

THE DEMAND FOR CURRENCY SUBSTITUTION

This paper develops a model where agents can choose between two alternative currencies as medium of payment. The basic ingredients of the model are similar to those of Santomero and Seater's (1996) where the fundamental motive to hold money is the existence of transaction costs. In the model there are two goods that must be purchased with a medium of exchange. Households can use either one or both types of money to buy each good. As in any Baumol-Tobin type model, households need to spend real resources each time they convert savings into money. The model assumes that these costs are constant but differ across types of money. The model also assumes the existence of fixed costs associated to the use of money, which differ across the two types of currency. The main results of the paper are the following: currency substitution (CS from now on) not only depends on the level of domestic inflation, but also on the income level and its composition. The author also distinguishes between an intensive and extensive margin of CS. The intensive margin is referred to the number of goods purchased with the same amount of foreign currency whereas the extensive margin to the amount of foreign currency held by the agent, given the number of goods purchased with that currency.

The topic addressed by this paper is very interesting because CS is an important phenomenon for developing economies with a history of high inflation but also because is related to fundamental issues in monetary theory, such as the existence of money and its determinants. However, I am not convinced that the model developed in the paper captures the main stylized facts on CS. First, although the author recognizes that CS is a continuous, dynamic issue, the model is completely static, and hence it is silent about key issues such as the high degree of persistence of CS. In the model CS only occurs if domestic inflation is relatively high respect to foreign inflation, and therefore, the model implies that CS disappears once inflation has converged to international levels. This implication of the model it is at odds with the empirical evidence.

Second, although I am sympathetic to the idea the financial development might play a role on determining the extent of CS. I disagree with author respect the ability of the model to capture this feature. In the model, as in Baumol, due to fixed costs to enter in the financial market, low-income agents tend to use more money than high-income agents and when the costs of using the foreign currency are larger than those of the domestic currency; low-

income agents use less foreign currency than those high-income countries. This latter result however depends crucially on the assumption on the relative size of transaction costs, something that it is not necessarily linked to financial development. In countries with a history of CS, such as Bolivia and Peru, although their financial system are not well developed, costs associated to the holding of foreign currency savings accounts are similar than those of domestic currency. Therefore, a further discussion to validate assumptions on transactions costs is necessary in the paper.

Third, some assumptions of the model need to be justified better. For instance, the assumption that transactions in the goods market generate a cost seems to be an unnecessary assumption, particularly because this cost does not depend on the amount of money hold by the agent. In all Baumol-type of models, it is costly to convert deposits into money not goods into money. Moreover, the assumption that holding any of the two currencies generates a fixed cost seems rather an extreme assumption. It is important to motivate these costs empirically providing evidence that they are relevant in the data.

Fourth, the author suggests that CS depends in a complex way on the level of income and the composition of expenditure; however, the paper doesn't discuss the range of parameter values for which these results holds. Neither has it provided a sensitivity analysis that evaluates what of the three different costs that the model considers are more important in delivering these results.

Fifth, since the expenditure composition is exogenous, and it is not chosen optimally, I would be more carefully stating that the expenditure composition plays a relevant role in explaining the pattern of CS. Even though a large level of expenditure on X2 affects the marginal utility of using foreign currency, if that effect is taken into account when choosing X2, the optimal level of expenditure on good two might be different and therefore, the result claimed on the paper on this issue would not necessary hold.

Sixth, the analysis developed by the author is partial equilibrium. That feature could be problematic if for instance the returns in domestic and foreign currency depend on the degree of CS. For instance, if agents use more foreign currency than domestic currency, then it should be easier to buy with foreign currency and so the return to holding foreign currency should increase.

Finally, there exist some papers on CS that are very relevant that, however, has not been quoted by the author. For instance

1. Uribe, Martín, 1997, "Hysteresis in a Simple Model of Currency Substitution", *Journal of Monetary Economics*, 40(1), 185-202.
2. Sturzenegger, Federico, 1997, "Understanding the Welfare Implications of Currency Substitution", *Journal of Economic Dynamics and Control*, 21(2/3), 391-416.