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THE EFFECT OF INFLATION ON CARIBBEAN ECONOMIES

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INTRODUCTION

In market economies it has become normal to expect regular moderate increases in the price level. However, such increases have tended not to cause undue concern since the effect on real incomes and economic activity in general have not usually been of particular significance. What concerns us here, is the extraordinarily large increases in prices which have occurred over the past two or three years. Such price increases have created dislocations of quite a serious order in the economies of many countries including those of the Caribbean. At the same time as the effects of this inflationary situation have been working themselves out, there have been other situations which have had some dislocating effects on the world economy. In particular, one refers to the oil crisis, the food crisis and major recessions in some of the industrialised countries. The purpose of this paper will be to examine the behaviour of certain economic and financial variables in selected Caribbean economies during the past four years in the context of the Inflationary situation. In so doing, an attempt will be made to establish what effects were principally due to the inflationary conditions as well as to advance some possible explanations for the changes which occurred.

In some Caribbean countries, almost every aspect of the economy has been effected. In some instances, of course, the effect on the same sectors have differed markedly. This may imply that the effect of inflation on different Caribbean economies is a function of their structure. In other words, the extent and nature of economic growth and development in times of inflation may be very dependent on the main components and structural features of the economy.

In this paper, the economies of three Caribbean countries will be examined, viz. Barbados, Dominica and Jamaica. All three countries are net importers of oil, and all three have a strong dependence on exports as a generator of economic growth. However, the economies of Jamaica and Barbados are more broadly based than is Dominica's and both Barbados and Jamaica have their own central banks while Dominica is still a member of the East Caribbean Currency Authority. This later feature of course is an indication of the greater degree of control over monetary variables which Barbados and Jamaica can exercise as compared to Dominica. The other major background feature of these three economies is that Jamaica and Barbados are classified as More Developed Countries (in the Caribbean context) while Dominica is one of the Less Developed Countries of the region.

It is hoped to identify a number of effects of the inflationary situation which have worked to promote growth in a number of sectors, to retard activity in others, to reduce the levels of employment, to change the role of government in the economy, to dampen investment levels and overall to contribute to stagnation in the economies of these countries. Possible explanations for these phenomena will be advanced, particularly where the effects on the economies appear to have differred somewhat from what the theoretical literature would lead one to expect.

TREND OF PRICE INCREASES

Over the last five years, prices have behaved somewhat differently in these countries, in so far as the trend of increases is concerned. In Barbados for example, prices increased by 7.8 per cent in 1970 over the level of prices in 1969 and thereafter by over 12 per cent in 1971 and in 1972. In 1973, prices increased by an extraordinary 21.9 per cent and by an even more fantastic 41.4% in 1974. Jamaica had a somewhat different situation, where the increase in prices in the Kingston area in 1970 was 9.7 per cent but the increase fell to 5.1 per cent in 1971. However, the rate of price increases rose again in 1972 to 9.4 per cent and was even greater in 1973 with prices increasing by 29.5 per cent. In 1974, prices increased, but by a lower percentage rate (20.8 per cent) than in 1973. In the rural areas, the increases in prices were in all these years higher than the increases in the urban area but the trend was the same.

The situation in Dominica was more similar to Jamaica's than to Barbados. A price increase of 12.1 per cent in 1970 was followed by only mild increases of 4.6 per cent and 3.5 per cent in 1971 and 1972 respectively. But in 1973, the percentage change in prices once more increased, this time to 12 per cent and in 1974 the increase in prices was a tremendously large 36.3 per cent. (See Table 1).

TABLE 1

Changes in Retail Price Index 1970-74

Country	Change in year ended / Over index at end of year	1970 / 1979	1971 / 1970	1972 / 1971	1973 / 1972	1974 / 1973
Barbados	All items	7.8%	12.4%	12.1%	21.9%	41.4%
	Food	8.0%	14.4%	12.7%	27.7%	41.2%
Jamaica[1]	Kingston Area - All items	9.7%	5.1%	9.4%	29.5%	20.8%
	Rural Area - All items	10.5%	6.8%	7.7%	32.1%	27.4%
Dominica[2]	All items	12.1%	4.6%	3.5%	12.0%	36.3%

Some explanation may be advanced for these differences in rates of inflation. On average, the inflation rate in Barbados was higher than in the other two islands. One explanation of this might be that imported inflation was a significant factor and Barbados has a higher import component of consumption expenditure than does either Jamaica or Dominica. This is particularly the case where food supplies are concerned. Both Jamaica and Dominica produce far more of their food requirements than does Barbados. With world food prices rising, as a result of a tight supply situation, the effect on food prices would be much greater in Barbados than in the other two countries. In all three countries food has a weight of more than 45 per cent in the overall consumer price index and in Barbados the weight is of the order of 58.7 per cent.

1. Annual Average 2. Average monthly figures

Sources: Central Bank of Barbados: Economic and Financial Statistics, July, 1975
National Planning Agency, Jamaica: Economic and Social Survey, Jamaica 1974 E.C.L.A.: Economic Activity - Caribbean Community Countries Part VII - W.I. Associated States, 1973

It is therefore, clear that an escalation of world food prices would have a proportionately greater effect in Barbados than in the other two countries.

Other factors such as the increased costs of energy requirements, raw material inputs and capital imports would be of the same order of relative importance in all three of the countries. The main factors in the increases in prices of the items other than food would be, of course, the increased price of oil and oil products like fertiliser, petroleum etc. and increasing costs of shipping and insurance as well as the increased cost of capital and intermediate goods. Where insurance and freight charges are concerned, Dominica might have suffered more than Barbados and Jamaica because of the transhipment arrangements which have to be used in moving goods to Dominica from outside of the region. Both the cost of insurance (because double handling etc. is involved) and freight would have increased more than in the case of Barbados or Jamaica with their higher proportion of direct shipping.

To a large extent, as well, the level of increases may have depended on the degree of price control implemented and maintained by governments. For example, in 1974 which was the major year for inflation, the rates of increased of prices for Barbados was 41.4%; in Dominica the rate of increase was 36.3% and in Jamaica, the rate of increase was 20.8%. One could perhaps compare the behaviour of prices in Jamaica on the one hand with the behaviour of prices in Dominica and Barbados on the other. The price control apparatus in Jamaica is much more extensive than in Barbados or Dominica, possibly because of longer experience with the implementation of such policies and the allocation of relatively more resources for the task.

It is interesting to note, though, that Barbados, which has a more extensive price control machinery than does Dominica, experienced a higher rate of inflation than did Dominica. But it is possible that prices were rising very rapidly in areas not normally subject to price control. Furthermore, as mentioned earlier the food supply situation in Barbados is rather more subject to imported inflation than it is in Dominica. In addition, the structure of manufacturing in Barbados depends much more on imported inputs than in Dominica. In any case the size of manufacturing in Dominica is very small in comparison to Barbados. There is far less scope, therefore, for inflationary trends to show up in this sector of the Dominica's economy than there is in Barbados.

So far, one has identified some sort of functional relationship between the level of inflation and other features of the economies of Jamaica, Dominica and Barbados. Specifically, it seems clear that the level of inflation has been affected by dependence of the food supply situation on foreign suppliers, the structure of consumption, the size and structure of the manufacturing sector requiring foreign inputs, and the extent of price control mechanisms.

EXTERNAL SECTOR

It has been implied so far that the openness of the Caribbean countries has to a large extent been contributory to the high inflation experienced by Jamaica, Barbados and Dominica, over the last few years. A look at the behaviour of the entire external sector is necessary. Table 2 sets out the percentage growth rates of imports, exports and the visible trade deficit over the years 1970 to 1974 for Barbados, Jamaica and Dominica.

TABLE 2

Rates of Growth of Visible Trade, 1970-74

	Imports			Exports			Deficit in Visible Trade		
1970	B'dos.	J'ca	Dom.	B'dos	J'ca	Dom.	B'dos	J'ca	Dom.
1970	15.7	20.5	26.9	6.6	16.2	-19.5	29.6%	29.3	89.0%
1971	8.3	2.9	1.4	1.4	0.3	16.2	4.8%	13.6	- 7.0%
1972	11.0	9.4	8.5	5.3	5.6	1.3	13.9%	9.7	13.7%
1973	21.7	22.5	-10.0%	23.0	18.1	24.4	21.1%	29.3	-31.8%
1974	26.9	40.8	n.a	65.8	87.3	n.a	9.0%	-25.3	n.a

After relatively large increases in imports in all three countries in 1970 the following year saw a decline in the rate of growth. In 1972, however, the rate of increase grew to approximately 10% in all three countries. During 1973 and 1974 the rate of increase reached over 20% in both Jamaica and Barbados. The explanation for this behaviour of imports is clear. The relatively good economic conditions of the late 1960's and early 1970's together with the slow but steady rise in world prices led to substantial increases in imports. But when the boom slackened off and incomes ceased to grow as quickly the rate of growth of imports fell somewhat. What happened in 1973, however, was that the prices of oil and related products increased tremendously by about 300%. In addition, the lag in world food supplies behind demand led to substantial price increases. The prices of those imports into which petroleum products represents an important input also showed a sharp upward trend in 1973 and 1974, in the two countries mentioned above.

n.a : Not available

Sources: Statistical Service, Barbados: Annual Overseas Trade Report
Central Bank of Barbados: Economic and Financial Statistics. July 1975
National Planning Agency, Jamaica: Economic and Social Survey, Jamaica 1974
E.C.L.A.: Economic Activity Caribbean Community Countries. 1973. 1974.

The situation in Dominica, however, was somewhat different. The value of imports in 1973 fell by 10%. This is a strange phenomenon in view of the generally inflationary conditions existing in that year. However, there were some factors in the situation which renders a certain degree of plausibility to the result. In the first place, the economy seems to have entered a phase of stagnation or even decline. Such crude estimates as are available suggest that Gross Domestic Product increased by 14.2 percent at current prices in 1973. However, in the content of an inflationary situation (the retail price index rose by almost 12% in that year) the growth in real output (and income) could have been very small or even negative, thus depressing the demand for imports. Furthermore, the country appears to have had problems in procuring supplies of some commodities during the latter part of the year in the wake of the increase in oil prices, and the supply constraint may have been further aggravated by the country's dependence on trans-shipment of most of its supplies from other ports in the Caribbean.

From the data in Table 2 one observes that the growth in exports for the two years, 1973 and 1974, from all of the three countries being considered was on average higher than the growth in imports. This was occurring for the first time in at least five years. The principal reason for this fairly spectacular increase in the value of exports in those years was the inflationary conditions in world and commodity markets. For example, sugar began to increase in price from 1973 and so too did bananas and most of the other export crops in the region. It must be noted carefully, however, that most of the increase in exoorts was due not to an increased level of physical output but rather to the increased level of prices of these exports. Normally one would expect the sharp rise in export prices to act as a spur to increased production of these commodities and at a later stage in this paper one shall have to look at this aspect of the effects of inflation in the region.

At the beginning of this excessively inflationary period, both Barbados and Jamaica experienced unprecendented declines in the level of their Foreign Exchange Reserves. In Barbados, Foreign Exchange Reserves at the end of 1973 were 44.5% below the level of 1972. In Jamaica, the decrease was 25.7% over the same period.

Even though, therefore, exports increased substantially in both of these countries during 1973, and the percentage increase in exports was roughly of the same order as the increase in imports, the latter was on a far larger base and so the visible trade deficit would have increased. Foreign exchange reserves would, therefore, fall substantially. So great was the shock of this fall in reserves in Jamaica, that strict import rationing and control of currency movements were implemented early in 1974 and easy convertibility of the Jamaican dollar was suspended. In Barbados also, currency movenents and imports were also strictly supervised and controlled by the Central Bank. In 1974, the Jamaican Government took advantage of the rising prices of aluminium and alumina products and imposed a new and higher tax structure on the foreign-owned bauxite/alumina companies operating in Jamaica. In addition, the price of sugar really spiralled upward in 1974 and with a larger crop of sugar reaped in 1974 than in the previous year Jamaica's earnings of foreign exchange increased significantly. The value of imports increased by 87.3% during 1974.

The effect of the high sugar prices also worked to the advantage of Barbados, for even though the sugar crop was not a particularly good one, sugar prices were so high that Barbados made record earnings for sales of sugar overseas. In addition to the usual increase in other exports, the effect of this sugar situation was to raise the value of exports for 1974 by 65.8% over 1973. With such fortuitous circumstances prevailing in the export markets, both Barbados and Jamaica were able to raise their holdings of foreign exchange reserves in 1974. Compared with the losses in 1973, foreign exchange reserves increased by 15.4% at the end of 1974 over the end of 1973 level in the case of Barbados, and for Jamaica, the increase was 73.6% over the same period. As a matter of fact, the increase in the level of Jamaica's Foreign Exchange Reserves was so good, that the holdings of Foreign Exchange Reserves at the end of 1974 was actually 29% above the level of Foreign Exchange Reserves at the end of 1972. In other words, the ability of both these countries to increase their imports of raw material inputs into manufacturing and other industries, and to increase the purchases of capital goods were substantially increased in 1974 partly as a result of inflationary conditions in the export markets for their products.

Not only did the growth of exports help to reclaim lost ground in so far as foreign exchange reserves are concerned, but they also helped to decrease the rate of growth of the visible trade deficits. Table 2 shows that between 1971 and 1973 for Barbados and Jamaica, the deficit on the visible trade was in general tending to grow at a faster rate each year. In Dominica, an 89% growth in the visible trade deficit in 1970 was reduced to a 7% drop in the deficit in 1971. In 1972, however, the visible trade deficit again grew, this time by 13.7% and fell in 1973 by 31.8% reflecting the effect of a growth rate of almost 25% in the value of exports and a decline of 10% in imports to which we have already referred.

No figures are available for Dominica's trade balance in 1974 but in Barbados because of relatively good earnings from sugar combined with import controls the visible trade balance rose by only 9% compared to an increase of 21% during the previous year. In Jamaica the change was even more dramatic. An increase of 29.3% in 1973 was converted into a reduction of 25.3 percent in 1974. Once again the reasons were good export earnings and stricter import controls.

Unfortunately, the increase in export earnings during 1973 and 1974 was principally due to price increases and not to any substantial increases in physical output. Certainly, during 1973 the production of agricultural commodities for export stagnated at the level of previous years and in some instances even declined. In 1974, however, some small growth in the level of production of these agricultural commodities was evident. Possibly, the upward trend in prices was beginning to affect production after a lag.

During the late 1960's and very early 1970's there had tended to be a marked upward trend in the growth of income from service industries such as tourism. This factor would have tended to offset to some extent the growing deficits on visible trade. In other words, the current account deficits were not growing as quickly as the deficits on visible trade. During 1973 and 1974, however, there was some slowing down in the rate of growth of tourist expenditure in the countries concerned. This means, therefore, that since the onset of the marked inflation the growth in the deficits on visible trade were no longer being moderated to the same extent as previously. In addition, the cost of services purchased from abroad was also being affected adversely by inflation and generally unstable monetary conditions.

The effect of these changes in the structure of foreign exchange earnings is that the countries will have to monitor continously the growth of commodity imports and promote visible exports to an even greater extent since the phenomenal growth in earnings from services to partially relieve the visible trade deficit can no longer be relied on. Hopefully this will induce a switch to greater emphasis on investment in the productive sectors of the economy.

Another aspect which has not yet been adequately documented is the effect of inflation on remittances from abroad. A large number of West Indian people have emigrated over time to the United Kingdom, the United States and Canada, all of which have been plagued by abnormal rates of inflation in recent times. The volume of remittances to dependents at home has built up to significant proportions in a number of Caribbean countries including those being studied here. It can be assumed that inflation abroad would have limited the extent to which the emigrants could have remitted funds to dependents. The disposable income of the latter would therefore have tended to decline. To the extent that incomes arising from this source are spent on domestic output there would have been a depressing effect on the local economy. Of course, this is only a hypothesis which needs to be supported by more detailed research.

STRUCTURE OF CONSUMPTION

Related to the question of the significant growth of imports is that of the structure of consumption. As mentioned earlier food prices have been among those most affected during the recent inflation. As a result the consuming public has in some cases switched to greater consumption of commodities which would normally have been exported. This has been particularly the case with bananas. If this trend continues and production grows to match the increased demand (rather than supplies simply being diverted from export markets) a contribution would have been made towards solving the problem of extreme vulnerability to external economic conditions.

It should be noted also that the drastic rise in oil prices has also let to renewed efforts to find new sources of energy. In Barbados the commercial production of limited quantities of crude oil is now possible and resources of natural gas have also been located. Jamaica

has renewed interest in the search for oil both on - and off-shore, and Dominica is also anxious to explore new possibilities of thermal energy which might exist in the main volcanic sections of the island. In other words, one effect of the inflationary structure has been to provide the necessary incentive for increased investment in energy exploration enterprises. The prospects of using solar energy have also become brighter and plans have been announced for more intensive research in this connection.

INVESTMENT

Traditional theory postulates that inflation should encourage investment. The basis of this assumption is that inflation tends to increase the profit margins of producers and distributors and so induce increased investment. Furthermore, if the producer expects inflation to continue he should try to avoid increased costs of investment which would occur if he postpones the decision to invest.

This does not appear to have been the situation in the Caribbean countries examined. While the level of investment measured in current prices increased in some countries during the recent inflationary period the increases seem to have been due principally to the higher price level for capital goods. Furthermore, there appears to have been a tendency for the public sector to increase its share of investment relative to the private sector. In some countries when the public sector was not so active the level of investment might even have fallen in real terms.

A number of hypotheses can be put forward as to why actual behaviour of investors in the Caribbean does not conform with what the theory would lead us to expect. The first one is that even if inflation in the region actually gives rise to increased profits, the structure of ownerships of assets is such that increased investment in the private sector is not necessarily made. Most of the profitable concerns in many countries are foreign-owned and their profits tend to be repatriated rather than re-invested. The second reason is that even when businesses are locally owned the propensity to invest, generally speaking, tends not to be high. Profits which have been made in the distribution sector or in traditional export industries such as sugar tend not to be channelled into new production areas. Of course, to the extent that governments by way of taxation can appropriate some of these surpluses, investment in the public sector may be increased. But investment in the public sector tends to be still heavily weighed towards infrastructure rather than directly productive activities. And in many cases recurrent expenditure has been pressing so hard on recurrent revenue that governments have had to increase their levels of borrowing quite substantially so as to carry out such investment as was undertaken by the public sector.

Another reason for the lack of spectacular growth in real investment in some countries has been a tendency towards a slowing down in private capital flows from abroad. One reason could be that inflationary conditions in the traditional source countries together with the generally unsettled state of money markets have made investors adopt a "wait and see" attitude.

Inflation in the United Kingdom has been one factor making for the substantial depreciation of the exchange rate of the pound in international money markets. Other things being equal, the depreciation of the value of the pound should have served to encourage North American investment in the area. But as mentioned earlier, there were many other factors working in the opposite direction. Not least of these, was the decline in demand in the North American market for the type of export commodities for which investment funds are usually made available by private investors.

PUBLIC SECTOR ACTIVITY

As pointed out earlier some governments have been tending to play a much more important role as far as capital expenditures are concerned. In Jamaica, for example, government capital expenditure during 1974 increased by 77.1% over the previous year. Even allowing for rising prices this represented a substantial increase in real investment as far as the public sector was concerned. This was made possible partly by the relatively large increase in revenues as a result of the new tax structure imposed on the bauxite/alumina industry. It can be said that these new tax measures were triggered by the effect of imported inflation since without the additional foreign exchange made available as a result the economy would have been much harder hit by the combined effect of the increases in prices of oil, food and raw materials.

TABLE 3

Growth in Government Activitv. 1970-1974

	Current Revenue			Current Expenditure			Capital Expenditure		
Year	B'dos	J'ca	Dominica	B'dos	J'ca	Dominica	B'dos	J'ca	Dominica
1970	19.6%	22.0%	11.3%	13.8%	22.6%	23.1%	19.6%	30.4%	128.29%
1971	13.6%	14.8%	12.6%	10.7%	15.9%	16.3%	13.6%	22.4%	80.79%
1972	8.4%	14.9%	1.6%	13.4%	26.2%	-8.6%	8.40%	17.8%	137.19%
1973	23.6%	22.3%	-7.7%	32.8%	26.9%	28.8%	23.6%	16.0%	-71.19%
1974	19.9%	47.6%	3.8%	30.1%	47.9%	-6.3%	37.2%	77.1%	-40.39%

Sources: Ministry of Finance and Planning, Barbados: Estimates of Revenue and Expenditure, different issues

National Planning Agency of Jamaica: Economic and Social Survev of Jamaica 1974

E.C.L.A.: Economic Activitv - Caribbean Communit_, Countries - Part VII - W.I. Associated States, 1973, 1974

Estimates of Dominica, 1971, 1972, 1973

Statistical Yearbook of Jamaica, 1973

The large increases in capital expenditure which were made by the Barbados and Jamaica governments were parallelled by similarly large increases in current expenditure for 1973 and 1974. Even by 1972, the rate of growth of the current expenditure of the Jamaica government had reached 26% and this rate of growth increased significantly in 1974 to almost 48%. In Barbados for the period 1970-1972 the average annual increases in current expenditure did not exceed 13.8% (See Table 3). However, in 1973, the increase in current expenditure was of the order of 33% and in 1974 the increase was 30.1%. Certainly in the case of Barbados, stringent controls were instituted over current expenditure so that all expenditure which was not particularly urgent was omitted and the control of expenditure even went so far as to the point where there was a curtailment of the creation of new positions within the public sector. Government's role as one of the primary generators of employment was therefore substantially affected by the high rate of inflation. With fewer possibilities of employment in the government sector the onus was therefore thrown onto the private sector to absorb a far larger percentage of the increase in the labour force than was customary. With relatively little new investment in the private sector and some firms actually reducing their labour force there has been very little additional job creation in the private sector and so the unemployment problem in the country appears to have worsened.

In Jamaica the unemployment situation has not shown much improvement during the recent inflationary phase. However, this was not because of government curtailment of employment expansion but rather as a result of the slowing down of investment in the private sector. A relatively high percentage of new housing investment during the period since mid-1973 was undertaken by the government. In addition, the government's "crash programme" to relieve unemployment (financed out of the additional revenues occasioned by the bauxite levy) helped to create a substantial amount of employment. However, with the increase of the labour force and the slowing down of the rate of expansion of the private sector the result was merely to prevent the rate of unemployment from increasing.

Such data as is available for Dominica suggests that public sector activity declined drastically in 1973 and 1974 after having been at very high levels during the preceding three years. Capital expenditure in the public sector actually fell by 71.1% and 40.3% in 1973 and 1974 respectively. In the latter year government current expenditure also fell by 6.3%. These declines reflected the behaviour of government revenue which in turn arose out of the low level of economic activity in the economy. With the stagnation of the banana industry and the slow growth of private investment in other activities there has been little real growth, if any, in the economy over the past few years. Government revenues actually declined by 7.7% in 1973 and increased by only 3.8% in 1974. With inflation proceeding at a brisk pace and in the absence of budgetary aid large cuts had to be made in certain items of current expenditure so as to more nearly achieve some sort of balance in the budget.

As far as capital expenditures are concerned the main sources would be external aid and external borrowing. As indicated above there was no surplus in the current account to be applied toward the capital budget. Furthermore, the rigidity of the currency board system, under which countries like Dominica operate, place severe limits on the extent to which loans can be raised in the local market.

External aid to Dominica appears to have declined absolutely in 1973 and 1974. We have been unable to identify the reasons for this phenomena. As far as external borrowing is concerned the main source for the less developed countries of the region has been the Caribbean Development Bank. However, disbursements up to the end of 1974 were low in relation to loan approvals reflecting the normal lags experienced by institutions of this nature and accentuated by the high proportion of loan approvals accounted for by projects with long gestation periods such as ports. In addition to the normal delays associated with the implementation of projects the problem was compounded by the inability of many governments of the less developed countries to find the counter-part funds necessary for project implementation. Furthermore, in an inflationary situation delays in the implementation of projects can mean large increases in costs resulting in the need for applications for additional loans if the project is to go forward. It should be noted that the government of Trinidad and Tobago, the only CARICOM country which was in a position to benefit from the rapid escalation of oil prices, has provided a fund of TT$10 million in the Caribbean Development Bank to assist the less developed countries to meet their counterpart requirements. This has already begun to assist in the speedier implementation of projects.

The significant increases in public sector capital expenditures in Jamaica and Barbados which was referred to earlier was accompanied by significant increases in the public debt since recurrent expenditure tended to rise at a faster rate than recurrent revenue. The level of public borrowing in Jamaica during 1974 was more than 60 percent higher than in the previous year and in Barbados the corresponding growth was of the order of 40 percent. The rapid rate of growth of public borrowing in relation to recurrent revenue is almost sure to lead to a situation where an increasing share of the latter will have to be directed towards servicing of the public debt.

It should be noted, however, that the sizable increase in public borrowing tended to be accompanied by a noticeable increase in the share obtained from local sources. This shift towards greater dependence on the local capital market might have been due in part to a conscious effort on the part of governments to reduce the burden of future foreign debt service payments. A number of other factors might have influenced the decision. Among these one can point to the sharp increases in interest rates abroad and the reluctance of many institutional investors overseas to lend at long term in the face of an unstable international situation.

Domestic money markets could hardly escape some effects of the international monetary situation together with the heavy increases in local borrowing by governments. If the Treasury Bill rate is taken as a rough indication one finds that in Barbados for example the rates increased sharply from somewhere under 6% at the end of 1972 to 8% at the end of 1973. Approximately the same rate was prevailing at the end of 1974. A similar trend was also noticeable in Jamaica when the rate moved from approximately 5% to more than 7%. The inflationary situation appears to have affected the cost of government borrowing both at home and abroad but in terms of availability of funds the local markets offered a distinct advantage.

TABLE 4

Movements in Government Treasurv Bill Rates

Year Ended	Barbados	Jamaica
1970	7.10%	4.38%
1971	6.69%	3.52%
1972	5.98%	4.97%
1973	8.10%	7.14%
1974	8.04%	7.20%

Source: Central Bank of Barbados: Economic and Financial Statistics Julv 19-5

GROWTH OF OUTPUT

Although data at constant prices are not generally available such crude indicators as exist suggest that the relatively high rates of growth of domestic output which occurred in many countries during the late 1960's and early 1970's did not continue into the period of abnormally high inflation. In Jamaica, for example, real growth rates approximately 8% between 1969 and 1972 were reduced to an average of about 3% during the following two years. High growth rates at current prices tended to be a reflection more of rapid inflation than of increased output.

It has been postulated by some theorists that substantial growth in real output should occur during inflationary conditions since the increased level of prices, and correspondingly of profits, should encourage producers to invest more and so boost production.

As the phenomenon of "stagflation" has clearly demonstrated the proposition is not necessarily valid depending as it does on the doubtful assumption that as a general rule consumer prices can be increased at a faster rate than cost of production without at some point affecting the level of sales. It also assumes that profits are, as a matter of course, reinvested in the production sectors. The evidence in the Caribbean does not seem to confirm this hypothesis.

It might be useful to look briefly at the major trends in some of the main productive sectors of the economy.

Agriculture

The inflationary period has resulted in increases in prices of agricultural produce both for export and domestic consumption during the years 1973-74. There were spectacular increases in the prices of some commodities such as sugar.

Other things being equal, such price increases should have acted as a spur to increased production. It is as yet too early to make authoritative statements about whether this is the case but it is clear that the cost structure has also been rising thus making inroads into the surpluses generated by higher prices. The following increases in prices of selected fertilisers in Jamaica during 1974 illustrates the point.

TABLE 5

Prices of Selected Fertilisers in Jamaica

	J$ per ton		Percentage Change
	1973	1974	
Urea	133.6	323.8	142.4%
Complex 12-24-12	127.4	241.7	89.7%
Super Triple Phospate	134.5	252.1	87.4%
Sulphate of Ammonia	77.9	178.6	129.3%
Muriate of Potash	95.0	114.9	20.9%

In addition the price of machinery, fuel, transportation etc. rose very considerably during the same period. Wage rates have also been rising in agriculture. Wage increases tended to originate in the export sector, where in some cases windfalls were being experienced, and permeated through to the domestic sector of agriculture.

With all these inputs rising in price the cost structure of agriculture in the region rose significantly and it is not clear whether the inflation has increased the overall profitability of the sector. As far as some crops are concerned costs might even have risen faster than prices, thus reducing profitability.

In some instances, as in the case of sugar, Governments have taxed away significant portions of the windfall gains arising from spiralling prices. But it is not always the case that such funds are channelled back into the agricultural sector. The inflationary situation has also increased the price of agricultural land thus making land acquisition more difficult especially for the small farmer. Thus at a time when food prices are rising abroad and the supply situation is also tight it is not clear that the necessary conditions have yet been created for bringing about the spectacular increases in food production which the circumstances warrant.

Construction

The indications are that the rate of construction of new housing at all levels has tended to stagnate during the inflationary phase. This is not surprising in view of the combination of higher building costs, increased interest rates on mortgages and rising land prices at a time when the population is also faced with spiralling costs of other basic necessities such as food.

It might be argued that if rates of inflation are high and are expected to continue the rational approach is to borrow now since the burden of repayment will be progressively reduced as inflation proceeds. However, this approach ignores the downpayment which has to be made in respect of mortgages and in a period of rapid inflation this may be increasingly difficult to come by.

The decline in private sector activity in this sector has been partially offset by public sector activity financed by loans from international agencies or by windfall revenues derived from export commodities such as sugar or bauxite.

There has also been some slowing down in construction of new hotel accommodation because of a levelling off of the rate of growth of the demand for such accommodation. In Jamaica, in particular, hotel construction had been a significant portion of activity in the sector during the late 1960's and early 1970's.

Another very important area of construction is that of road building and repair. The period under review witnessed sharp increases in the cost of both materials and labour associated with this activity. With limited government revenue available, particularly in the case of Barbados and Dominica, much of the new road construction programme had to be shelved temporarily and even road repair had to be cut back in the attempt to keep public expenditure within reasonable bounds.

The result of the circumstances outlined above has been a tendency towards reduction of the employment generated by the construction sector. Traditionally this sector has been a relatively large employer of both skilled and unskilled labour. As a consequence the pace of expansion of the sector has important implications for movements in the overall level of employment.

MANUFACTURING

The relatively slow rate of growth of real income and employment appears to have led to a reduction in the growth of demand for manufactured goods. In addition, because the sector depends heavily on imported inputs it has felt the effects of increases in costs of raw materials and freight rates.

As far as the enclave industries are concerned the high rate of inflation in the Caribbean countries relative to North America tended to erode some of the cost differential which made location in the Caribbean advantageous in the first instance. This factor together with sagging demand as a result of recession in the United States led to closure or retrenchment of labour in some of these industries in Barbados and Jamaica.

TOURISM

"Stagflation" in the traditional tourist markets tended to reduce the amount of discretionary income available for expenditure or foreign travel. Furthermore, air fares tended to increase and so has the cost of hotel accommodation in the Caribbean. For these reasons, the rate of growth of tourist arrivals has fallen in Barbados and levelled off in Jamaica. (See Table 6).

TABLE 6

Growth of Tourist Arrivals 1970-1974

	1970	1971	1972	1973	1974
	%	%	%	%	%
Barbados	16.5	20.9	11.2	5.6	3.9
Jamaica	8.1	8.1	7.9	8.3	8.4
Dominica	n/a	10.0	4.0	6.4	n/a

Sources: Barbados Statistical Service - Annual Abstract of Statistics
Central Bank of Barbados - Economic and Financial Statistics July 1974
ECLA: Economic Activity - Caribbean Community Countries 1973. 1974

The high and increasing cost of hotel accommodation in the Caribbean, particularly in Barbados and Jamaica, has severely reduced the competitive position of the tourist industry in these countries. Unless this decline in competitiveness can be averted the trends evident in 1973 and 1974 are likely to be accentuated.

Already the effect on employment of the depressed state of the industry has been quite apparent resulting in hotel closures and retrenchment of staff. The situation is most serious in Jamaica where over-expansion of capacity in the late nineteen sixties and early nine-teen seventies together with the recent reduction in demand led to a dramatic plunge in occupancy rates leading to many closures.

As far as this industry is concerned one limited benefit has accrued from the recent inflation. The high cost of imported foodstuffs together with some shortages of supply has induced some marginal switching towards locally produced commodities. But unless the agricultural sector can respond by increasing production quickly to the desired level even this limited benefit may disappear.

INCOME DISTRIBUTION

The data available for Caribbean countries are grossly inadequate for the purpose of measuring short period changes in income distribution. As a consequence it is almost impossible to assess the impact of inflationary pressures on relative income changes as between different segments of the society.

Evidence drawn from the experience of other countries suggests that re-distribution of income in favour of property owners is one of the more pervasive effects of rapid inflation. It would be surprising if this were not the case in the typical Caribbean country but it is impossible to refute or support this hypothesis from the existing data.

However, even if it could be shown that the distribution of income between property income on the one hand and wages and salaries, on the other did not change markedly the conclusion could not be drawn that the income distribution did not worsen. Rates of increase of income can be vastly different between different groups of wage and salary earners. It is difficult to generalise on this point but the case of Jamaica seems to suggest that in a period of inflation those workers who are able to protect their real incomes most vigorously are precisely those who, on average, started off close to the top of the income pyramid.

Within recent months at least one Caribbean government has begun to attempt to formulate a strategy aimed at correcting this situation by providing guidelines for wage and salary movements involving higher percentage increases at the lower than at the higher level. But it remains to be seen whether this laudable policy can be enforced outside the narrow confines of the public sector.

Conclusion

This survey, focussing as it does on a few aspects of a limited number of countries has covered only a small proportion of the many effects which inflation has had on Caribbean economies recently. However, even from this limited evidence it is clear that the recent inflationary period has served to highlight the known structural weaknesses of Caribbean economies and their very heavy dependence on the rest of the world.

The initial impact of the imported inflation was on the balance of payments. Traditional deficits on current account were worsened by the escalating prices of oil, food and a variety of other goods and services. Favourable movements in the price of sugar on the world market helped some countries to recover a portion of the huge loss of reserves and in Jamaica increased taxes on the bauxite/alumina sector also helped to partially retrieve the situation.

In those countries without central banks a balance of payments problem did not materialise. As elsewhere imported inflation manifested itself in a rapid rise in consumer prices and a tendency towards a creation of deficits (or widening of already existing ones) on government current accounts. With limited means of credit creation and the absence of sufficient quantities of aid many of the non-independent countries were forced to restrict government expenditure quite sharply thus reinforcing a tendency towards stagnation of the economy.

Increased prices of imports affected the cost of structure of all sectors adversely. A combination of inflation and stagnation in some foreign countries affected the growth of demand for exports and in some cases where demand was growing the traditional bottlenecks, especially in agriculture, prevented output from responding sufficiently quickly to benefit from the favourable situation.

Typically the rate of growth of real income and employment tended to be relatively low. This was accompanied by a situation in which it appears that income distribution tended to worsen as those at the bottom of the income scale were least able to protect themselves from the ravages of inflation.

The recent international situation has provided convincing evidence of the dangers of excessive reliance on external sources, especially for basic supplies such as food. It has pinpointed other areas where greater self reliance can be a reality. One can say, then, that although economic growth may have been retarded in the short-run real development could be enhanced in the future if the challenges provided by recent events are squarely faced.

FIRST SESSION

"THE EFFECTS OF INFLATION ON CARIBBEAN ECONOMIES"

O. Jefferson and D. Boyce
Caribbean Development Bank

Chairman: Maurice Odle

Session started at 9.25a.m.

The Chairman situated the paper in the context of the Conference theme pinpointing the differences this paper has relative to an earlier paper of a like genre.

Jefferson's introductory remarks were aimed at rooting the paper in a context of Caribbean inflation as evidenced in three micro case studies of Barbados, Jamaica and Dominica.

Five tentative hypotheses were advanced for the price increases in the Caribbean.

(1) Imported inflation, primarily via food prices.

(2) Increased energy costs.

(3) Raw material imports, and the rises therein.

(4) Increased costs of capital imports.

(5) Insurance and freight increases.

Seven main classificatory schemes were analysed in a verification of the impact of inflation in the three countries under study.

1. External Sector: Openness of the economy, energy crunch, supplies of raw materials constraint ..... were the main focal determinants.

2. Foreign Exchange Reserves: This was particularly evident in surplus for Jamaica - due in part to the Returns from the bauxite levy.

The rise in sugar prices also made it possible for Jamaica and Barbados to register surpluses. However, ineffective price controls of foods destroyed what was an acceptable position.

3. Tourism suffered decreases because of the state of the tourist originating economies. This slowing down of tourism receipts exacerbated the inflationary situation in Jamaica and Barbados.

4. Remittances from the Metropole may have had negative effects due to the inflation in the major areas of West Indian Remittance origination. On the level of food consumption it appeared that there was a switching of consumption to locally produced foods; bananas in Jamaica was given as an example. Under this income and substitution effect, the rise in oil prices "encouraged" the search for oil in Jamaica, and the use of natural gas in Barbados.

5. Investment: It was mentioned that the theoretical theses about investment were not substantiated. The public sector was a significant investor. Some tentative hypotheses were advanced as to the difference of behaviour in investment in the Caribbean versus the metropolitan variant. The structure of the enconomy and ownership of production were the main hypothetical bases.

6. Public Sector: The public sector was in a very "favourable" position in Jamaica due to windfall gains in Bauxite. By and large "urgent" expenditures were instituted, but these measures were not fully implemented. Impact programmes and other Keynesian type expenditures were used in the Caribbean economies, but again there was no sustained public sector operations. The private sector was weak, hence the public sector had to bear the brunt of investments, but this caused a certain degree of inflation in the economic systems.

7. Growth of Output: The high rates of growth of Caribbean countries did not continue through the inflationary period. Increases in GDP/GNP were Monetary increases and not real; in addition output was not rising.

Stagflation has now caused a turning point in the growth of demand/ supply/prospects.

At this point, Jefferson turned attention to a Sectoral analysis of the economies. Rising prices in Agriculture, Construction, Manufacturing, Income Distribution, were identified. The critical causal determinants were noted. In the main the causal determinants were rooted in the theoretical and empirical discussions of the first part of the paper.

SUMMARY:

The paper pinpointed the challenges facing Caribbean economies resulting from the dependency syndrome on external countries. A sectoral analysis from a microscopic view was presented. It was suggested that there ought to be a shifting of financing from external to local sources, so as to establish efficiency in a broad aggregative frame of reference.

George Theophilus: Principal Discussant: He stated that authors of paper indentified cost-push as the main type of inflation. Several observations were made:

1. Long-run implementation of coordinated monetary and fiscal policies ought to mitigate inflation in the Caribbean.
2. Political realities ought to be taken into consideration in the inflationary impact.
3. There seems to be a confusion in terms of recognising the types of inflation in the Caribbean.

4. It should not be assumed that external ownership of capital will lead to capital outflow.

5. The level of entreprenearial ability in the Caribbean is low and this may have some "significant" relationship to inflation as far as wages-push inflation is concerned.

6. Income Distribution should have incorporated forced saving. Finally, the "non-balance of payments" problem in the smaller Caribbean countries is an inadequate assessment of the situation.

In the "Open Discussion" session, it was noted that Governments in the Caribbean do not give the needed support to the Price Commissions. Small scale sellers are being "wiped" out by the monopolies and other market structures. These structures are significant catalysts of price increases.

D. Boyce, in some concluding points, restated the paper's position and objected to the observations of the principal discussant.

The session concluded at 11.10a.m.

14TH OCTOBER, 1975.