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FINANCIAL VARIABLES IN THE INFLATIONARY PROCESS  
IN TRINIDAD AND TOBAGO 1967-1974

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INTRODUCTION

Unprecedented high rates of price inflation within recent years have served to re-direct attention to the problem of inflation in Caribbean economies. Recent writings on the subject, e.g. Ally (1), Latibeaudiere (2), St. Cyr (5), Thomas (6), and Ramjeosing (4), have concentrated on the analysis of generating factors. Not surprisingly, virtually no academic attention has been devoted to the development of anti-inflation policy, for at the present time the latter step would be very much a matter of shooting in the dark since no firm knowledge exists with respect to inflationary impulses and spread mechanisms.

This is not to say there has been a shortage of empirical studies. However, as a result of limitations in data, statistical technique and model specification, no definitive findings have been arrived at. Moreover, those studies focus primarily on real variables such as factor costs and incomes, with rather little attention being devoted to the role of financial variables.

This paper analyses the effect of selected financial variables on the rate of inflation in Trinidad and Tobago over the period 1967 to 1974. Quarterly data are employed throughout. The primary statistical technique utilised is multiple regression analysis. The structure of the paper is as follows. Section I describes the behaviour of particular economic time series over the period as

a kind of background to the model formulation which follows in Section II. In Section III, various versions of a reduced-form model of price determination are applied to the data, and results are reported. Section IV is in the nature of a conclusion.

I: From December, 1966 to December 1974, the absolute level of prices in Trinidad and Tobago, as measured by the retail price index, nearly doubled itself. More than sixty per cent of the increase in prices occurred in the final two years. This signifies a much more rapid rate of inflation in the later years than in the earlier ones. While the average quarterly rate of inflation was approximately 1.2% for the first quarter of 1967 to the last quarter of 1972, the average quarterly rate for 1973(1) to 1974(4) was roughly 4.8 per cent. The pace of price change also differed among the several subcomponents of the retail price index. The index for food expanded by more than 90%, while for the others the percentage change was in the region of 35-65 per cent.

The time pattern of several real and financial variables such as wages, money supply, bank credit, government debt, and import prices has been adduced by recent commentators (e.g. Ally) as prima facie evidence in support of several versions of cost-push and demand-pull theories of price inflation. It is quite evident from Figures 1 and 2 that there was pronounced upward movement in the time series for net domestic credit by the banking system (NDC), the Gross Government Debt (GGD), Money Supply (MS) narrowly defined, the index of import prices, the weighted average index of

export prices (EP) for Trinidad and Tobago's import suppliers, and wages. To a lesser degree the series for the exchange rate (XCR) represented by the trade conversion factor, and the weighted average commercial bank loan rate also rose over time.

A closer examination of some of the time series reveals some parallelism between the movements of some of them on the one hand, and the retail price index on the other hand. Dealing first with the import price index, one observes that over the entire period, import prices rose by more than 500 per cent, the rate of increase being extremely rapid - 15% - in the final two years. The index of minimum wage rates rose at a much slower and more uniform rate, averaging 1.9% for 1967-1972, and 2.5% for 1973-1974. Thus while domestic retail prices nearly doubled, nominal wages increased by about 80%, thereby implying a deterioration in real wage income. It is worthwhile to note that real wages declined at an even faster rate from 1973(1) to 1974(4).

A considerable expansion in the stock of nominal money supply, bank credit and gross government debt accompanied the upsurge in domestic retail prices. Money supply slightly more than doubled, gross government debt increased by 120% and net domestic bank credit increased by slightly under 90 per cent from 1967(1) to 1971(4). With the exception of the money supply, the rate of expansion was faster for 1967-1972 than for 1972-1974. Specifically, the stock of money averaged a quarterly rate of increase of 2.5% for 1967-1972, and 3.8% for 1972-1974. On the other hand, net domestic bank credit while expanding at an average quarterly

rate of 4.4% for 1967-1972, declined at approximately the same rate over the remaining two years. Gross government debt expanded at a slightly slower rate over the last two years, as compared to 1967-1972.

From the description of the time pattern of the variables, it is perhaps becoming apparent that it is extremely difficult to detect any clear patterns much more to establish causal relationships without recourse to more sensitive statistical analysis. However, as a first step in our econometric investigation, we construct a simple macro-economic model of the economy from which the reduced form price determination equations are derived. The distinguishing characteristic of the model is its emphasis on financial variables.

## II. THE MODEL OF PRICE DETERMINATION

Essentially theories of inflation fall broadly into two groups, that one might call aggregate demand theories and cost push theories. In aggregate demand theories the focus is on price change as a market clearing mechanism, so that inflation is treated as a result of excess demand in factor and commodity markets. Within the aggregate demand genre, one can distinguish further between on the one hand Keynesian theories which ascribe the main causal role to income disturbances, and on the other hand, Monetarist theories which treat the excess demand for money function as the central propulsive element in the inflationary process. Placed somewhat awkwardly between the strict Keynesian and strict Mone-

tarist models are those models which focus on the credit and financial variables that augment demand in the consumption and investment markets.

Cost-push theories are centred around autonomous changes in the cost functions of 'production' enterprises and, on the assumption of administering pricing of final products, view inflation as the end result of factor prices rising faster than factor productivities. In the open, underdeveloped economy, labour and imported materials contribute high proportions of total costs. Not surprisingly, therefore, cost push models devote much attention to wages and import prices.

Research on inflation in the Caribbean so far has paid attention to wages and productivity relations, economic openness, government expenditures, taxes and disposable personal incomes. In this study, we are particularly interested in the propulsive role of monetary and financial variables. We do not purport to formulate a complete theory of inflation. Moreover, we adopt neither a purely aggregate demand nor a purely cost-push framework. Rather our formulation is a hybrid of both paradigms.

The basic structural model is summarised by the following system of thirteen equations:-

$$(1) \quad \dot{P}_t = a_0 + a_1 \dot{P}_{t-1} + a_2 \dot{PIR}_{t-1} + a_3 \dot{BLR}_{t-1} + a_4 \dot{TE}_{t-1} \quad a_j > 0$$

$$(2) \quad \dot{MD}_t = \dot{Q}_t - \dot{E}_t$$

$$(3) \quad \dot{Q}_t = \dot{DO}_t - \dot{W}_t + \dot{IM}_t$$

$$(4) \quad E_t = \dot{C}_t + \dot{I}_t + \dot{G}_t$$

$$(5) \quad \dot{C}_t = C_0 + C_1 \dot{Q}_{t-i} + C_2 \dot{BLR}_{t-i} + C_3 \dot{NDC}_{t-i} + C_4 (\dot{MS} - \dot{MD})_{t-i}$$

$$C_1, C_3, C_4 > 0$$

$$C_2 = 0$$

$$(6) \quad \dot{I}_t = i_0 + i_1 (\dot{Q}_{t-i} - \dot{Q}_{t-i-1}) + i_2 (\dot{BLR}_{t-i} - \dot{BLR}_{t-i-1}) + i_3 (\dot{NDC}_{t-i} - \dot{NDC}_{t-i-1}) + i_4 (\dot{MS}_{t-i} + \dot{MS}_{t-i-1} - \dot{MD}_{t-i} - \dot{MD}_{t-i-1}) + i_5 \dot{BLR}_{t-i} + i_6 \dot{NDC}_{t-i}$$

$$i_1, i_3, i_6 > 0$$

$$i_2 < 0$$

$$(7) \quad \dot{G}_t = g_0 + g_1 \dot{E}_t + g_2 \dot{D}_t \quad g_j > 0$$

$$(8) \quad \dot{IM}_t = m_0 + m_1 \dot{PIM}_t + m_2 \dot{E}_t$$

$$m_1 < 0$$

$$m_2 > 0$$

$$(9) \quad MS_t = \text{exogenous}$$

$$(10) \quad \dot{MD}_t = d_0 + d_1 \dot{Q}_t + d_2 \dot{BLR}_t + d_3 \dot{P}_t^o$$

$$d_1 > 0$$

$$d_2 < 0$$

$$d_3 \geq 0$$

$$(11) \quad \dot{W}_t = w_0 + w_1 \dot{P}_{t-i} \quad w_1 > 0$$

$$(12) \quad \dot{PIM}_t = P_0 + P_1 XCR_t + P_2 FP_t \quad P_1 < 0$$

$$P_2 > 0$$

$$(13) \quad \dot{T}_t = t_0 + t_1 \dot{Q}_t \quad t_1 > 0$$

The variables are defined in the Glossary of Terms.

Some brief explanations of the equations are now given.

Equation (1) is the structural price determination model. It states that the rate of price change is a function of excess aggregate demand (ED), and cost push factors such as the wage rate, import prices and the price of bank credit. The lag structure is deliberately treated as indeterminate since there is no a priori basis for specifying particular lags for the explanatory variables.

Equation (3) is a definition of the total supply of goods and services in the national economy as the total domestic output minus that which is exported, plus the supply of foreign goods and services. The explicit identification of traded goods in the aggregate supply relation is intended to emphasise the role imports as a safety-valve and the role of exports as a negative element aggregate demand models of inflation in open economies. Equations (4) and (2) state the familiar final demand accounting relation and the balance equation for the final goods and services market.

The consumption function (equation 5) hypothesizes that private consumption expenditures are determined by aggregate income



(Q), the commercial bank loan rate, the supply of bank credit, and the excess demand for money balances. The consumption model thus adopts a monetarist theory of expenditure determination by which given a stable demand for money function, changes in the nominal stock of money generate changes in the level of nominal consumption expenditures; the change in nominal consumption itself being separable into changes in prices and changes in real consumption. The consumption function also adopts a finance-expenditure hypothesis. The stock of bank credit is a straightforward availability of purchasing power in advance of income variable. The bank loan rate captures two separate elements: firstly, the negative relationship between loan rates of interest and the demand for credit, and secondly, the positive relationship between bank deposit rates of interest (which are positively geared to the bank loan rate) and savings, and hence the inverse relationship between the loan rate and consumption expenditures.

The investment function (equation 6) combines the accelerator and finance hypotheses. Investment is hypothesized to respond to changes in consumption expenditures; hence the first four terms, and to changes in the availability and the price of credit. Government expenditures are treated as being influenced by the level of government fiscal revenues and by the level of the government deficit or surplus. Fiscal revenues are themselves conceptualised as a function of the level of total national supply. Import expenditures are treated as a function of the price of imports and a transaction variable, namely the level of domestic final

demand.

The demand for money function is quite conventional. It relates money demand to a transaction variable, namely GNP, interest rates, and the expected rate of price inflation. In this model, inflation imposes a cost on holders of monetary assets, while simultaneously increasing the transactions demand for money. The sign of the co-efficient relating money to the expected rate of change in prices is therefore theoretically ambiguous.

Wage rates are hypothesized to be a function of lagged prices alone. This is an extremely simple function which ignores the several other influences such as profitability of the industry or firm, labour productivity, the power of labour as a class, and product market structure. We abstract from these complexities simply to dramatise the possible self-generating role of inflation as a consequence of wages adjusting to lagged prices. If the wage lagged price relationship is strong, then inflation possesses a self-reinforcing character.

The final structural equation to be mentioned is the import price model. It is postulated that changes in import prices are determined by changes in the exchange rate and by changes in foreign prices. This relationship being quite straightforward needs no further clarification.

Combining equations (1) to (10) and (12) and solving for  $\dot{P}_t$  we derive the following reduced-form equation for price determination:-

$$\begin{aligned}
 (14) \quad \dot{P}_t &= \Lambda_0 + \Lambda_1 \dot{W}_{t-i} + \Lambda_2 \dot{IM}_{t-i} + \Lambda_3 \dot{Q}_{t-i} \\
 &+ \Lambda_4 \dot{Q}_{t-i-1} + \Lambda_5 \dot{BLR}_{t-i} + \Lambda_6 \dot{BLR}_{t-i-1} \\
 &+ \Lambda_7 \dot{HDC}_{t-i} + \Lambda_8 \dot{HDC}_{t-i-1} + \Lambda_9 \dot{MS}_{t-i} \\
 &+ \Lambda_{10} \dot{MS}_{t-i-1} + \Lambda_{11} \dot{DO}_t + \Lambda_{12} \dot{LIX}_t \\
 &+ \Lambda_{13} \dot{D}_t + \Lambda_{14} \dot{P}_{t-i}^e + \Lambda_{15} \dot{P}_{t-i-1}^e
 \end{aligned}$$

Where

$$\begin{aligned}
 \Lambda_0 &= c_0 + c_4 \left( m_0 - c_0 - i_0 - g_0 - 2d_0 \left( m_2 c_4 - m_2 i_4 \right. \right. \\
 &\quad \left. \left. + c_4 i_4 \right) + m_2 \left( c_0 + i_0 + g_0 \right) \right)
 \end{aligned}$$

$$\Lambda_1 = c_1$$

$$\Lambda_2 = (c_2 + m_1)$$

$$\Lambda_3 = c_4 \left\{ d_1 \left( m_2 c_4 - m_2 i_4 + c_4 + i_4 \right) + \left( m_2 c_1 + m_2 i_1 - c_1 - i_1 \right) \right\}$$

$$\Lambda_4 = c_4 \left\{ d_1 \left( m_2 c_4 - m_2 i_4 + c_4 + i_4 \right) + \left( i_1 - m_2 i_1 \right) \right\}$$

$$\begin{aligned}
 \Lambda_5 &= c_4 \left\{ d_2 \left( m_2 c_4 - m_2 i_4 + c_4 + i_4 \right) + \left( m_2 c_2 + m_2 i_2 + m_2 i_5 \right. \right. \\
 &\quad \left. \left. - c_2 - i_2 \right) \right\}
 \end{aligned}$$

$$\Lambda_6 = c_4 \left\{ d_2 \left( m_2 c_4 - m_2 i_4 + c_4 + i_4 \right) + \left( i_2 - m_2 i_2 \right) \right\}$$

$$\Lambda_7 = c_4 \left( m_2 c_3 + m_2 i_3 + m_2 i_6 - c_3 - i_3 \right)$$

$$A_8 = -a_4 (m_2 i_3 + i_3)$$

$$A_9 = -a_4 (m_2 c_4 + m_2 i_4 + c_4 + i_4)$$

$$A_{10} = -a_4 (m_2 i_4 + i_4)$$

$$A_{11} = a_4 ; A_{12} = -a_4, \text{ and } A_{13} = -a_4 g_{12}$$

$$A_{14} = a_4 \left( d_3 (m_2 c_4 - m_2 i_4 + c_4 + i_4) \right)$$

$$A_{15} = a_4 \left( d_3 (m_2 i_4 + i_4) \right)$$

If we substitute for  $PIM_t$  from equation (12) into (14), we obtain another reduced-form model which makes explicit the role of foreign prices and the exchange rate. Thus,

$$(15) \quad \dot{P}_t = A'_0 + A_1 \dot{W}_{t-1} + A_3 \dot{Q}_{t-1} + \dots + A_{15} \dot{P}_{t-1}^e$$

$$+ A_{16} \dot{XGR}_{t-1} + A_{17} \dot{FP}_{t-1}$$

Where,

$$A'_0 = A_0 + A_2 P_0$$

$$A_{16} = A_2 P_1, \text{ and } A_{17} = A_2 P_2$$

The self-generating character of inflation via the wage equation is seen by substituting for  $\dot{W}_{t-1}$  from (11) into (16) to obtain -

$$(16) \quad \dot{P}_t = A''_0 + A_3 \dot{Q}_{t-1} + \dots + A_{17} \dot{FP}_{t-1} + A_{18} \dot{P}_{t-1}$$

Where

$$\Lambda''_0 = \Lambda'_0 + \Lambda_1 w_{01} \quad \text{and} \quad \Lambda_{16} = \Lambda_1 w_1$$

It should be mentioned that the lagged rate of inflation can also enter the model if the adaptive expectations hypothesis is assumed to govern  $\dot{P}^e$ .

From the structure of the reduced-form equations (14) - (16) it should be apparent that many variables may enter into the inflationary process and in a complex manner for even a simple but realistic macro economic model. Much depends on the signs and magnitudes of the structural co-efficients. Since a priori analysis may provide little help in establishing the propulsive factors, considerable reliance has to be placed on empirical estimates of structural and/or reduced form co-efficients. To this task we now turn.

G L O S S A R Y

P	=	general price index
W	=	wage rate
PIM	=	index of import prices
BLR	=	commercial bank loan rate
ED	=	excess aggregate demand
Q	=	total supply of goods and services in the national economy. Formally equivalent to GNP.
DO	=	total supply of home-produced goods and services
EX	=	exports of goods and services
IM	=	imports of goods and services
E	=	total final demand in the national economy
C	=	total private consumption expenditures
I	=	total private investment expenditures
G	=	total government expenditures
NDC	=	net domestic credit by the banking system
MS	=	the stock of money
MD	=	the demand for money to hold
T	=	government tax and other non-capital revenues
D	=	government deficit (surplus)
P <sup>e</sup>	=	expected prices
XCR	=	the international rate of the local currency
FP	=	index of foreign prices
Superscript "•"	=	time rate of change of the variable.

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### III: EMPIRICAL RESULTS

A version of equation (14) was applied to quarterly data for the period 1967(1) to 1974(4). The assumption of static price expectations was employed so that no lagged dependent variable entered into the regression model. Furthermore,  $DO_t$  were treated as constants, and hence deleted. Supply factors are therefore partly absent from the model

Data and data sources are described in the appendix. It should be noted here, however, that in the absence of national income data on a quarterly basis, and even on an annual basis for a large part of the period, total exports was used as a surrogate variable. In so doing, one is of course employing tacitly the export-propelled economy hypothesis. In the absence of an adequate time series on the government deficit, gross government debt was utilised as a proxy variable. The use of surrogates results in some bias in statistical estimation, but nonetheless can be shown to constitute an improvement on total omission of the missing variables.

Regressions were conducted on log linear equations of the form:

$$\begin{aligned} \Delta \ln P_t = & B_0 + B_1 \Delta \ln W_{t-i} + B_2 \Delta \ln \text{PIE}_{t-i} \\ & + B_3 \Delta \ln (\text{EX}/P)_{t-i} + B_4 \Delta \ln \text{BLR}_{t-i} \\ & + B_5 \Delta \ln \text{MFC}_{t-i} + B_6 \Delta \ln (\text{GGD}/P)_t \\ & + B_7 \Delta \ln \text{MS}_{t-i} + u_t \end{aligned}$$

where  $u$  is a stochastic error term and is assumed to be normally independently distributed.

Since no prior knowledge existed with respect to appropriate lag distribution, an initial screening operation was undertaken to gain some insight into the appropriate lags and in an effort to minimise multicollinearity in the reduced-form model. The screening was conducted with the aid of stepwise multiple regression. For each explanatory variable in the model represented by equation (14), a stepwise regression was conducted with lags of up to four quarters.

The following seemed to be the better fitting relations between prices and the individual explanatory variable. Figures in parentheses are "t" statistics, and  $\bar{R}^2$  is the co-efficient of determination adjusted for degrees of freedom.

$$(i) \quad \Delta \ln P_t = 0.0026 + 1.2393 \Delta \ln W_{t-4} \quad (4.15)$$

$$\bar{R}^2 = .3807$$

$$(ii) \quad \Delta \ln P_t = 0.01691 + 0.08416 \Delta \ln PIM_{t-1} \quad (2.96)$$

$$\bar{R}^2 = .2323$$

$$(iii) \quad \Delta \ln P_t = 0.0171 + 0.0559 \Delta \ln (EX/P)_t + 0.0598 (EX/P)_{t-1} \quad (2.59) \quad (2.75)$$

$$\bar{R}^2 = .3136$$

$$(iv) \quad \Delta \ln P_t = 0.0153 + 0.3048 \Delta \ln BLR_t + 0.2195 BLR_{t-3} \quad (3.24) \quad (2.30)$$

$$\bar{R}^2 = .2891$$



$$(v) \quad \Delta \ln P_t = 0.0142 - 0.0910 \Delta \ln NDC_t + 0.1994 \Delta \ln NDC_{t-4}$$

(-2.42)
(2.43)

$$\bar{R}^2 = .2470$$

$$(vi) \quad \Delta \ln P_t = 0.0140 + 0.0933 \Delta \ln MS_t + 0.0932 \Delta \ln MS_{t-3}$$

(1.26)
(1.26)

$$+ 0.1163 \Delta \ln MS_{t-4}$$

(1.609)

$$\bar{R}^2 = .0812$$

$$(vii) \quad \Delta \ln P_t = 0.0235 - 0.444 \Delta \ln (GGD/F)_t$$

(-4.25)

$$\bar{R}^2 = 0.393$$

Logged terms which added less than .06 to  $\bar{R}^2$  were deleted from the equations presented.

A few observations can be made about the results of the 'two-variable' regressions before the multivariate equations are introduced. Firstly, the money supply variable appears to be quite insignificant to the explanation of quarterly price inflation in Trinidad and Tobago. Secondly, the wage rate, import prices, exports, the bank loan rate, net domestic credit, and gross government debt all seem to be reasonably important influences on the rate of change in aggregate retail prices. The first four mentioned have served as propulsive elements while the last two variables appear to have served as a dampening force on Trinidad and Tobago

inflation. Thirdly, in this preliminary analysis, financial variables seem to be critical elements in the inflationary process.

The right hand side variables from equations (i) to (v) and (vii) were utilised in a stepwise multiple regression model for price determination. Only a sample of the results are reproduced here:

$$\begin{aligned}
 \text{(a)} \quad \Delta \ln P_t &= 0.0074 + 0.7918 \Delta \ln W_{t-4} + 0.0407 \Delta \ln PIM_{t-1} \\
 &\quad (3.08) \qquad\qquad\qquad (2.00) \\
 &\quad + 0.0940 \Delta \ln EMR_t - 0.2907 \Delta \ln (GGD/P)_t \\
 &\quad (1.34) \qquad\qquad\qquad (-3.48) \\
 \bar{R}^2 &= .6529 \qquad F = 13.33 \qquad C.V = 0.5437
 \end{aligned}$$

$$\begin{aligned}
 \text{(b)} \quad \Delta \ln P_t &= 0.0063 + 0.9324 \Delta \ln W_{t-4} + 0.0401 \Delta \ln PIM_{t-1} \\
 &\quad (1.94) \qquad\qquad\qquad (1.94) \\
 &\quad - 0.3046 \Delta \ln (GGD/P)_t \\
 R &= .6416 \qquad F = 17.36 \qquad C.V = 0.5437
 \end{aligned}$$

$$\begin{aligned}
 \text{(c)} \quad \Delta \ln P_t &= 0.0077 + 0.99102 \Delta \ln W_{t-4} - 0.3540 \Delta \ln (GGD/P)_t \\
 &\quad (4.00) \qquad\qquad\qquad (-4.06) \\
 \bar{R}^2 &= .6053 \qquad F = 21.91 \qquad C.V = 0.5890
 \end{aligned}$$

$$\begin{aligned}
 \text{(d)} \quad \Delta \ln P_t &= 0.0236 - 0.4445 \Delta \ln (GGD/P)_t \\
 &\quad (-4.25) \\
 \bar{R}^2 &= .3931 \qquad F = 10.10 \qquad C.V = .7250
 \end{aligned}$$

$$\begin{aligned}
 \text{(c)} \quad \Delta \ln P_t &= 0.0084 + 0.7403 \Delta \ln W_{t-4} + 0.0299 \Delta \ln PIM_{t-1} \\
 &\quad (2.78) \qquad\qquad\qquad (1.33) \\
 &+ 0.0952 \Delta \ln DMR_t + 0.0204 \Delta \ln (EX/P)_t \\
 &\quad (1.35) \qquad\qquad\qquad (1.21) \\
 &- 0.2645 \Delta \ln (GGD/P)_t - 0.0212 \Delta \ln MDC_t \\
 &\quad (-2.77) \qquad\qquad\qquad (-0.68) \\
 \\
 R^2 &= .6512 \qquad F = 9.44 \qquad C.V = 0.5437
 \end{aligned}$$

It can be seen from equations (c) and (d) that GGD and W contribute most to the explanation of the rate of inflation in Trinidad and Tobago over the period. While the addition of other variables does result in greater adjusted co-efficients of variation, the net gain in explanatory power is quite small, and is obtained at the cost of less efficient estimates of the regression co-efficients. Of the remaining credit variables (other than gross government debt), the commercial bank loan rate is the most significant but adds only about .01 to the adjusted co-efficient of determination derived from the regression with gross domestic credit, the wage rate, and import prices.

To pursue the statistical analysis of the model even further, we estimated the structural relations embodied in equations (11) and (12). Quite poor results obtained for the wage rate equation. A rather weak relationship ( $R^2 = .1826$ ) was established between changes in the logarithms of the wage rate and changes in the logarithms of

synchronous and lagged prices.

$$(f) \quad \Delta \ln W_t = 0.1719 - 0.1674 \Delta \ln P_t + 0.3408 \Delta \ln P_{t-1}$$

$$\qquad \qquad \qquad (-1.21) \qquad \qquad \qquad (2.42)$$

$$R^2 = .1826 \qquad F = 3.13$$

The longest lag we experimented with was four quarters. It is possible that wages adjust even more slowly than that to changes in the price level. More likely, perhaps, is an explanation of the poor fit in terms of the omission of variables, such as profit expectations, relative wages, and market power that many theorists suggest are important determinants. The results indicate nonetheless that whatever self-reinforcing character inflation may possess does not stem from the wage/lagged price relationship.

For the import price equation, the results were as follows. Data pertains to the period 1971(1) to 1974(4) since prior to 1971 the exchange rate was quite stable.

$$(g) \quad \Delta \ln PII_t = -0.0340 + 2.2468 \Delta \ln FP_t + 0.6453 \Delta \ln FP_{t-2}$$

$$\qquad \qquad \qquad (6.04) \qquad \qquad \qquad (1.67)$$

$$\qquad \qquad \qquad + 1.8214 \Delta \ln XCR_t + 1.4150 \Delta \ln XCR_{t-2}$$

$$\qquad \qquad \qquad (5.71) \qquad \qquad \qquad (1.41)$$

$$R^2 = 0.6436 \qquad F = 14.84$$

$$(h) \quad \Delta \ln PHi_t = -0.0152 + 2.4166 \Delta \ln FP_t$$

$$\qquad \qquad \qquad (6.17)$$

$$\qquad \qquad \qquad + 1.9430 \Delta \ln XCR_t$$

$$\qquad \qquad \qquad (4.00)$$

$$R^2 = .7805 \qquad F = 23.11$$

$$(1) \quad \Delta \ln FPI_t = 0.00076 + 2.1109 \Delta \ln RP_t$$

(3.82)

$$R^2 = .511$$

Evidently both foreign prices and exchange rate changes contribute importantly to the behaviour of import prices. Particularly worthy of note in the present context is the moderate push effect of exchange rate changes on the import price index and hence on inflation. This was so, despite movements in the exchange rate in both upward and downward directions. It may be argued that domestic commerce in their pricing policies respond in an asymmetric manner to changes in the exchange rate, so that while exchange rate depreciations result in higher prices, exchange rate appreciation does not correspondingly result in downward price adjustments.

#### IV: CONCLUSION

In the light of data problems and some weaknesses in econometric technique, (for example the use of the static expectations assumption to circumvent the problems posed by lagged dependent variables), any conclusions arrived at from the study must be tentative. Nonetheless, they do provide some insight into the nature of the recent inflationary process in Trinidad and Tobago, and especially into the role of financial variables.

With respect to the latter aspect, we conclude that the behaviour of domestic financial variables, notably government finan-

cing, and the exchange rate have had an important bearing on the pace of inflation in Trinidad and Tobago. The monetary authorities, therefore, have the power to moderate the pace of inflation caused by cost-push factors such as the wage rates and foreign prices by increasing the level of government indebtedness and by avoiding exchange rate depreciation. The mechanism underlying the role of the government debt may be one by which an increase of the local debt withdraws purchasing power from the community and an increase in the foreign debt provides the means for closing the aggregate demand gap by imports.

Secondly, it can be concluded that though the availability and price of domestic bank credit are contributors to increases in the general level of prices, their influence has been so mild as not to warrant any grave policy concern. This is not to say, however, that explicit regulation of these variables as instruments of anti-inflation policy might not be worth pursuing.

FIGURE I

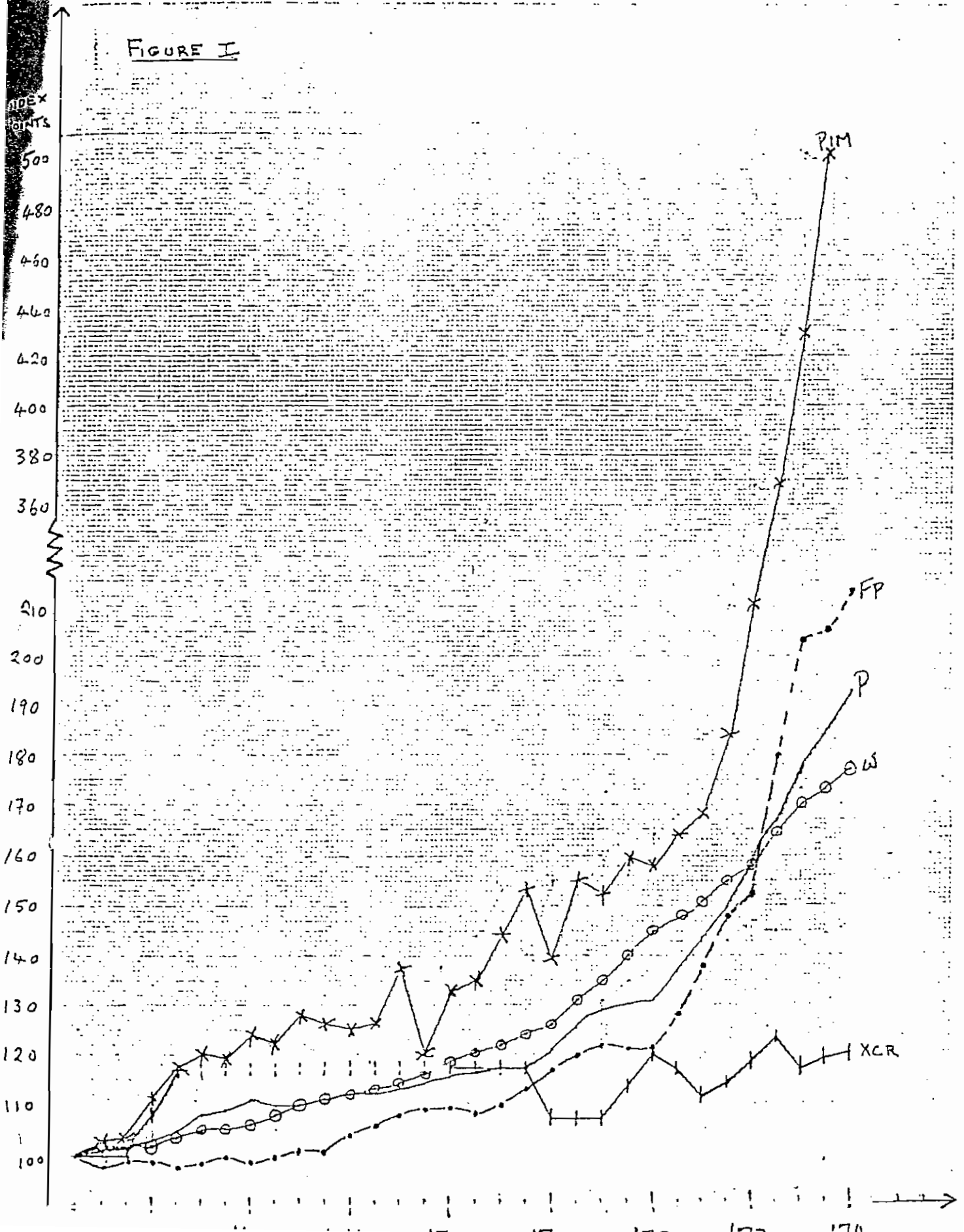


FIGURE 2

