Pricing strategy of emerging market exporters in alternate currency regimes: The role of comparative advantage ☆

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ABSTRACT

The exchange rate pass-through (ERPT) literature has not considered product-level comparative advantage (CA) as a source of heterogeneous firm productivity, whilst the heterogeneous-firm trade literature suggests that a firm's production choice may determine its productivity level and also its pricing decision as both the degree of market power and the fixed costs of exporting vary across products. This paper combines these two strands of literature and empirically analyses the export pricing behaviour of Chinese and Indian exporters in 1994–2007 whilst considering 6-digit product-level CA at the intercept and at the slope. Previous ERPT estimates that did not take product-level CA into account are biased as CA is significant in both cases. ERPT is more incomplete in high CA products but export prices increase with export specialization because a stronger presence in export markets allows higher market power. If China were to let its currency float, Chinese exporters' pricing strategy would become a classic case of incomplete ERPT. On the contrary, Indian exporters' pricing strategy remains robust regardless of the exchange rate regime. This result supports recent calls for the adoption of a flexible exchange rate regime, particularly in the case of China.

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1. Introduction

Whilst China and India, the two continent-sized ancient societies, initiated their planning for national development at the same time in the early 1950s (Srinivasan, 1990), their outward-oriented policies were introduced at two different points in time (in late 1970s for China and in early 1990s for India) showing different comparative advantages from growing world trade. They have been undergoing substantial trade liberalization and specialization reorientation in the last 20 years, for which these countries have been increasingly attracting the attention of academics and policy-makers around the world (see for example Feenstra and Wei (2010) for China and Girma (2012) for India). The interest in the study of these two countries has recently

been augmented by the fact that both are important emerging markets that under the current economic downturn have taken up the role of growth engines in the world economy (Hanson, 2012).

China started opening up to international trade and investment in 1979, with the creation of the special economic zones (Huang, 2012). In India, the direct trade controls including quotas, licensing, and trading rights that were prevalent before the 1990s were phased-out during the reform period. In addition, the indirect trade controls, such as tariffs and non-tariff measures, were reduced in order to regulate the trade flows. Such trade liberalization policies have been instrumental in enhancing the international competitiveness of Indian industries (Alessandrini, Fattouh, Ferrarini, & Scaramozzino, 2011). These policy developments reveal China and India as two key emerging economies with changing product specializations and consequent changes in competitiveness. Moreover, China has kept a fixed exchange rate regime (low exchange rate volatility), whereas India has moved on to a flexible exchange rate regime (high exchange rate volatility).

The exchange rate pass-through literature on the other hand has shown that the observed pass-through of exchange rate changes to foreign market prices is incomplete due to the sluggish price adjustment originating in mark-up adjustment by the exporters following changes in costs or movements in the exporters' currency (see for example Devereux & Yetman, 2003; Nakamura & Zerom, 2010). Moreover, incomplete exchange-rate pass-through (ERPT) exists even in emerging economies (see Mallick & Marques, 2008, 2012 for the case of India). Gust, Leduc, and Vigfusson (2010) find that with increased trade integration, exporters have become more responsive to the prices of their competitors, explaining a sizeable portion of the observed decline in the sensitivity of US import prices to the exchange rate. This suggests that industry-level competitiveness can be crucial in explaining ERPT along with considering the firm's pricing orientation and the degree of exchange rate uncertainty.

Recently, the ERPT literature has acknowledged the existence of firms with heterogeneous productivity and their role in the determination of the extensive and intensive margins of trade (see for example Alessandria & Kaboski, 2011; Auer & Chaney, 2009; Basile, de Nardis, & Girardi, 2012; Berman, Martin, & Mayer, 2012; Johnson, 2012). Assuming a home currency depreciation, Rodriguez-Lopez (2011) finds that, when firms have heterogeneous productivity, aggregate ERPT into home import prices can be negative even if at the firm level it is positive (although incomplete). This result is due to the adjustment of the extensive margin whereby only the most productive foreign exporters survive a depreciation of the home currency and each exporter adjusts the mark up differently depending on their productivity.

On the other hand, the growing importance of North–South trade brought by the development of global value chains renewed the importance of inter-industry trade based on patterns of comparative advantage (Hanson, 2012). Hence it is not sufficient to study firm heterogeneity without looking into the characteristics of the industry the firms belong to. Bernard, Redding, and Schott (2007) have shown that the effects of symmetric trade liberalization on a given country are different for comparative advantage (CA) and comparative disadvantage (CD) industries, so that resource reallocation takes place across firms within the same industry as well as between industries.

Taking into account that China and India are two major emerging exporters that have been undergoing substantial trade liberalization which lead to important changes in competitiveness in the last 20 years, in this paper we compare their pricing-to-market decisions in response to exchange rate changes – as measured by the NEER (Nominal Effective Exchange Rate) – whilst controlling for the industry CA and CD levels. Firms operating within more competitive industries have a greater presence in international markets, which may allow them to have lower fixed costs of exporting, but on the other hand that presence allows them to exercise a greater degree of market power. So pricing strategies may differ according to the industry CA level. If the cost effect predominates, export prices should be lower in high CA industries, but if the market power effect dominates instead, export prices could actually be higher in those industries. The identification of these types of industries is done using a transformation of the Hanson (2012) RCA index, which is bounded between −1 (CD) and 1 (CA) with zero representing intra-industry trade. We use 6-digit product-level data across high- and low-income export destinations over the period 2000–2007. At 6-digits we obtain a lower bound for intra-industry trade (and an upper bound for inter-industry trade).

On the other hand, high exchange-rate volatility causes ERPT to be incomplete in both the short and the long run (Corsetti, Dedola, & Leduc, 2008). In this context, considering two key emerging market exporters (China and India), where exchange rate fluctuations are respectively fully and partially managed by the authorities of these two countries, can reveal whether exchange rate volatility tends to increase price discrimination and thereby reduce the degree of ERPT.

Section 2 starts by exposing the theoretical set-up. Section 3 describes some stylised facts about the patterns of CA in China and India and explains the construction of the transformed Hanson (2012) RCA index. Section 4 presents short-run ERPT estimates in a static panel model. Section 5 introduces long-run ERPT estimates in a dynamic panel setting (System GMM). Section 6 introduces relative price effects through the REER and Section 7 presents a counterfactual experiment of a change in exchange rate regime. Section 8 concludes.

2. Theoretical set-up

Despite the influence of recent work on firm heterogeneity started off by Melitz (2003), the idea that industries may matter in trade has been rehabilitated by, among others, Bernard et al. (2007). They take the argument that heterogeneous firms may react differently to market conditions depending on whether they operate in CA or CD industries. It is possible that export pricing behaviour also differs by industry type. On the one hand, because CA industries are those with a relatively large export margin, we can expect firms within these industries to have lower fixed costs of exporting. If this effect dominates, export prices should decrease with the industry's CA level. On the other hand, we can expect a greater presence of CA industries in international markets,