A Reconsideration of Interest Rate Policy in the Caribbean

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The role of interest rates in Caribbean economies
is rarely analysed and imperfectly understood. Conventional
wisdom is fulsome about the level, determinants, effects, and
ethics of interest rate behaviour but these wisdoms rest neither
on systematic analyses or on carefully compiled empirical
evidence. The rapidly accumulating body of theoretical and
empirical studies of many less developed countries inspired by
(or provoked) by the seminal works of Mc Kinnon (1973) and Shaw
(1973) strongly suggest that many of our conventional wisdoms
and the associated interest rate policies should be re-examined[1].

The main lines of warranted reappraisal of interest
rate policy include the nature and magnitude of interest rate
effects on national savings rate, the static and dynamic social
efficiency consequences of disequilibrium interest rates, income
and wealth distributional implications, and the effect of interest
rate policies on long run viability of financial institutions.
Each of these issues merits full attention. However, this paper
deals only with the less familiar and less appreciated issues of
allocative efficiency, distributional effects, and institutional
viability.

Though the paper is entirely theoretical, the theory is developed within the context of Caribbean economies. It is therefore helpful to begin by delineating the empirical context by a set of stylized descriptions of contemporary Caribbean economic reality.

Stylized Facts about Caribbean Production and Finance

Productive opportunity, technology and efficiency in resource use is heterogeneous within the non-financial sector. Productive enterprises differ across industries and within industries with respect to their profit opportunities, the levels of production technology employed, and the marginal returns to resource use. All productive enterprises utilise credit but in widely differing proportions, and from qualitatively different sources. Larger enterprises have higher ratios of credit to self-finance, and have greater access to credit from formal financial institutions than smaller enterprises.

The formal financial markets are oligopolistic on the asset side and oligopsonistic on the liability side. Within these markets, nominal interest rates on loans and deposits are low in relation to the rate of price inflation and the real rate of return on physical capital. Average nominal rates of interest on deposits are considerably lower than average nominal rates of interest on loans. Nominal interest rates are variegated across

borrower classes but uniform within borrower classes. Within broad classes, the stock of deposits varies inversely and the stock of credit varies directly with income levels. Nominal loan rates of interest are much lower for credit extended by government or quasi-government development banks. National interest rate policy takes the form of minute adjustments of low basic nominal rates of interest in declared pursuit of income growth, balance of payments, and price stabilization objectives. Interest rates are not used as a major policy adjustment.

These descriptions identify the germane features of Caribbean finance and commodity markets. One can now turn to the analysis of current interest rate practice.

Allocative Efficiency Consequences of Disequilibrium Interest Rates

Equilibrium nominal interest rates are defined with respect to the rate of social time preference for both savers and investors,[2] and with respect to the marginal cost of lending by financial institutions. Interest rate disequilibrium exists in financial markets when nominal interest rates diverge from the expected rate of price inflation and/or from marginal lending costs. In the real sector, interest rate disequilibrium exists when the real rate of interest diverges from the real rate of return to capital. Each case constitutes a departure from full equilibrium.

In the Caribbean, nominal rates of interest are less than the rate of price inflation. Assuming unitary price expectations, this divergence implies that real rates of interest are negative. Disequilibria therefore exist in the savings and investment market because the incentive to save is weaker than the incentive to invest. These result in dynamic efficiency losses in that the economy is restrained from moving to a higher production frontier. There is also the possibility of static efficiency losses resulting from the effect of disequilibrium interest rates on savers. To the extent that savers switch from deposits to direct investment, the degree of self-financing in the economy increases. Since productive opportunities are unlikely to be perfectly correlated with capacities for self-financing, compositional changes in asset portfolios induced by interest rate disequilibria are likely to reduce aggregate allocative efficiency.

The resource inefficiencies argument can be further elucidated by explicit reference to banking behaviour.[3] Consider first an original state of self-finance in a two sector (two producer) world with non-uniform productive opportunities and efficiency. Figure 1 depicts the state of affairs by a_1a_1' and a_2a_2' (the opportunity loci for the most efficient, superior technology class of enterprise labelled "A" and the less efficient inferior technology class of enterprise termed "B"). In a self-finance regime, A's net income is $a_1b_1h_1$ and B's net income is $a_2b_2h_2$.

FIGURE I
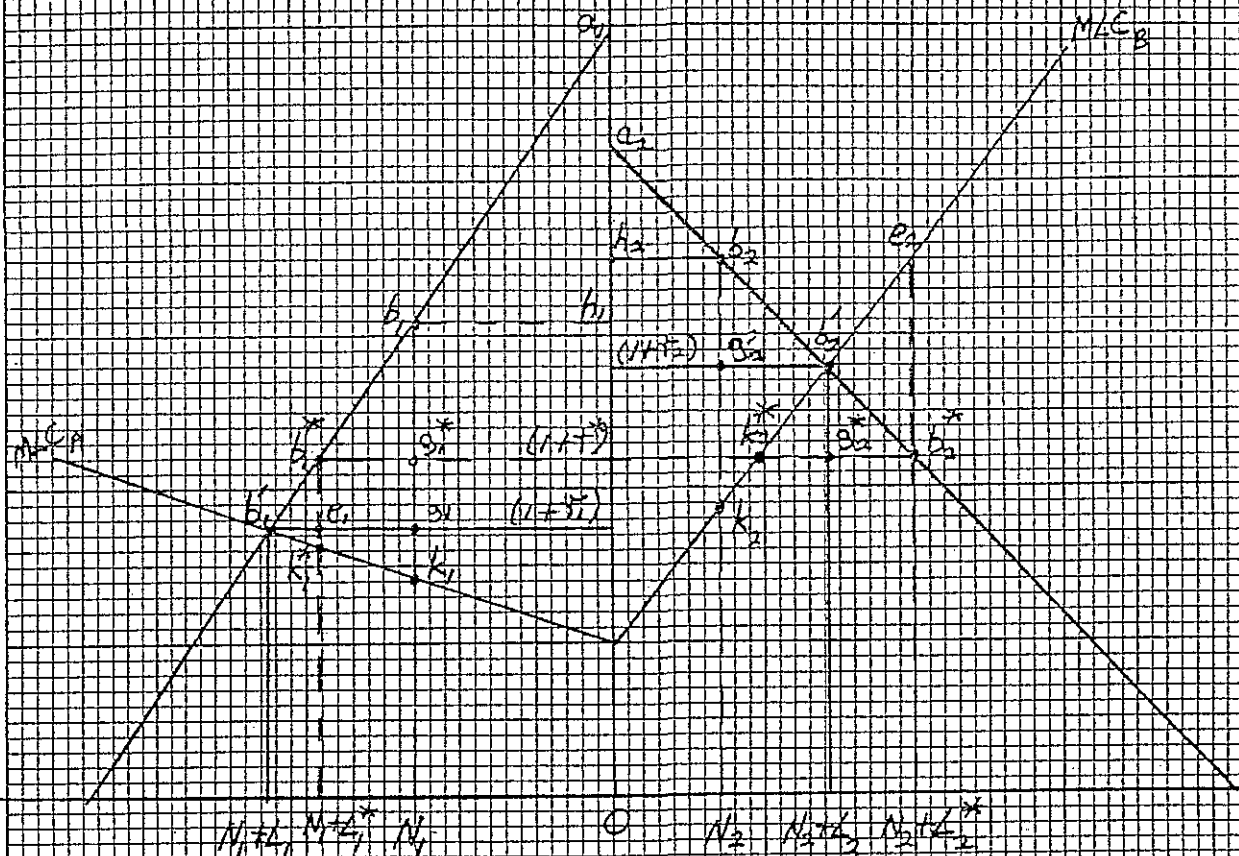
Aggregate net income is the sum of the two. Indirect or credit finance improves resource allocation if it increases aggregate net income. Consider therefore the introduction of a monobank with marginal lending cost schedules of MLC_A for A and MLC_B for B. Lending costs include interest costs of loanable funds, those costs incurred in attempting to reduce the probability of loan delinquency and default, and those risk premia which compensate for loan default. Differences in marginal costs of lending therefore are indicative of differences in credit rating. In this example, A's credit rating is higher than B's. Assume that the bank extends credit at an interest rate equivalent to its marginal lending cost and equivalent to the marginal value product of variable inputs in each borrowing class. Denote these loan rates of interest by $(1 + r_1)$ and $(1 + r_2)$. It can be seen that with credit of L_1 ($= ON_1 + L_1 - ON_1$) going to A and L_2 ($= ON_2 + L_2 - ON_2$) going to B, the following incremental net incomes are obtained. A receives incremental net income $b_1 b_1' g_1$; B receives $b_2 b_2' g_2$; and the bank receives incremental net income $b_1' g_1 k_1 + b_2' g_2 k_2$. Thus, bank finance at interest rates equal to the marginal costs of lending and the marginal returns to input use increases aggregate net income and improves the social efficiency of resource use.

Consider next a situation in which banks are unable or unwilling to discriminate between different loan customers or classes of customers in their interest rate decisions. This example corresponds to those situations where central bank

interest rate policy or oligopolistic loan pricing results in higher than warranted interest rate charges for some loan customers, and lower than warranted for others. A uniform rate of interest is typically imposed. Let the uniform rate of interest be $(1 + r^*)$ assumed $> (1 + r_1)$ and $< (1 + r_2)$. This represents a situation of disequilibrium interest rates in the credit market. At interest rate $(1 + r^*)$, loans to borrower class A contract to L_1^*, i.e. by $N_1 + L_1$ minus $N_1 + L_1^*$, and loans to B expand by L_2^*, i.e. by $N_2 + L_2$ minus $N_2 + L_2^*$. A's incremental net income is negative and equal to $b_1^* b_1' (1 + r_1)(1 + r^*)$, while B's incremental net income is positive and equal to $b_2' b_2^* (1 + r^*)(1 + r_2)$. The bank has a negative, incremental net income of $b' k_1^* e_1$ plus $b_2' b^* k_2^* e_2$. The sum of A's net income loss and the bank's net income loss exceeds A's net income gain by $b_1^* b' k_1^*$ plus $b_2^* b_2' e_2$. Therefore, aggregate net income declines as a consequence of the departure from equilibrium interest rates and the adoption of uniform credit pricing rules in situations of different marginal lending costs and marginal value products.

These allocation inefficiencies extend into a growth context since the rate of surplus accumulation will be lower in the absence of significant offsetting distributional effects on business savings.

Inflation, Interest Rate Inflexibility, and Lender Behaviour

Inflation raises the costs of producing bank services. Unless loan rates of interest increase commensurately with the general rate of price inflation, bank profitability declines, deposits costs are suppressed, or credit rationing occurs.4 Each situation adversely affects efficient resource use.

In Figure 2, MLC is the bank's marginal lending costs for its entire portfolio, and ALC is average lending costs consisting of interest and non-interest costs on deposits and of loan administration costs. D is the aggregate demand for loans. Assume an initial breakeven equilibrium point represented by interest rate r_1 and loan demand (= supply) of L_1. Assume next that inflation raises the average costs of lending by increasing loan administration costs and non-interest costs on deposits. Thus the new operative average cost function is ALC_2. At unchanged nominal loan rate of interest, r_1, i.e. total interest rate inflexibility, the bank would experience a loss equivalent to $(r_2 - r_1)OL$. Persistent financial losses decapitalize institutions, reduce their capacity for attracting market funds, impairs the efficiency of their operations, and ultimately cause their loan volumes to contract. Interest rate inflexibility on a system-wide basis threatens the viability of the financial sector. It has already been shown that credit improves allocative efficiency and social welfare. It follows, then, that interest rate inflexibility to the extent that it results in banking losses has negative consequences for allocative efficiency and social welfare.

7-a

FIGURE 2
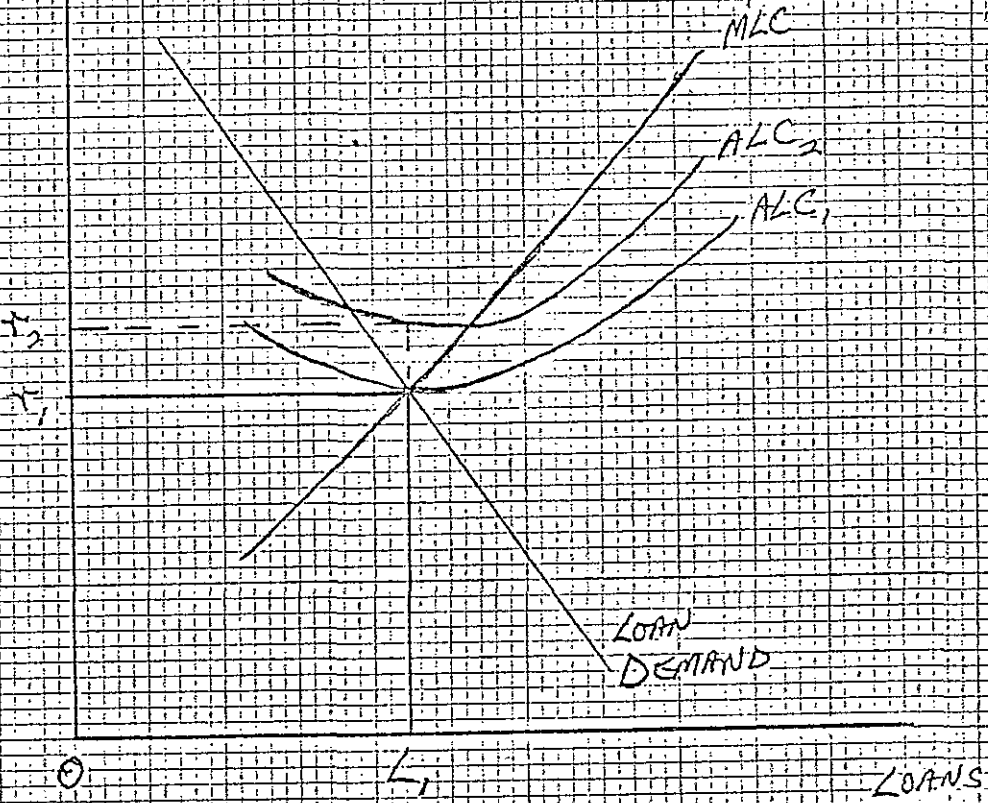
The banking system confronted with the prospect of capital losses caused by rigid nominal loan rates has tended to adjust by suppressing those input costs which are flexible. This policy amounts to restraining increases in nominal deposit rates of interest and/or increasing bank charges on deposit services. The economic authorities tacitly acquiesce and sometimes appear to promote this form of adjustment to disequilibrium interest rates in the credit market. While seemingly sufficient as short-run policy, this method creates allocative inefficiencies by discouraging financial asset accumulation and encouraging direct finance by surplus income units. It also vitiates the longer run financial resource mobilisation abilities of the credit institutions.

A second defensive response by lenders is to alter the distribution of loans in favour of those customers with lower marginal and average lending costs. By this method, overall average lending costs are reduced and the prospects of capital loss lessened. However, rationed customers will be receiving less loans than warranted by their marginal value products, and non-rationed customers will be receiving more loans than warranted by their marginal value products. The incremental net income of non-rationed enterprises will be less than the net income loss of rationed enterprises. Allocative efficiency in commodity markets is therefore impaired by quantity rationing behaviour on the part of the credit institutions.

Distributional Effects of Interest Rate Policies

The distribution of income and wealth is fundamentally affected by interest rate policy. As already analysed with the help of Figure 1, income change is influenced by access to credit. Differential access to credit therefore means differential income growth. It also implies differential growth of wealth as capitalised income. Thus interest rate policy by influencing the allocation of credit among enterprises (productive units) shapes the distribution of income and wealth. Specifically, disequilibrium interest rate policy biases credit access and as a consequence biases income and wealth distribution in favour of higher income and richer credit recipients who by virtue of their already existing income-wealth configuration are more "creditworthy" and less likely to be subject to nonprice rationing of credit.

There are other channels through which the interest rate policies have perverse distributional consequences. One such channel is linked with the subsidies implicit in negative real rates of interest. A negative real rate of interest implies that the capital value of savings expressed in real terms diminishes over time, and that the real value of physical capital increases over time. Savers surrender future income to deptors. In effect, savers subsidize borrowers. A subsidy transfer is also effected whenever savings rates of interest

are depressed in order to avoid upward revisions of the loan

rate of interest. Because the stock of financial savings is

negatively correlated with income class, and the stock of debt

is positively correlated with income class, credit-subsidies

benefit the higher income groups at the expense of the lower

income groups. These perverse income distribution consequences

can be emphasized by recognising that there are many savers

and few borrowers. The many poor subsidize the few rich.

In the case of some credit institutions and some loan

programs, e.g. development bank programs, credit subsidies are

financed not by savers but by government budgetary transfers.

Where the budgetary transfers are tax-financed, income distri-

bution consequences might still be regressive, depending on

whether the tax system is progressive or not. The evidence for

one country, i.e. Jamaica (Mc Lure 197) suggests that the

Caribbean tax systems may be at best mildly progressive and

possibly regressive. A progressive tax system combined with

a regressive credit-subsidy distribution need not cause any

further deterioration in the distribution of income and wealth.

A regressive tax system combined with a regressive credit-

subsidy program undoubtedly aggravates already "bad" income

distributions.

. Conclusion

Interest rate policies matter significantly to the performance of an economic system. Interest rates influence resource allocation and efficiency in resource use for better or for worse. The distribution of income and wealth is also fundamentally affected by interest rate policies directly through credit-subsidies and indirectly through access to credit. The prolonged pursuit of disequilibrium interest rate policies in most Caribbean countries in the face of the negative economic consequences discussed in this paper might be interpreted as some indication that these aspects of interest rate policies are not recognised or fully appreciated. The intention of this paper was to bring allocative and distributional questions into the forefront of policy debate. Hopefully, the pertinent economic authorities will now reconsider their de facto policy position on interest rates.

N O T E S

1. See for instance Galbis (1977, 1978(a), 1978(b),
Gonsalez-Vega (1977, 1980), Vogel and Buser (1976).

2. The use of the concept is in keeping with the strictly
Classical theory of interest rates. For background,
see Fisher (1965) and Wicksell (1965).

3. The best technical expositions of allocative and
distributional issues are perhaps by Gonsalez-Vega.
The arguments in his 1980 paper are used extensively
here.

4. The credit rationing literature is quite extensive.
For a recent guide, see Baltensperger (1978).

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