Comments on Raphael Auer and Aaron Mehrotra's paper

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Relationships with the existing literature

In this paper, the authors have examined impacts of globalisation in the form of closer integration of trade. Specifically, they show (i) the inflation rates of Asian and Pacific countries have come to co-move more closely and (ii) the domestic inflation of these countries has become more sensitive to overseas factors. These questions are highly relevant for the Asia-Pacific region where trade integration has been rapid.

In the literature, a number of papers discuss the impacts of globalisation including a chapter of the latest World Economic Outlook (IMF, 2013). The structure of these papers can be broadly summarised as follows:

- First, the papers define "globalisation" as a process of ***trade integration*** or that of ***financial integration***.
- Second, they examine impacts on various variables such as ***output growth***, ***inflation*** and/or ***asset prices***.
- Finally, typical questions asked are (i) whether globalisation has made these variables ***co-move*** more closely, (ii) whether globalisation has made these variables more sensitive to ***overseas factors***, or (iii) whether globalisation has raised or reduced ***volatilities*** of these variables.

This paper fits into this pattern such that:

- It defines globalisation as a process of ***trade integration***
- It focuses on impacts on ***inflation***
- It tests the first two questions (***co-movement*** and ***overseas effects***), but not the last one (***volatility***).

Main comments

The first comment is related to co-movement. One of the tests the authors use is a panel co-integration test, which takes an error correction form of this type:

$$\Delta^2 p_{it} = \alpha(\Delta p_i - \Delta p_j)_{t-1} + \phi t + u_t$$

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If α is significantly negative, then the deviation between inflation in country i and that of country j is supposed to be corrected in the long run. That is, they have a tendency of co-movement. The authors find that this is the case for the sample period of 1992–2012, but not for 1980–91. This is consistent with a hypothesis that, because of globalisation taking place since the 1990s, the inflation rates of sample countries have come to show a greater degree of co-movement.

In this regard, the authors could more carefully treat an underlying assumption of the co-integration test. If they claim inflation rates are co-integrated with each other, they implicitly assume that these inflation rates are I(1) variables. Then, first, the authors need to check that assumption itself by unit root tests. Second, if that is really the case, the authors should address an issue of consistency with the other regressions in the paper, which implicitly assume inflation is I(0). Third, in order to avoid this sort of comment and also for the sake of a robustness check, the authors might instead estimate a dynamic common factor model such as that outlined in Ciccarelli and Mojon (2010).

The second comment is regarding impacts from overseas economies. The following two equations are key findings of the paper.

$$\Delta ppi_{i,n,t} = 0.128^{***}\Delta iipi_{i,n,t} + 0.342^{***}\Delta iipi_{i,n,t}\theta_{i,n,t} + 0.0127\theta_{i,n,t} \quad (1)$$

$$\Delta ppi_{i,n,t} = -0.0138\Delta exr_{i,n,t} + 0.157^{***}\Delta exr_{i,n,t}\theta_{i,n,t} \quad (2)$$

These equations come from specifications (2) in Table 4 and (5) in Table 5. Pooling all data for sample countries in the region and all sample industries, the authors find the coefficients on interaction terms positive and statistically significant, which means that pass-through from import prices or exchange rates becomes larger, when trade share θ takes higher values.

In this respect, in addition to pooled results, the authors could provide estimates of individual countries or industries (perhaps using SURE) and compare key coefficients. Pooled estimates give coefficients as an average across all countries and all industries. From a policymaker's point of view, however, it would be much more interesting to see what these coefficients of each country look like compared with others, because this might give us more insights such as why they are different, if there are differences. This cross-country comparison would also work as a robustness check. In a similar vein, it would also be interesting and prudent to conduct cross-industry comparison, given the heterogeneity of the sample industries.

The third comment is whether the authors could extend their analysis to an issue of volatility. As seen above, some studies in the literature examine whether globalisation has raised or reduced the volatility of a variable of interest. If we applied the same thought, then a question could be something like whether the Asian supply chain network has increased or contained volatility of inflation in the region.

In the case of globalisation in terms of financial integration, its impacts on volatilities of financial asset prices are supposed to be non-linear. For instance, Haldane (2013) said recently "Within limits, connectivity acts as a shock-absorber. … But when shocks are sufficiently large, the same connectivity serves as a shock-transmitter. Risk-sharing becomes risk-spreading."

If we can apply the same logic to trade integration in the region, then it might be the case that during normal periods, the volatility of inflation is reduced by a

shock-absorbing mechanism, whereas during abnormal periods, volatility is amplified by a shock-transmitting mechanism.

In fact, volatility is closely related to pass-through. Suppose we run a regression of a less volatile series on a quite volatile one, then we get a smaller coefficient. If we suppose that trade integration has reduced the volatility of inflation during normal times, then the pass-through coefficient becomes smaller. This corresponds to the case of footnote 6 of the paper to the effect that "a supply chain may decrease the sensitivity of prices to exchange rate changes." Furthermore, if trade integration has increased volatility of inflation during abnormal times, then the pass-through coefficient becomes larger. Specifications (7) and (8) in Table 6, in fact, seem to indicate this nonlinearity.

As such, if the authors could extend an issue of globalisation to cover volatility of inflation, then they could provide another interpretation of pass-through.

More about pass-through

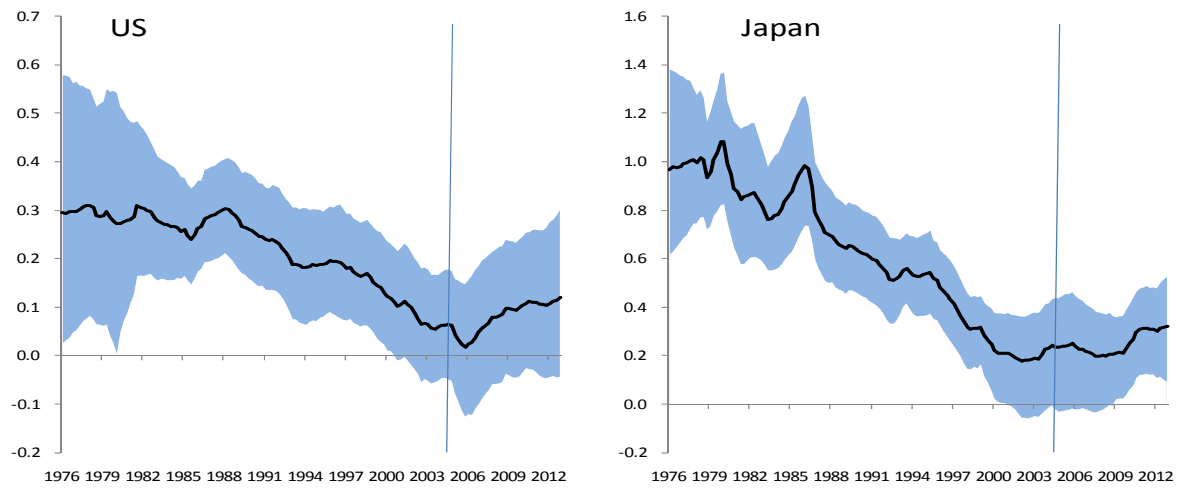
When we talk about pass-though, presumably we have various stages of pass-through in our mind, along a chain of price setting such that a change in exchange rates feeds into import prices, then to producer prices and finally to consumer prices. Equations (1) and (2) above can be interpreted as pass-through from either import prices or exchange rates to producer prices.

Related to this issue, using data up to 2004 and employing a then exotic estimation technique of a time-varying parameter model with stochastic volatility, Sekine (2006) estimated the pass-through of advanced economies, where first stage pass-through is defined as that from exchange rates to import prices, and then second stage pass-through as that from import prices to consumer prices.

Figures 1 and 2 are updates of first and second stage pass-through for the United States and Japan, both of which are located in the Asia-Pacific region and have experienced the rapid globalisation of trade integration.

First stage pass-through

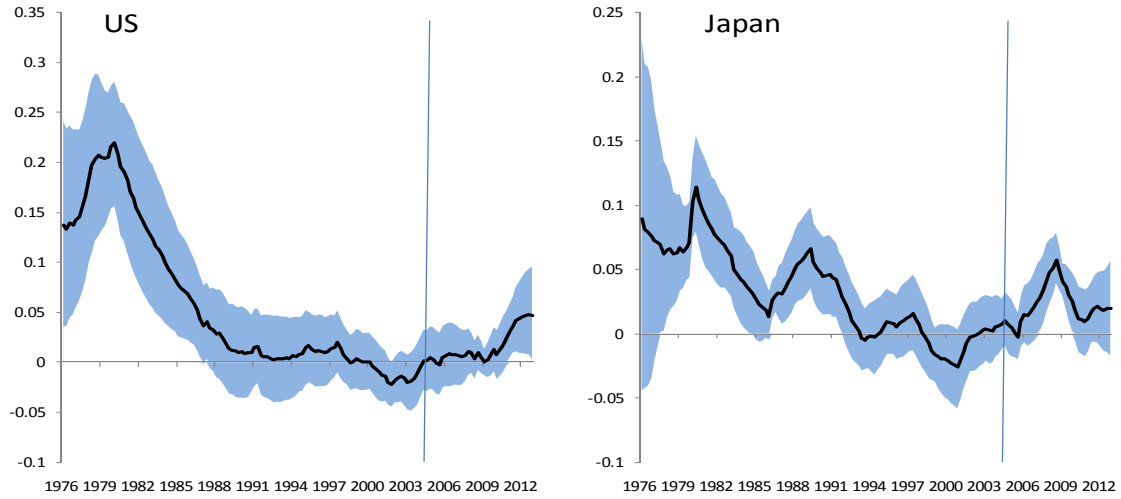
Figure 1



Note: The shaded areas indicate 25th/75th percentile ranges (same as Figure 2).

Second stage pass-through

Figure 2



The vertical lines correspond to 2004, which is the end of the sample period in Sekine (2006). Up to that time, pass-through had declined. Although we need to be extremely careful in reading end-point estimates of time-varying parameter models, after the middle of the 2000s, there are some rebounds in both countries. This is consistent with Shioji (2014), who also finds that exchange rate pass-through has rebounded in Japan in recent years.

Then the natural question is why pass-through has rebounded. A recent rebound would suggest inflation has become less firmly anchored because of greater trade linkage, as argued by the authors. Or it might be because monetary policy has become less inflation-centric, since the central banks in these countries are busy dealing with the aftermath of the Lehman crisis and the implementation of all kinds of unorthodox monetary policy.

Depending on which view is taken, the policy implications may differ. In the former view, pass-through will not come down unless trade integration is reversed. In the latter view, presumably pass-through might come down once these central banks are able to exit from their unorthodox monetary policy.

Summing up

The paper is very good and very carefully crafted. It raises many interesting and important questions including a discussion of how to interpret the recent rebound in exchange rate pass-through.

References

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