Import Price Misalignment after the Crisis: A New Keynesian Perspective by Woon Gyu Choi and David Cook

Discussion by Martin Bodenstein

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Idea of the paper

Exchange rate policies against the US dollar are typically viewed to be at the core of the imbalances in global trade.

This paper suggests misalignment of US import prices relative to production costs, i.e. markups, as a complementary source.

Along with the depreciation of the dollar (USDX) since 2000, the Choi-Cook index has been falling.

Exchange pass-through to import prices has been slow and/or incomplete, causing real import prices to drop.

While true for all regions, this finding is most striking for Asia-Pacific.

To what extent is rebalancing obstructed by pricing behaviour of firms rather than exchange rate policy?

Framework of the analysis

Slow adjustment in import prices can be due to

1. nominal rigidities and local currency pricing (short-run pass-through),
2. strategic interaction (long-run pass-through),
3. or both.

This paper abstracts from 2. and presents a framework that exclusively relies on 1.

New Keynesian Phillips Curves

Standard derivations of an NKPC link contemporaneous inflation to (real) marginal costs and expected inflation. This link underlies the decision to price US imports.

To avoid the use of marginal cost measures, the paper exploits the connection between price inflation of domestically sold goods and goods sold abroad.

Import price inflation in the US under local currency pricing follows

$$\pi_t^{LCP} = \frac{(1-\nu)(1-\beta\nu)}{\nu}(mc_t - \mu_t) + E_t\pi_{t+1}^{LCP}. \qquad (1)$$

where μ_t measures deviations from the law of one price.

New Keynesian Phillips Curves

Import price inflation in the US under producer currency pricing follows from the PPI as

$$\pi_t^{PCP} = \pi_{t-1}^{PPI} - \Delta s_{t-1} \tag{2}$$

where

$$\pi_t^{PPI} = \frac{(1-\kappa)(1-\beta\kappa)}{\kappa} mc_t + E_t \pi_{t+1}^{PPI}. \tag{3}$$

Finally, assume that a fraction $1-\lambda$ of firms prices in the local currency, the import price index then satisfies

$$\pi_t^{IPI} = \lambda \pi_t^{PCP} + (1-\lambda)\pi_t^{LCP}. \tag{4}$$

New Keynesian Phillips Curves

Combining equations (1) through (4) delivers

$$E_t\left(\pi_t^{IPI} - \beta\pi_{t+1}^{IPI}\right) = \lambda E_t\left(\pi_t^{PCP} - \beta\pi_{t+1}^{PCP}\right)$$

$$+(1-\lambda)E_t\left(\frac{(1-\nu)(1-\beta\nu)\kappa}{(1-\kappa)(1-\beta\kappa)\nu}\left(\pi_t^{PPI} - \beta\pi_{t+1}^{PPI}\right)\right)$$

$$-(1-\lambda)\frac{(1-\nu)(1-\beta\nu)}{\nu}\mu_t. \tag{5}$$

a NKPC linking PPI inflation and exchange rate changes abroad to US import price inflation.

Estimation

Equation (5) can be estimated by GMM. No further assumption about the economy need to be made.

Producer price inflation index is constructed from 51 major US trading partners.

Law of one price deviations are measured relative to price measures from the World Bank International Comparison Project.

Results

Very low passthrough from Asia-Pacific with implied Calvo parameters from LCP around 0.95! But even PPI stickiness is quite high.

Non Asia also shows high price stickiness, but significantly lower than Asia.

Looking at the sectoral level, final goods sector seems to have experienced larger drop in markups than intermediate sectors.

As Asian countries concentrate their activities more on final goods, the paper concludes that the observed decline in markups is due to sector and not country characteristics.

Comments on the framework

Framework assumes the validity of the NKM. By exploiting the relationship that exports and domestically consumed goods share the same production process, the authors eliminate country-specific marginal costs from the list of required data.

However, do the simple NKPCs actually work in each of the 51 countries? To account for inflation persistence, Gali and Gertler (1999) and others introduce “backward-looking” behaviour into the model.

To start with a empirically more justified model, the inflation terms in equation (5) would then need to be corrected by past inflation.

Can you provide a measure of the quality of the fit?

Comments on the framework

Equating marginal costs across exports and domestic sales may only be appropriate within a firm.

PPI also contains prices of firms that are not exporting at all.

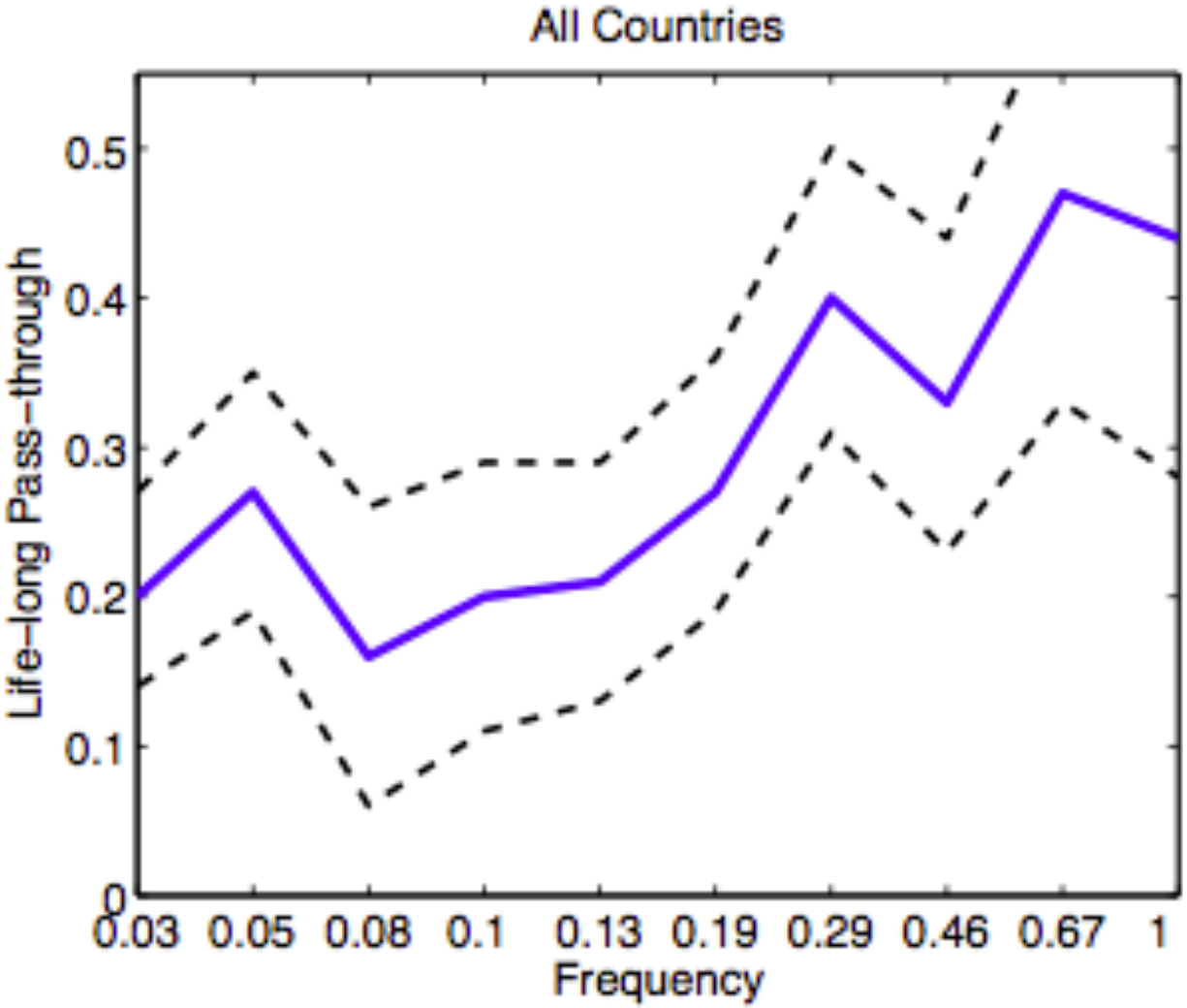
Given the emphasis on firm heterogeneity in international trade, do we have reason to believe that marginal costs differ between exporters and non-exporters?

Comments on the framework

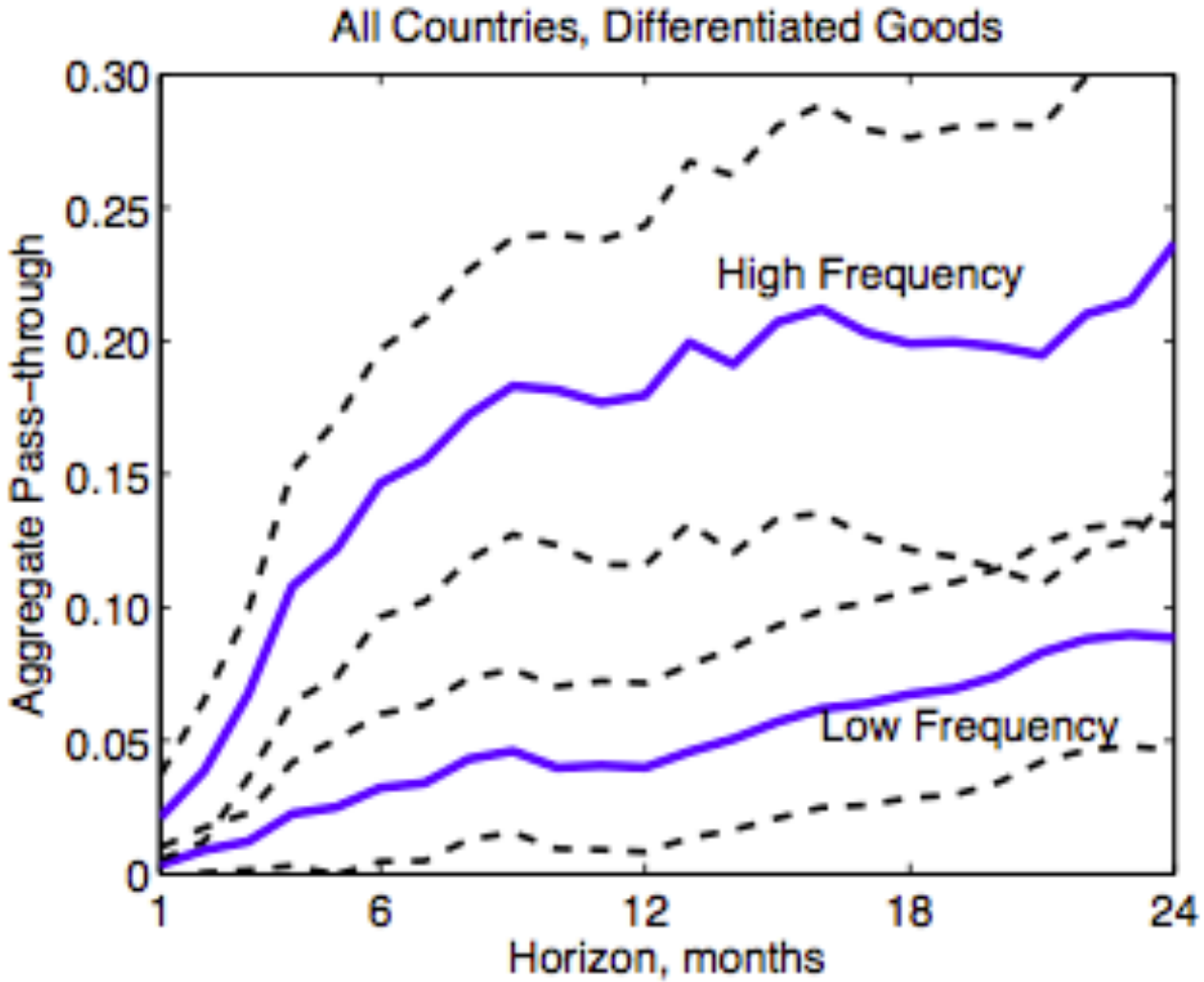
Gopinath and Itskhoki (2008) systematically link exchange rate passthrough to the frequency of price adjustment.

Firms that adjust with high frequency (3 months, 40%) have a long-run passthrough that is twice as high as for low adjusters (14 months, 20%). The adjustment is slow.

Frequency and life-long passthrough



Dynamic passthrough



Comments on framework

Paper by the authors also features slow passthrough in prices but with the help of very infrequent price adjustment.

But, the micro evidence suggests that

- passthrough is not complete in the long run,
- many firms adjust quite regularly.

The implications for policy can be very different.

Conclusions

The paper takes an interesting stab at emphasizing that low passthrough from Asia-Pacific may have to do with industry characteristics and less with country characteristics.

To further develop this point, I consider it important to distinguish between short- and long-run passthrough. If the predominant explanation of exchange rate policy being at the root of global imbalances leads countries to adjust their exchange rates, we need to be able to predict the impact.

Why is it that Asian economies have opted to be in industries with little passthrough? What country characteristics influence this choice.