Comment on Douglas D. Purvis
"Wages, the Terms of Trade, and the Exchange Rate Regime"

By Juergen Schroeder*

It is a much discussed and well known fact that the efficiency of monetary and fiscal policy as well as the possibility of avoiding undesired effects of increasing foreign prices on domestic prices and production at home crucially depend on the relative size of a country and on the adjustment of wages to price and exchange rate changes. *Purvis* is to be credited for having developed an interesting monetary model in which these relations are carefully explored and the results summarized in various propositions.

Beside the relative size and the wage adjustment, the predetermined net foreign position of a country plays an important role in this model, particularly in the case of flexible exchange rates. Wealth, A, comprises domestic money, L, plus the domestic currency equivalent of foreign assets held by the public, eF^*, which are exclusively non-interest bearing foreign currencies in *Purvis*' model. Consequently, exchange rate changes generate a direct wealth effect only to the extent that the public holds foreign assets. An increase (devaluation) in the exchange rate, e, implies at constant prices an increase in the real value of the domestic currency equivalent net foreign position. In order to keep real wealth constant, the public will reduce nominal wealth and therefore increase expenditures. A decrease (revaluation) in the exchange rate leads to a reduction of the real net foreign position and, via the direct wealth effect, to a decrease in expenditures. As long as F^* is positive the existence of the direct wealth effect, indicated by the term $D_1 E_2 F^*$ (13), increases the positive impact of a devaluation on domestic prices and output, as can be seen from table 1. This means that the direct wealth effect reinforces the domestic price increase in both, the Keynesian (i) and the classical (ii) cases and in the Keynesian case reinforces the increase in domestic output as well, whereas the negative output effect of the devaluation will be mitigated in the classical case. If the predetermined net foreign position is negative instead of positive and if the public wants to keep this net foreign position constant, then

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the direct wealth effect reduces the expansionary impact of a devaluation on domestic prices and output. This means that the negative impact of a devaluation on domestic output will be reinforced in the classical case by the direct wealth effect. Thus, the success of a devaluation increases with an increasingly positive F^* and decreases with an increasingly negative F^*. For this reason it is not unimportant to know what determines F^* and whether there are interrelations between the sign and size of F^* and a de- or revaluation of a currency. Assuming a predetermined F^* and neglecting interest rates and exchange rate expectations these questions remain unanswered in *Purvis'* model. Therefore some considerations about F^* might be useful here.

Whereas the overall net foreign position of a country, i. e. the position of the public *and* government or central bank, is in any point of time mainly determined by the current account development in preceding periods, the net foreign position of the public is the result of previous developments in the private capital account. Using the conventional distinction between long and short term international capital movements, it is primarily the international difference in the returns on investment which determine that part of the private net foreign position which is caused by previous net international direct and long term portfolio investments. It seems that the exchange rate will not influence this part of the net foreign position; however, if in a system of fixed exchange rates government remains too long at a disequilibrium rate this might have an impact on the direction and amount of international long term portfolio investment. Therefore, a delay in a necessary devaluation over several years might increase a positive or reduce a negative F^*. If this is correct, then the postponement of a necessary devaluation increases its positive impact on domestic output because it either intensifies the positive or reduces the negative direct wealth effect generated by the exchange rate change which finally takes place.

Short term international capital movements are for the most part interest rate induced or motivated by speculation. Therefore, that part of the private net foreign position which is the result of these net capital movements depends decisively on differences in the current short term international interest rates and on exchange rate expectations. As interest rate induced short term capital movements are usually hedged on the forward market against the exchange rate risk, the direct wealth effect is not associated with that fraction of F^* which is due to these net capital movements. Note that such part of F^* which is caused by previous net long term capital movements, will very probably at least to some extent also be hedged against the exchange rate risk. A proportional change of the spot and forward exchange rate generates no direct wealth effect on this part of F^* either. Short term speculative

capital movements are determined by expectations about exchange rate changes. As in a system of fixed exchange rates, a devaluation usually will be accomplished when there is a fundamental current account deficit, which normally already existed in previous periods, each delay in a necessary devaluation implying further portfolio rearrangements in favor of short term foreign assets. If the direct wealth effect is associated with that part of the private net foreign position which is brought about by speculative capital movements, then each postponement of a necessary devaluation increases its success via this direct wealth effect, independent of the fact that a rearrangement of the portfolio in favor of domestic assets will take place once the devaluation has been conducted.

Now a word about the applicability of this model to a system of flexible exchange rates. In the classical case (ii) where wages adjust completely to domestic price changes and to exchange rate changes $(S_2 = -S_1)$, the stability of the flexible exchange rate system depends crucially on the net foreign position of the public. In the SOE case the XX-curve, which determines equilibrium in the goods market, is a line through the origin with slope one, because for $X_1 = -\infty$ one gets from (12) $\dfrac{dp}{de} = \dfrac{\lambda}{\Sigma} = 1$. From (15) the slope of the MM-curve which determines asset equilibrium, is given by $\dfrac{-(Al_y S_2 + eF^*)}{Al_y S_1}$. If in the classical case (ii) the net foreign position is zero, or if a positive or negative net foreign position is completely forward hedged, then a movement of the exchange rate generates no direct wealth effect and the MM-curve also has a slope of one. In this situation the system is under-determined. If F^* is positive (negative) and not hedged on the forward market, the slope of the MM-Curve is smaller (greater) than the slope of the XX-curve. Hence it follows from *Purvis'* model that in a small country the flexible exchange rate system is stable (unstable) as long as this country has a positive (negative) uncovered predetermined net foreign position, independent of how large this position will be. This overemphasis on the unhedged net foreign position reduces the practical use of the model as long as it does not provide a satisfactory economic explanation of this position.[1]

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[1] It might be interesting in this connection to give some empirical estimations of eF^*. The Deutsche Bundesbank has estimated the German net foreign position twice. Although Germany had a positive net foreign position of about 89 billion DM in the middle of 1974, the net foreign position of the public, i. e. eF^*, was about minus 24 billion DM according to this estimation. How much of this was hedged on the forward market was not estimated. In the middle of 1976 the overall net foreign position of Germany was approximately 108 billion DM. This Time, the net foreign position of the public was about zero. See Monatsberichte der Deutschen Bundesbank, November 1974 and 1976.

Finally one point seems worth mentioning here. In the classical case (ii) real wage is defined in terms of the consumer price index, i. e. in terms of a price index involving *both* import and domestic goods prices ($Q = eQ^*$ and P). Real wealth, on the other hand, is defined in terms of the price level of domestic production ($\frac{A}{P}$ in the expenditure function (4)). Is it not more plausible to use the *same* price index in order to determine the real wage and the real wealth?