Ford (1998), Chen, Chang, and Zhang (1995), Fan and Dickie (2000), Jansen (1995), Lee, Rana, and Iwasaki (1986), and Sun (1998). Liu, Burridge, and Sinclair (1992) also found causal links between FDI, trade and economic growth in China.

[3] Kohlhagen (1977) showed that expected devaluation of the sterling and the franc in the 1960s had deterred FDI from the US until after the actual devaluation ended. Although Cushman (1985, 1988) showed that higher exchange rate volatility increased FDI into and out of the US, the same regression results also showed that expected depreciation of the host country currency had significant negative impact on FDI inflows. If we further assume that the higher exchange value of domestic currency in Blonigen (1997) and Kogut and Chang (1996) reflects a higher perceived chance of exchange rate correction, their empirical studies could also be considered as an evidence that expected depreciation of the host country currency would reduce FDI.