FISCAL POLICY AND THE CURRENT ACCOUNT: WHAT DO CAPITAL CONTROLS DO?

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Summary

The formulation of fiscal and financial policy targets to restore and preserve external balance is becoming increasinly important not only in countries with large external debt obligations but also in industrialized nations, like those of Western Europe and the United States. This paper examines how the presence of controls of international capital flows affects the extent to which: (1) reducing budget deficits, (2) shifting public expenditure away from imported goods toward domestic goods, and (3) moving from foreign to domestic financing of such deficits, will improve the current account of a country's balance of payments.

The conclusions suggest that in order to improve the current account balance in countries with <u>controls</u> on private international capital flows, fiscal targets should concentrate on limiting the amount of <u>public external borrowing</u>, rather than attempting to shift the composition of goverment spending. On the other hand, fiscal targets should focus on <u>reducing</u> the <u>import</u> component of goverment <u>expenditure</u>, rather than the amount of public borrowing abroad, in countries with <u>free</u> international capital flows. If these simple rules are not followed, there is no guarantee that a reduction of the budget deficit leads to a reduction of the current account deficit.

Resumen

La formulación de objetivos de política fiscal y financiera para la corrección del desequilibrio exterior de la economía está tomando una importancia creciente, no sólo en los países fuertemente endeudados, sino también en los países industrializados de Europa Occidental y en los Estados Unidos. Este trabajo analiza en qué medida la existencia de controles sobre los movimientos internacionales de capitales afecta el grado en que: (1) la reducción del déficit público, (2) el desplazamiento del gasto público desde bienes importados hacia bienes nacionales, y (3) la sustitución de la financiación externa por la financiación interna del déficit público, mejoran la balanza de pagos por cuenta corriente.

Las conclusiones obtenidas sugieren que, en países con <u>restricciones</u> sobre los movimientos internacionales de capitales privados, la mejora de la balanza corriente se logra básicamente mediante reducciones del grado de <u>financiación</u> pública en el <u>exterior</u> y no mediante variaciones en la composición del gasto público. Por otra parte, en aquellos países que gozan de <u>libertad</u> de movimiento internacional de capitales privados la mejora se logra a través de <u>reducciones del gasto público</u> en bienes <u>importados</u> y no a través de reducciones de la financiación exterior del presupuesto. Si estas reglas no son seguidas, entonces no existe ninguna garantía de que una mejora del déficit público lleve a una mejora de la balanza corriente de la economía.

Fiscal Policy and the Current Account in the Presence of Capital Controls

During the 1970s and early 1980s, developed and developing countries alike experienced dramatic changes in their current account positions as well as their external indebtedness. To some extent, these changes were caused by external developments such as the two oil price shocks, as well as large movements in commodity prices, exchange rates, and interest rates in the world's financial centers. Macroeconomic policies, at home and abroad, also played a role in affecting current account behavior. Soaring fiscal deficits were, in some cases, the most important cause of current account deterioration. Even in cases where fiscal policy was not the cause, it was often perceived as a cure for soaring current account deficits.

During this period, the trend towards increasingly integrated world financial markets continued at an accelerated pace, particuarly after the widespread adoption of flexible exchange rates in the early 1970s. Many countries, among them Great Britain, France, Germany and several Latin American countries changed their restrictions regarding international capital flows in order to either accelerate or retard this integration. It was unclear, however, whether the presence of absence or capital controls made fiscal policy any more or less effecive as an instrument for reducing countries' external imbalances.

This paper examines the extent to which reducing government spending or switching expenditure away from imports and towards domestic goods will improve the current account in economies with and without restrictions on private capital flows. In addition, the differential

impact of external and internal financing of fiscal deficits is investigated.

Our analytical approach follows recent research on the current account by placing considerable emphasis on intertemporal optimization by private agents. (See, e.g. Dornbusch(1983), Sachs(1981), Svennson and Razin(1983)). The starting point for this research is the well-known accounting identity that states that the current account equals the difference between total domestic (i.e. private and public sector) saving and investment. Both saving and investment, of course, inherently reflect intertemporal decisions by economic agents. Much of this research makes two key assumptions: (1) all domestic agents can borrow or lend at the interest rate prevailing in the international financial market and (2) wages and prices are perfectly flexible so that full employment is continously maintained.

The full-employment assumption makes these models inappropriate for analyzing stabilizaton aspects of fiscal policy. Hence, our analysis follows Cuddington– Viñals (1986) and van Wijnbergen (1984) by using an intertemporal optimization model where the economy suffers from short-run disequilibrium, even though all markets clear in the long run.

For discusing the external balance consequences of fiscal policy, the assumption that private residents as well as their governments can borrow and lend at the prevailing world interest rate, subject only to their intertemporal budget constratints, may also be invalid. In many countries, governments borrow externally but, at the

same time, impose restrictions on <u>private</u> capital inflows and outflows. It is important to determine how these capital controls affect the efficacy of fiscal policy.

2. The Model

Domestic households are assumed to consume both domestic and foreign output in each of two periods. The supply of foreign output is perfectly elastic at the world price by the small country assumption. In the short run (represented by period 1) the price of domestic output p_1 is fixed above its market clearing level so that <u>Keynesian unemployment</u> prevails. In the long run, represented by period 2, the price of domestic output p_2 adjusts to its market-clearing level implying that the (exogenous) full-employment level of output $\bar{y}_2$ is produced. There is no capital investment.

The Household Sector

Following Frenkel and Razin (1984), we assume the private sector maximizes a log-linear, time-separable utility function:

$$(1) \quad \upsilon = \alpha \ln C_{d1} + (1-\alpha) \ln C_{f1}$$
$$+ \frac{1}{1+\delta} \left[\alpha \ln C_{d2} + (1-\alpha) \ln C_{f2} \right]$$

where δ is the rate of time preference. The subscripts d and f indicate domestic and foreign goods respectively, while the subscripts 1 and 2 refer to the short and long runs. Assuming that the household has

no initial debts and that all borrowing must be repaid by the end of the second period, the household's budget constraint equals:

$$(2) \quad p_1 c_{d1} + c_{f1} + \frac{p_2}{1+i} c_{d2} + \frac{1}{1+i} c_{f2} = W$$

where the price of foreign goods is assumed to equal unity in both periods and wealth equals the present value of net-of-tax income:

$$(3) \quad W = p_1 y_1 - T_1 + \frac{1}{1+i} \left[p_2 y_2 - T_2 \right]$$

The interest rate i is the rate at which the <u>private sector</u> can borrow or lend.

As is well known, maximizing (1) subject to the intertemporal budget constraint (2) yields demand functions of the following special form:

$$(4a) \quad c_{d1} = \alpha \left(\frac{1+\delta}{2+\delta} \right) \frac{W}{p_1}$$

$$(4b) \quad c_{f1} = (1-\alpha) \left(\frac{1+\delta}{2+\delta} \right) W$$

$$(4c) \quad c_{d2} = \alpha \left(\frac{1+i}{2+\delta} \right) \frac{W}{p_2}$$

$$(4d) \quad c_{f2} = (1-\alpha) \left(\frac{1+i}{2+\delta} \right) W.$$

Saving in the first period takes the form of private demand for financial assets called "bonds":

$$(5) \quad B^d = p_1 y_1 - T_1 - p_1 c_{d1} - C_{f1}.$$

Using the specific form of the commodity demands in (4), the bond demand function reduces to:

$$(6) \quad B^d = p_1 y_1 - T_1 - (\frac{1+\delta}{2+\delta})W$$

which depends positively on the interest rate via wealth (3).

For simplicity, it is assumed that foreign demands for goods take the same form as those in (4) except that the foreign expenditure shares $(\alpha^*, 1-\alpha^*)$ need not equal the domestic shares $(\alpha, 1-\alpha)$ and foreign wealth W^* is exogenous.

The Government Sector

The government demands domestic and foreign goods in each period and finances these expenditures either by levying taxes or by borrowing in the domestic credit market at interest rate i or in the international market at interest rate i^*. Assuming there is no initial public debt and that all loans must be repaid in the second period, the period-by-period financing constraints of the government are:

$$(7) \quad p_1 g_{d1} + g_{f1} = T_1 + B + B^*$$

(8) $\quad p_2 g_{d2} + g_{f2} = T_2 - (1+i)B - (1+i^*)B^*$

where B and B* equal domestic and foreign borrowing respectively (i.e, supplies of financial assets).

In the case where the private sector as well as the government has access to the international market, it is assumed that arbitrage will insure that $i=i^*$. When the private sector faces capital controls, however, the domestic interest rate is assumed to exceed the world rate (i.e, $i > i^*$).

We assume in what follows that the private sector has <u>perfect foresight</u> so that correctly perceives the future tax (T_2) implications of the government's spending and financing decisions. In this case private wealth in (3) can be rewritten using (7) and (8):

(9) $\quad W = p_1(y_1 - g_{d1}) + \dfrac{p_2}{1+i}\left(y_2 - g_{d2}\right) - \left(g_{f1} + \dfrac{1}{1+i} g_{f2}\right) + \left(\dfrac{i-i^*}{1+i}\right)B^*.$

Note that the private sector experiences a wealth gain whenever $i > i^*$ and the government takes advantage of its ability to borrow in the world financial market instead of borrowing domestically <u>1/</u> provided that $i^* < i.$

1/ Note that there is a Ricardian equivalence between taxation and <u>domestic</u> bond financing in our model.

Equilibrium Conditions

In the short run, p_1 is fixed and domestic output y_1 is demand determined:

(10) $y_1 = c_{d1} + g_{d1} + c_{d1}^*$

In the long run, the price of domestic output p_2 adjusts to equate aggregate demand for domestic output to the full-employment supply $\bar{y}_2$:

(11) $\bar{y}_2 = c_{d2} + g_{d2} + c_{d2}^*$

Asterisks denote <u>foreign</u> demands.

The specification of <u>credit market equilibrium</u> differs depending on the assumption regarding private-sector access to the world financial market. In the case of perfect private access, the domestic interest rate is assumed to equal the world rate:

(12a) $i = i^*.$

When private-sector access is restricted, on the other hand, the domestic interest rate equates the supply and demand for credit within the internal market. That is:

(12b) $B^s = B^d = p_1 y_1 - T_1 - p_1 c_{d1} - c_{f1}.$

Finally, the definition of the current account equals:

(13) $CA = p_1 c_{d1}^* - c_{f1} - g_{f1}.$

3. Fiscal Policy and the Current Account:

    "The No Capital Controls" Case

     Regarding the effects of fiscal policy on the current account, the usual indeterminacies arise due to elasticities conditions of the Marshall-Lerner variety. In order to determine what new insights can be obtained from an intertemporal optimizing model, we assume a log-linear utility function in (1). That way, all commodity demands have unitary own-price elasticities and zero cross-price elasticities.

     With the log-linear utility specification, the equilibrium conditions in (10), (11) and (12a) can be used with (9) to obtain a reduced-form equation for wealth in the case of perfect private access to the world financial market: 1/

$$(14) \quad W = \frac{1}{1-\alpha} \left[\alpha^* W^* - g_{f1} - \frac{1}{1+i^*} g_{f2} \right]$$

The expression for the current account obtained by substituting the demand functions (4) into the definition in (13) equals:

$$(15) \quad CA = \alpha^* \left(\frac{1+\delta}{2+\delta}\right) W^* - (1-\alpha)\left(\frac{1+\delta}{2+\delta}\right) W - g_{f1}.$$

1/ This equation is obtained by multiplying equations (10) and (11) by the present-value prices of output in the respective periods. The resulting equations are then added together using (12a) and equated to the expression for W in (9). Finally, solving for W yields (14).

Using (15) and the reduced form equation for W, the effects of various fiscal actions on private wealth and the current account can now be obtained for the perfect private access case.

To examine the effects of fiscal policy on the current account, Substituting the expression for wealth in (14) into the current account equation (15) yields:

$$(16) \quad CA_1 = -\frac{1}{2+\delta}\left[g_{f1} - \left(\frac{1+\delta}{1+i^*}\right)g_{f2}\right]$$

From the above expression, it is clear that:

1. The method of financing the fiscal deficit has no effect on the current account in the case where the private sector and the government have equal access to international financial markets.

2. Changes in government spending only affect the current account to the extent that they involve changes in government spending on foreign (rather than domestic) goods. 1/

3. While a temporary increase in the foreign component of government spending (g_{f1}) worsens the current account by a less than proportional amount, an expected future increase (g_{f2}) improves the current account by a less than proportional amount.

The first point needs no explanation. The lump-sum nature of taxes and the absence of other distributional effects guarantee the

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1/ Note that this conclusion depends on the assumption that government consumption does not enter the private-sector utility function in (1).

existence of Ricardian equivalence between taxes and domestic and foreign borrowing by the government when the private sector and the government have equal access to international financial markets.

Regarding the second point, it is well known that a balanced budget increase in government spending has a multiplier effect of unity in a simple Keynesian model with fixed interest rates. (In models with Ricardian equivalence, furthermore, bond-financed increases in government spending also have a unitary multiplier.) It is clear from the definition of private wealth in (9) that an increase in government spending which causes an equal increase in domestic output leaves wealth unchanged. Thus there is no effect on private demand for foreign (or domestic) goods and the current account remains unchanged. (Van Wijnbergen (1984) also obtains this result.)

Although it is not self-evident without solving the model, increases in $\underline{future}$ government spending on domestic goods also leave wealth unchanged. This is because the increase in p_2 needed to equate the supply and demand for goods in the second period just offsets the direct effect on wealth of the change in g_{d2} itself.

Regarding the third point, an increase in the current foreign component of government spending leads to a reduction of current relative to future net disposable income, as the private sector takes into account the higher current tax obligations. This leads to dissaving (a current account deficit) by the private sector this period as people try to smooth out consumption over time. Analogously, the expectation of future higher taxes coming from an expected increase in the future foreign component of government spending, reduces future net

disposable income relative to the current one. Individuals then save today (current account surplus) to smooth out consumption over time.

4. Fiscal Policy and the Current Account: The "Capital Controls" Case

In the presence of capital controls on private transactions, the domestic interest rate is no longer given by that of the rest of the world. Rather, it is determined in the domestic credit market (12b). The effect of fiscal policy on the current account balance can be obtained directly from the balance of payments accounting identity, without having to solve explicitly for the other variables of the model. By identity, the current account balance equals private net savings minus the budget deficit. In the presence of capital controls, private net savings equal B and the budget deficit equals (B + B*). The identity can then be written as follows:

$$(17) \quad CA_1 = B - \left[B + B^*\right] = -B^*$$

Equation (17) has some striking implications which, by the way, do not depend on the particular shape of the utility function employed in the paper . It says that the current account balance will move over time only to the extent that there are changes in the external borrowing by the government. The level of the fiscal deficit per se is irrelevant. Surprisingly, shifts in the composition of government spending between domestic and foreign goods and whether government spending shifts are believed to be transitory or permanent are also irrelevant for determining fiscal policy's impact on the current account.

In sum, the inability of the private sector to borrow/lend freely in the world capital market reduces the dimensions of the problem to a single one: the extent of <u>foreign</u> borrowing.

Intuitively, it is convenient to recall that the current account balance equals the sum of private net saving and public net saving. When there is a budget deficit, public net saving drops by an equal amount. In turn, private net saving will only change to the extent that the private sector accumulates assets. In this economy, without money or private foreign lending/borrowing, the only asset that the private sector can hold is government bonds. In turn, the creation of this asset is fundamentally linked to the financing of the government deficit.

If the government deficit is fully financed by borrowing internally, private net saving goes up by exactly the same amount as the drop in public net saving; thus the current account balance is not affected. The current account will only be affected to the extent that the budget deficit is financed by borrowing abroad. If so, while public net saving goes down, private net saving is unchanged, since the amount of domestic government bonds in the economy is unchanged. In this case, there is a 'one for one' current account deficit coming from the budget deficit.

5. Conclusions

This paper has compared the differential effects of fiscal policy on the current account with and with controls on private capital flows. From our simple model, the following conclusions emerged:

1.   While the breakdown of government spending between domestic and foreign goods has important consequences for the current acount in the perfect private capital mobility case, it has no effect on the current account (but certainly affects other macroeconomic variables) in the presence of private capital controls.

2.   While the breakdown between domestic and foreign financing of government spending is irrelevant in the absence of capital controls, it is crucial for determining the effect of fiscal policy on the current account when capital controls are imposed.

3.   While temporary and permanent fiscal policy changes have widely different effects on the current account in absence of capital controls, these differences disappear when private capital flows are restricted.

In spite of the admittedly simple structure of our model, it may shed some light on the effects of reducing restrictions on private capital flows. Our results suggest that as a country reduces capital controls, government financing considerations become less important and the level and composition of government spending become more important for assessing the effects of fiscal policy on the current account.

Although our model should be extended to incorporate investment, monetary considerations and a less restrictive utility function, it is our belief that this will not alter the flavor of our more general conclusions regarding the role of government external financing and expenditure decisions under varying degrees of financial openness.

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