

Reply to Referee Report #2

I am grateful to the referee for careful reading and constructive comments. I am encouraged by the positive feedback with regard to the quality of the paper and the command of nonlinear models. The suggested amendments and corrections will help us to improve the paper. So, we are happy to address those points, and will adjust the final submission accordingly.

- First, I totally agree with the referee that the equation (9) is designed to test the exchange rate pass-through (ERPT) to consumer prices, while the theoretical model deals with the “first step pass-through” (import prices response to exchange rate changes). In fact, the standard model (equation (4) in the text) can be adjusted in order to have all the elements of a backward-looking Phillips curve, and, thus, can be used for estimating the “second step pass-through”. As mentioned by Bailliu and Fujii (2004), this model could be suitable for estimating pass-through to consumer price after considering two main issues: first, the inertial behavior of inflation must be taking into account. This could be accomplished by including lags of inflation (π_{t-j}) as explanatory variables in the empirical specification (backward-looking inflation). Second, the output gap (gap_{t-j}) should be used as a proxy for changes in domestic demand conditions. Once these two elements are considered, our LSTR pass-through equation (equation (9) in the text) can be described as a nonlinear backward-looking Phillips curve as follows:

$$\pi_t = \alpha + \sum_{j=1}^N \lambda_j \pi_{t-j} + \sum_{j=0}^N \psi_j \Delta gap_{t-j} + \sum_{j=0}^N \delta_j \Delta w_{t-j}^* + \sum_{j=0}^N \beta_j \Delta e_{t-j} + \left(\sum_{j=0}^N \phi_j \Delta e_{t-j} \right) G(s_t; \gamma, c) + \varepsilon_t,$$

This specification is close to that tested throughout the “second step pass-through” literature (see Gagnon and Ihrig (2004) and Bailliu and Fujii (2004), among others), and it allows us to compute the long-run ERPT coefficient:

$$\text{LR ERPT} = \left[\sum_{j=0}^N \beta_j + \sum_{j=0}^N \phi_j G(s_t; \gamma, c) \right] / \left[1 - \sum_{j=1}^N \lambda_j \right]$$

Nevertheless, in our paper, we still focus on the short-run effect since the measure pass-through in the long-run would be very sensitive to the number of lags leading

to inaccurate estimates (see de Bandt et al. (2008)). Moreover, when we re-estimate the equation (9) using lagged inflation and output gap (instead of output growth as a proxy for changes in domestic demand conditions) as explanatory variables, we found that pass-through elasticities in the short-run do not change significantly. In the revised version of the paper, I will emphasize on these different points in order to make equation (9) suitable for estimating ERPT to CPI inflation.

- Second, in our paper, the domestic unit labour costs are not assumed to be proxied by foreign unit labour costs. In fact, in a New Keynesian Phillips Curve model (for an open economy), inflation rate is assumed to be a function of three factors: first, inflation expectations (which is assumed backward-looking in our case); second, real marginal costs; and third, the real exchange rate. Then, in our empirical specification, real marginal costs can be approximated by a measure of changes in domestic demand conditions (using real GDP growth or the output gap as in Woodford (2003)). However, for foreign costs, we constructed a typical export partners cost proxy (W_{it}^*) that used throughout the ERPT literature (see Bailliu and Fujii (2004) and Campa & Goldberg (2005)): $W_{it}^* = Q_{it} \times W_{it} / E_{it}$, where E_{it} is the nominal effective exchange rate (domestic currency per unit of foreign currencies), W_{it} is the domestic unit labor cost and Q_{it} is the real effective exchange rate. Taking the logarithm we obtain the following expression: $w_{it}^* = q_{it} + w_{it} - e_{it}$. Since the nominal and real effective exchange rate series are trade weighted, we obtain a measure of foreign firms' costs with each partner weighted by its importance in the domestic country's trade. These details will be incorporated in the new version of the paper.

- Third, it is true that the share of imports in the consumption basket has been increasing during our sample period. Bailliu & Bouakez (2004) reported that imports of goods and services grew by about 10% between 1988-2000 in OECD countries. However, empirical literature does not support the view that ERPT to the CPI inflation depend on the share of imported goods in the consumption basket (or the share of imports in domestic demand). For example, Gagnon and Ihrig (2004) found that pass-through was decreasing over 1972-2000 in 20 industrial countries, while the trade flows have risen dramatically over the same period (i.e. import share has risen also in the consumption basket). Similarly, Bank of Canada (2000) reports that the import share in the Canadian CPI basket rose from about 15% in 1976 to about 27% in 1997. This rising occurred over a period in which the ERPT to CPI inflation has fallen considerably. In fact, there are some reasons why there is no strong link between ERPT to consumer price and the import share. This is mainly due to the distribution sector, where imported goods have to go through domestic wholesalers and retailers to reach consumers. For instance, local distribution costs - such as transportation costs, marketing, and services - may cause a wedge between import and consumer prices. Also, competition in the distribution sector is an important factor. Bacchetta and van Wincoop (2002) argued that differences in the optimal pricing strategies between foreign producers and domestic wholesalers/retailers can explain why pass-

through to consumer prices is lower than the share of imports in the CPI basket. Due to competitive pressure in the domestic market, domestic wholesalers import goods priced in foreign currency (PCP) and resell them in domestic currency (LCP). This would entail much lower ERPT to CPI inflation than expected. This issue will be raised the revised version of the paper.

Finally, a careful proofreading will be thoroughly done to the paper in order to correct typos. We do hope these responses do justice to the very helpful comments of the referee. Thanks again for your effort and best regards.