

Comments on Alessandria, Kaboski, and Midrigan, “Lumpy Trade and Large Devaluations”

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Let me say at the outset that this is a really interesting paper. It takes a central element of discussion in recent international microeconomics – costly trade – and uses this to examine a core issue in international macroeconomics – current account adjustment in response to large devaluations. The authors do an excellent job developing synergies from the two sources.

I will divide my comments between those that address the framework directly and those that address their implementation.

Overview

The central question that they examine is why, in the face of large devaluations in developing countries, there is a very sharp adjustment in import volumes – stronger than would have been anticipated based on developed country experience, and indeed much stronger than would have been anticipated based on data for these countries themselves for periods prior to these shocks.

The answer they provide is very interesting. It can be thought of in two steps. Step one is to focus on how trade costs give rise to substantial inventories. Step two is to examine how the existence of inventories gives rise to a sharp adjustment in the face of devaluation.

In particular they focus on two types of trade costs in a world of stochastic demand. The first is the time cost of trade, measured partly in the financing of goods in transit and possibly also by lost sales due to any outstocking. The second is fixed costs of trade that makes shipments infrequent and lumpy. Both of these features give rise to inventories in equilibrium.

The role of inventories then becomes key in the adjustment story. At the moment of the sharp devaluation, firms find themselves overstocked with inventory. Imports come to a dead halt until the newly excess inventory

is worked off. Adjustment is very sharp initially and moderates over time. This is the opposite of the J-Curve.

One thing that is never really clear in this discussion is the role played by the magnitude of the devaluation. What is discrete here? Where are the thresholds? Yes, the orders themselves are discrete, but this does not answer why the adjustment in the aggregate will be discontinuous in the magnitude of the shock. It simply suggests that the time of workout of excess inventories should be longer for large shocks.

They make a strong point that they are looking at large devaluations among developing countries, but nothing in the theory seems particularly tied to the *magnitude* of the devaluation nor to the fact that these are taking place *in developing countries*. The need for inventories due to shipping lags and fixed costs of trade would seem to be an issue for developed countries as well. We are left to wonder what links this specifically to developing countries.

Similarly a permanent depreciation of any magnitude would shift the S-s bands, making existing inventories excessive relative to previous desired levels. Of course, larger devaluations shift the bands more and take longer to work off inventories, but there is no clear threshold effect.

One possibility that they might profitably explore is how firms react to an environment in which large depreciations are a more frequent occurrence. It seems plausible that one response to the threat of such price shocks would be for firms to hold larger inventories and that this in turn affects the time needed to work off excess inventories. Since developing countries have a higher incidence of steep devaluations, this would make the developing country case distinct.

A second possibility worth thinking about, relevant to the developing country distinction, is differences in financial development. The steep drop in imports may occur, as they argue, because the existence of inventories leads to a collapse in short horizon demand. Alternatively, firms whose balance sheets deteriorate with the depreciation may simply find it impossible to finance imports even when desired. The shock to income and employment and general environment of uncertainty that often accompanies the sharp depreciations provides an additional reason why demand for imports might react sharply to a steep depreciation.

Similarly, one might imagine that in such circumstances, the price sensitivity of consumers may rise, which would inhibit full pass through.

This leads us to ask: What is the competing model? It has to be an anti-J-Curve model. But we also need to realize that to get this, all we really need is to argue that a large devaluation invalidates all the putative frictions that were to give rise to the J-Curve in the first place. Importers can hardly fail to recognize the change in prices. Even less than perfect pass through of large shocks to prices will surely give consumers a reason to re-think old habits. Any type of fixed cost of adjustment will be crushed by the magnitude of the shock.

The paper would be considerably stronger by focusing more on competing models of adjustment and specific contrasts that can be drawn with the present framework.

Specific Questions

Let me now turn to specific questions regarding implementation of their approach.

Most of my comments have to do with identifying dimensions of the world for which the model of inventories has more or less plausibility and thinking about whether it is possible to use this variation to confirm that we indeed have the right story.

Large firms versus small. What do we know about the different patterns of inventory holding for large versus small firms? There would seem to be lots of reasons to suspect that the fixed cost reasons for holding large inventories should weigh less heavily on large firms. This suggests the question: Can we see a difference in the pattern of adjustment in sectors with varying degrees of concentration?

A related issue is the use throughout of the mean versus median. They often report both, but without focusing on why each may matter. The median shipment, like the median firm, is small and relatively unimportant to the aggregate. Except – as emphasized in heterogeneous firm frameworks, it is closer to the margin of greatest adjustment (entry and exit from importing) than the large firms.

We know that importing firms are different than non-importing firms. Do they really face a more severe inventory management problem? Or do they have a lower cost of capital that makes it optimal to hold larger inventories? Perhaps smaller firms serving the domestic market are thus willing to more frequently stock out rather than carry the inventory.

Perishables. Since inventories figure crucially in the story, it would be very interesting to compare categories of goods for which inventory is or is not a plausible account – e.g. perishable versus non-perishable foods – to see if the patterns of import adjustment differ.

What about foreign firms? Can we assume that the time and fixed costs of trading will not vary by ownership? Then we should see similar patterns of adjustment. Or is there a reason to believe that there is variation?

Air versus ocean transport. Air transport can take place quickly and so eliminates much of the time-lag reasons for inventory. According to David Hummels, air shipping now accounts for half of the value of US exports to countries other than Canada and Mexico. It is more than 30 percent of imports for some of the countries in their sample (excluding imports from land neighbors). Can variation in the mode of shipment be examined to see if the adjustment is different?

Alternative modes of transport, so these provide an upper bound in true costs.

Seasonality. Surely there is a better way to test for seasonal patterns than is done in Table 2.