The Optimal Stabilization of Tariff Shocks: a Note

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In recent months, the question of how monetary policy should respond to tariff shocks has moved to the forefront of academic debate. This note reconsiders our early contribution on the topic based on a open economy two-country model, with recent work using a small-open economy framework. The goal is to highlight methodological differences and the economics underlying variations in results concerning the optimal monetary policy response.

When we started to work on this issue in 2017, existing studies of the transmission of tariff shocks typically modelled monetary policy assuming a standard CPI Taylor rule (see the excellent contributions by, e.g., Caldara et al 2020, Erce et al. 2018 Linde and Pescatori 2019). We believed it was necessary to reset the debate in the literature by elaborating on the following three points: (a) a thorough analysis of the nature of these shocks relative to other shocks, (b) the characterization of the optimal policy, and (c) the fact that tariff shocks have different effects on CPI and PPI. We did so in our 2023 JIE article (Bergin and Corsetti 2023).

Optimal policy in a two-country global model framework

In Bergin and Corsetti (2023), we adopted the workhorse two-country open-economy model, augmented with features from trade theory—namely, intermediate inputs in production and firm entry. We believe that a global model was appropriate, given the evolution and nature of the tariff shocks after 2017. In this setting, we characterized the optimal policy under PCP, LCP, and DCP, also allowing for low pass-through from border to consumer prices (through distributive trade).

Our baseline was a trade war (tariffs with retaliation), but we also included sections on unilateral tariffs. The key takeaway from our exercises is that, especially but not exclusively in a trade war, the optimal policy is expansionary. In some respects, this was surprising, given that tariffs also affect marginal costs—and given the weight of imported intermediate inputs in these costs, as calibrated to the data. Cost pressures generated by tariff may justify an optimally contractionary stance. We derived thresholds for the share of intermediates in production beyond which the optimal policy in a trade war may become contractionary, and showed that these thresholds are below the estimates from input-output tables.

In a two-country setting, it is natural to characterize the optimal policy under cooperation and commitment. The optimal policy stances in the two countries trade off the objective of correcting relative price distortions induced by a tariff (i.e., welfare relevant misalignment) with other welfare relevant objectives: in addition to inflation, output gap and deviations from risk sharing due to incomplete markets (see the choice-theoretic loss function in Corsetti et al. 2010).

These trade-offs give rise to a rich set of result, particularly in the case of tariffs levied unilaterally by one country, without retaliation by the other. In the calibration in our paper where tariff shocks are temporary, under the optimal policy there is a minimal decline in the PPI in the (foreign) country imposing the tariff. In this country, the policy is thus *contractionary relative to the natural rate* (the policy rate rises).

With more *persistent tariff shocks* (a case not reported in the paper), there is a minimal rise in the PPI. The policy is therefore *expansionary relative to the natural rate* (the policy rate falls). We reproduce Figure 4 from the 2023 paper assuming g a higher persistence of the shock, relative to the published figure.

By the same token, with a lower trade elasticity than the one assumed in the paper, the tariff is more consequential for output and consumption. In our model, the optimal policy becomes relative expansionary even under the calibration of the temporary shock in our baseline. In a small open economy model, the role of elasticities is thoroughly analyzed by Aucler et al. 2025.

In short: the optimal policy monetary response in the country imposing a unilateral tariff can go either way, reflecting how the cooperative policy trades off different welfare relevant objectives depending on parameters, especially the persistence of the shock and trade elasticities.

In our 2013 paper, we emphasize two results. First, the currency of the country unilaterally imposing the tariff appreciates. In other words, the monetary stance in this country is *relatively contractionary* (relatively less expansionary), independently of the sign of the response.

Second, in our simulations the deviation of the Taylor rule targeting PPI from the natural rate is minimal, again, regardless of whether the optimal policy is contractionary or expansionary. Thus, there is a strong case for central banks to target PPI (or marginal cost) stability. And even if the deviation were not that negligible, a PPI target would still clearly outperform a CPI target.

Comparison with SOE model

In the literature based on a small open economy models, the optimal response to a unilateral tariff may differ from the above. Most contributions stress that it invariably *expansionary relative to the natural rate*. This means that under the optimal policy PPI inflation is positive, although the policy rate does not necessarily fall---the expansionary stance relative to the natural rate is implemented with a moderate rise in the interest rate.

These differences in results concerning PPI inflation relative to the natural rate and the movements in the interest rate shed light on differences in the optimal policy exercise and the structure of the models. In a two-country model, under cooperation both the Home and the Foreign policy together redress the relative price distortion created by the tariff, internalizing all policy spillovers impinging on output prices and quantities abroad. This tends to push the response in policy rates in opposite directions, and in some cases it brings PPI inflation below the natural rate. In a small open economy model, the optimal monetary policy is inward looking, thus ignores spillovers, and, most crucially, is typically designed under the assumption that both the price of the foreign goods and the foreign output are constant, thus

inelastic to domestic policy measures. The goal of redressing domestic (consumption) demand and domestic output has more weight in the optimal policy exercise.

Yet results across the two frameworks appear to align on one important dimension. The distance of the optimal policy from Taylor rules targeting from PPI appear to be negligible. Our conclusion about the near optimality of inflation targeting focusing on producers price is quite general.

Tariff revenues and the nature of tariff shocks

In our *JIE* paper, we ensure that tariff revenues are rebated to households. Studying tariffs necessarily requires considering the rebate of revenues, especially when discussing welfare or optimal policy responses (see Alessandria et a. 2025). Trade economists rightly argue that a defining feature of tariffs (as distinct from trade costs) is that they generate revenue— something that certainly affects the analysis of optimal tariffs. The role of the revenue rebate is extensively discussed by Bianchi and Coulibaly (2025) in the context of a small open economy. The mechanism they examine is embedded in our optimal policy results.

Finally, we believe it is crucial to understand whether and how tariff shocks are similar to, or dissimilar from, other shocks. In our *JIE* paper, we present optimal policy responses to productivity and markup shocks for comparison. As we note there, there are certainly fundamental similarities. E.g., in our simulations, in response to temporary tariffs the policy rate may rise on impact, but the rise is accompanied by a commitment to maintain an expansionary stance in the future---in line with the standard case of stabilization of cost-push shocks. In a small open economy, the nature of tariff shocks as cost-push shocks has been thoroughly analyzed by Werning et al. (2025).

There are nonetheless features that are specific to tariffs. Tariffs are imposed on top of preset export prices at the border, and the revenue accrues to the importing country, not to exporters. These differences are consequential. The first impinge on the way tariff shocks enter the firm pricing problem subject to nominal rigidities. The second affects the distributional implications of the tariff distortion, weighing on relative demand.

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Figure 4a. Persistent Unilateral tariff: Impulse responses to a rise in foreign tariff on home exports (rhotau = 0.9999)

Vertical axis is percent deviation (0.01=1%) from steady state levels. Horizontal axis is time (in quarters).