

Strategic Policy Unit

Discussion Paper

July, 1997

The Belizean Economy, 1985-1996

Evidence of Crowd Out Effects

Introduction

In general, crowding out refers to a reduction in some aspect of private sector activity which is accompanied by an increase in fiscal spending. The process of crowding out varies depending on the size of an economy and the type of exchange rate regime it utilises. Belize is a small open economy, a price taker on the world market, and utilises a fixed exchange rate regime with capital controls. This has four major implications:

1. Increases in income result almost immediately in higher consumption, and consequently in higher levels of imports, which must be paid for with foreign exchange.
2. Monetary policy is constrained by the need to respond to demand and supply factors on the foreign exchange market in order to defend the peg.
3. Changes in returns on capital will not lead immediately to adjustments on the capital account since control measures restrict residents transfer of assets to foreign entities.
4. These capital controls and the resulting lags in foreign exchange flows also allows for the existence of nominal interest rates which are different from prevailing international rates.

The result of these four conditions is that long term effects on price levels and the exchange rate arise from fiscal rather than monetary policy. Consequently, expansionary fiscal activity that leads to increased demand for foreign exchange which exerts pressure

on reserves would be expected to result in crowding out. This paper presents the results of three sets of analyses of crowding out. These are heuristic observation of trends in (1) national expenditure data and (2) government and private sector borrowing and (3) a vector autoregression decomposition of government and private sector credit, interest rates and fiscal balance. In addition, schematics of mechanisms outlining the effects of financing fiscal expansions (deficit financing) through both government borrowing and money creation are presented.

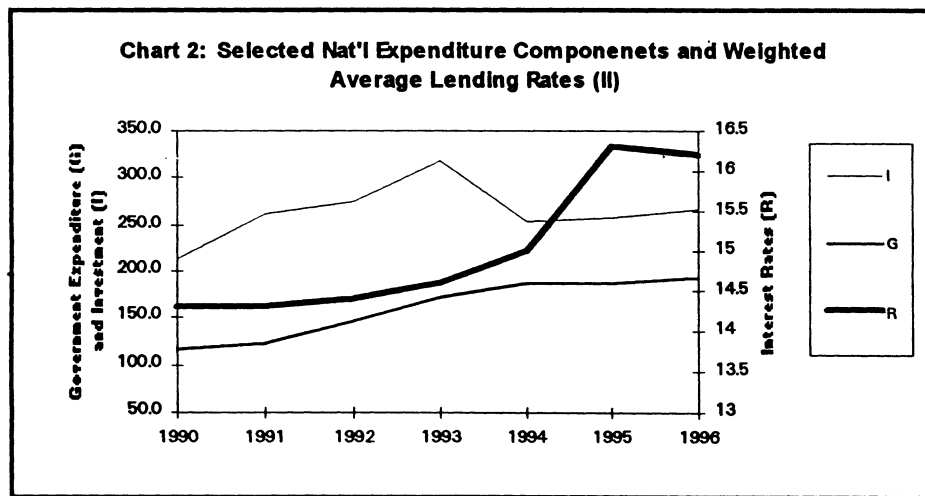
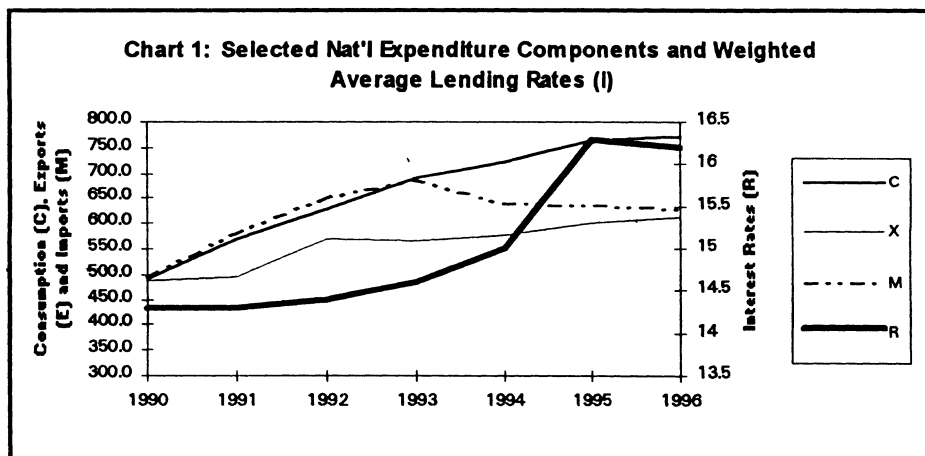
Crowding Out in Belize

The Evidence

At first glance, an examination of national expenditure data, domestic credit and banks' weighted average lending rate over the 1985-1996 period implies some level of crowding out, particularly between 1992 and 1996. As shown in charts 1 and 2, the marked increases in interest rates over that period (with the sharpest increase in 1994) coincided with drastic downturns in imports and investment and a slowdown in the rate of increase in exports. However these observations do not conform with text-book theories of crowding out insofar as some of the reductions observed reflect the slowdown in government expenditure on capital projects effected in 1993. Compilation of imports and capital formation for national expenditure purposes are not disaggregated by sector. Consequently, it can only be hypothesized that the extent of the downturns in both trends was sharpened by slowdowns in private sector investment owing to the observed increases in interest rates.

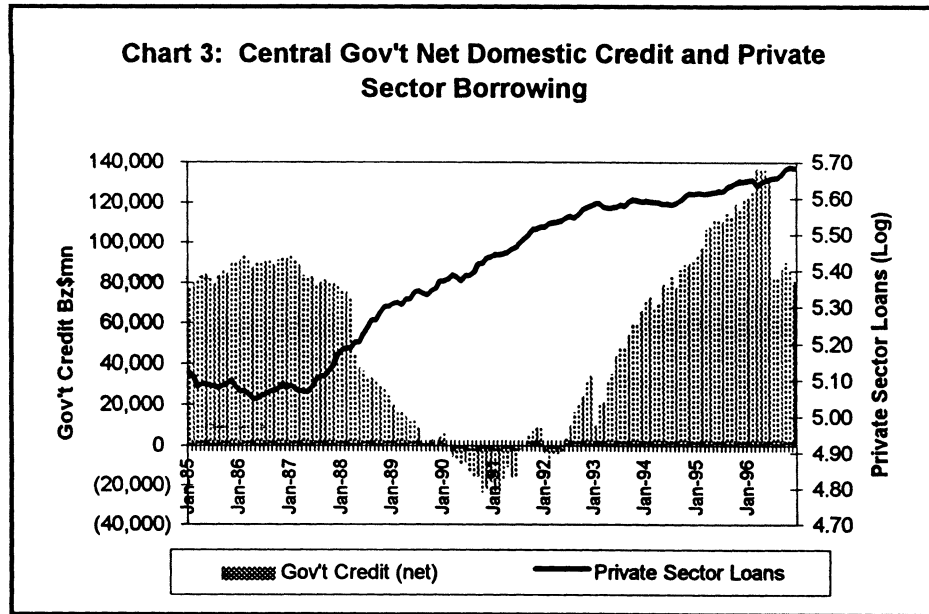
It is notable that, where the national expenditure trends are concerned, the reductions in investment and imports are accompanied by continuous increases (notwithstanding slowdowns in the rate) in government expenditure and consumption. To the extent that government spending finances consumption, this is not surprising. However, given the high import content of domestic consumption, the extent of the slowdown in imports is questionable. One factor that needs to be considered is that a significant portion of

“handbag” trade between Belize and neighbouring regions in Mexico and Guatemala goes unrecorded. It is well known that this trade consists mainly of consumption items. These observations underline a need to develop mechanisms that better capture the quantum of imports from these areas.

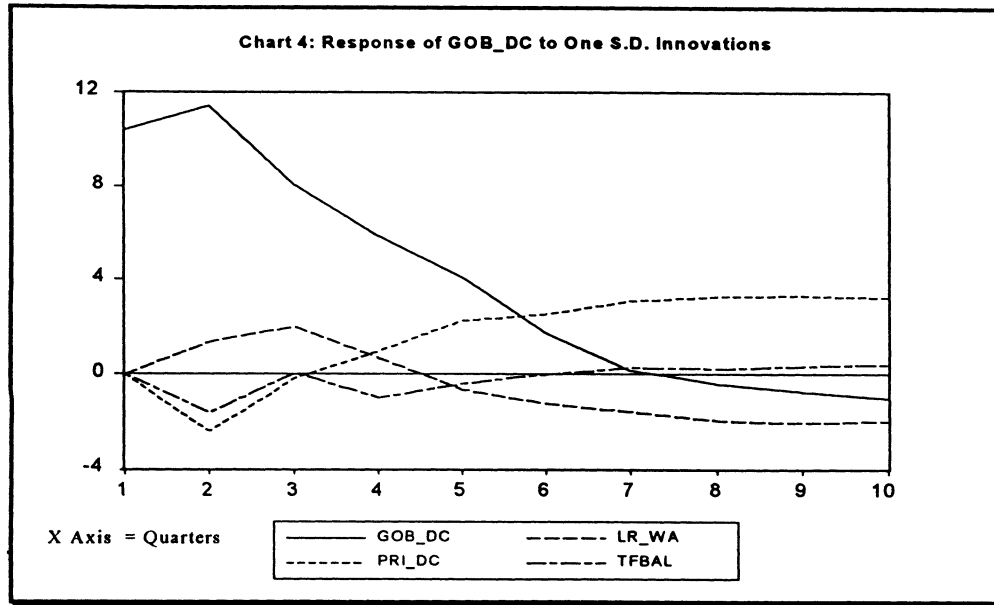


Additional evidence of increases in government spending and slowdowns in private investment can be gleaned from observations of the trends in central government and private sector domestic credit over the same period. As chart 3 shows, the interaction in these two trends has been consistent. Wherever government credit was high and increasing, the rate of private sector credit slowed, and where government credit was low

and declining, it increased. This trend is also shows some consistency with charts 1 and 2 insofar as the period (mid-1992 to 1996) of increasing government deficits and low growth in private sector investment encompasses that where interest rate levels were highest and investment was declining.



As shown in chart 4, a VAR decomposition lends further support to the above heuristic evidence of crowding out. This decomposition tests the behaviour of private domestic credit, interest rates and fiscal balance in response to a shock on government credit. With the initial increase (shock) in government credit, both private sector credit and fiscal balance decline, while lending rates rise. Declines in government credit beginning in quarter two are accompanied by increases in private credit; this trend continues throughout the next eight quarters. The interaction between government credit and the fiscal balance is reasonable from the viewpoint of a causal relationship between the two. A declining fiscal balance would result in an increase in government credit. More to the point, *the interaction between government and private sector credit underscores the existence of crowding out.*



The Mechanism

One question raised in ongoing discussions of crowding out is whether the nature of deficit financing matters. Specifically, does crowding out occur when deficit financing is effected through borrowing from the Central Bank? The following schematics show that the end result of deficit financing through money creation is the same as financing through domestic borrowing from the commercial banks.

Schematic I—Deficit Financing through Central Bank Borrowing (Money Creation)

$$B_{cb} \uparrow \rightarrow M \uparrow \rightarrow C \uparrow \rightarrow NFA \downarrow \rightarrow RR \uparrow \rightarrow L \downarrow \rightarrow r \uparrow \rightarrow PvtCdt \downarrow$$

Schematic II—Deficit Financing through commercial bank borrowing

$$B_{cm} \uparrow \rightarrow L \downarrow \rightarrow r \uparrow \rightarrow PvtCdt \downarrow$$

In these schematics,

B_{cb}	=	Gov't borrowing from the Central Bank
B_{cm}	=	Gov't borrowing from the commercial banks
M	=	Money supply
C	=	Consumption
NFA	=	Net Foreign Assets
RR	=	Reserve Requirements
L	=	Loanable funds available for new credit
r	=	Interest rates
$PvtCdt$	=	Private Credit

Both schematics involve lags (more so in the case of I) so that the contractions in private sector credit would occur well after fiscal expansion. Also, both imply a role for interest rates as the price of funds. If there is little sensitivity of private sector credit to interest rates, however, the crowding out still occurs since the supply of funds available for private sector use shrinks. Furthermore, as is typical in economics, these are *ceteris paribus* scenarios. The crowding out is not an absolute given, but rather depends on the behaviour of a host of interrelated factors.

Conclusion

The level of government involvement in capital formation and the method of calculating national expenditure makes it impossible to draw a conclusion regarding crowding out of exports and investment based on the behaviour of those components. On the other hand, the interaction of central government and private sector domestic credit and the results of VAR decomposition are more conclusive. *Increases in the rate of government domestic borrowing are indeed accompanied by declines in the rate of increase in private sector credit.* Furthermore, the beginning of this apparent "crowding-out" coincides with the period of marked increase in the level of interest rates, implying a correlation between interest rates and private sector borrowing. Further analysis of the nature of this relationship is the subject of a forthcoming paper, to be circulated for future discussion.