COMMERCIAL BANK CREDIT AND SECTORAL PERFORMANCE

-- Some Emerging Patterns in Jamaica, 1981-1988 --

by

ERIC A. SHAW

and

JOHN W. ROBINSON

RESEARCH AND ECONOMIC PROGRAMMING DIVISION
BANK OF JAMAICA

Prepared for 21st Annual Conference - Regional Programme of Monetary Studies, Bridgetown, Barbados, December 1989

The views expressed in this paper are those of the authors and do not necesarily represent those of the Bank of Jamaica

COMMERCIAL BANK CREDIT AND SECTORAL PERFORMANCE
- Some Emerging Patterns In Jamaica, 1981-1988

TABLE OF CONTENTS

COMMERCIAL BANK CREDIT AND SECTORAL PERFORMANCE - Some Emerging Patterns In Jamaica, 1981-1988

INTRODUCTION

The period 1981-1988 is significant in recent economic developments in Jamaica because it coincided with the continuous implementation of a series of IMF supported Stabilization Programmes that were intended to correct imbalances in the country's balance-of-payments position. The focus of these programmes has been on the aggregate demand effects of financial variables, particularly domestic bank credit, on the balance-of-payments. Supporting measures in these programmes often included devaluation of the currency, wage restrictions and induced or explicit increases in interest rates, both nominal and real. A reform of the tax administration and tax structure was initiated in 1986 to improve supply responses in the economy.

The design of stabilization programmes often incorporated explicit provisions for channelling credit into productive purposes rather than into consumption. This was reflected, within the framework of global credit ceilings, by specific quantitative controls on commercial bank consumer orientated credit. The emphasis on banking system credit for productive purposes was a recognition of the fact that the use of bank credit to expand output directly was a more feasible alternative in these difficult balance-of-payments circumstances than the indirect approach, in which output responds to the inducement of increasing aggregate final demand.(1)

In a previous study, Bourne analysed the sectoral distribution of commercial bank credit in Jamaica over the period 1960 - 1968.(2) However, the economic and institutional environment in the country has changed substantially since then. Since 1981, commercial banks have had to operate within the framework of IMF supported stabilization programmes, and it is logical to assume that these programmes would have had a significant impact on the allocation of their loan portfolios. Nevertheless, the basic criteria which these institutions adopt in assessing the conditions for providing credit to individual enterprises have remained largely unchanged.

---

(1) For a fuller discussion of the direct vs. indirect impact of credit on output, see Peter Keeler: "Implications of Credit Policies for Output and the Balance of Payments" in IMF Staff Papers, Volume #27, September 1980.

(2) Compton Bourne, "Commercial Bank Finance and Sector Activity in Jamaica: 1960 - 1968," Regional Monetary Studies Programme, 1971.

This paper examines some of these issues. Firstly, in Section 1, some balance sheet statistics of the commercial banks will be utilized to assess, at an aggregative level, the main supply factors relating to the provision of commercial bank credit. The contractionary effect of the various stabilization programmes meant that the profitability and liquidity of firms would have been a major focus of the banks in the provision of credit facilities. In Section 2, the aggregate demand for bank credit is examined based on the changing pattern of credit allocation among different industrial sectors in the economy. Bank credit had a direct impact on output because of its use as the primary source of financing for working capital, raw materials and other intermediate inputs relating to the short-term production plans of the firm.To the extent that credit was utilized for financing fixed investment, for which overdraft facilities are sometimes used, the effect on output was felt in the longer term. The impact of bank credit on output, however, cannot be separated from the nature of the market structure and the degree of monopoly power existing within different industrial sectors. Productivity, particularly labour productivity, and the profitability of different enterprises also modified the role which bank credit played in raising output levels. The paper develops some policy options arising from these considerations in Section 3, while Section 4 concludes and summarises the analysis.

I - SUPPLY OF COMMERCIAL BANK CREDIT

The availability of domestic bank credit for business enterprises in Jamaica was determined mainly by balance-of-payments considerations during the 1981-1988 period. At the macro-economic level, if we assume that the bulk of bank credit is utilized to meet working capital requirements, the increased output effect of such credit expansion can be kept in line with the level of resource absorption. Hence a targeted balance-of-payments out-turn can be related to a certain programmed level of domestic credit expansion. Within this framework, however, the banks, at the micro-economic level, utilized three basic criteria in determining the qualification to obtain bank loans: liquidity, security and safety. A loan is considered to be liquid if the borrower has the capacity to repay it quickly. Banks preferred loans "which were self-liquidating in the sense that whatever the loan finances will soon be realised as cash, be it the payment of wages or the purchase of stocks or raw materials which could be embodied in a product to be sold for cash".(3)

---

(3) Nugent Miller - Organization and Structure of Commercial Banking in Jamaica, ISER, June 1971

Liquidity in this sense therefore implies profitability as well. Only firms which were profitable were likely to possess the capacity to repay loans quickly on demand. Where credit expansion by banks was constrained by ceilings under a stabilization programme, thereby limiting the profitable use of available resources, the banks were likely to put even greater emphasis on the profitability of firms as a criterion for granting credit. But profitability often co-existed with low labour productivity, particularly where the market structure reflected monopoly conditions, as was the case in many sectors of the Jamaican economy.

Commercial banks also stressed the security and safety characteristics of loan funds.(4) The combination of these three factors meant that only certain firms were able to meet the stringent requirements for bank credit. Risky, but potentially high growth types of economic activity tended to fall outside this group. Construction activity, for example, attracted a substantial volume of bank credit, because of its high profitability and the short-term nature of the loans utilized by the sector. Moreover, good security was provided by the real estate itself.

---

(4) Miller, Ibid.

On the other hand, the banks showed less preference for lending to agriculture, because of the uncertainty which weather and climatic conditions created in the production and reaping of crops.There was also the added disadvantage of uncertainty in marketing and distribution of output. Adequate collateral for agricultural loans was also often lacking, from the perspective of the banks.

The preceding comments indicate the nature of the aggregate supply function of commercial bank credit which existed in the 1981-1988 period. Some supporting data are presented in Tables 1(a) and 1(b) below.

Table 1(a) Selected Commercial Bank Statistics 1978-1988

Year	% Increase in Bank Loans to the Business Sector	% Increase in Deposits of Business Ent.	% of Reserves for Bad Debts to Total Liabilities
1978	37.2	21.6	3.3
1979	6.3	5.7	3.7
1980	22.8	34.2	3.5
1981	28.6	43.6	3.5
1982	24.6	38.4	3.1
1983	31.1	31.0	2.7
1984	11.0	14.9	2.8
1985	5.2	7.6	3.0
1986	-27.3	19.5	2.9
1987	6.6	30.7	3.3
1988	47.5	22.4	2.2

Source: Monthly Balance Sheets of Commercial Banks (Form No. 1)

Table 1(a) shows the supply of nominal commercial bank credit to business enterprises as fluctuating with the severity of the balance-of-payments position and related demand management measures implemented to correct it. This was particularly noticeable in the years 1984 and 1985 when the sharp deterioration in the net international reserves of the Bank of Jamaica and the fall in the value of the currency to a new low of J$6.40 to the U.S. dollar resulted in a sharp contraction of the rate of expansion in commercial bank credit to business enterprises from 31.1% in 1983 to 11.0% in 1984 and 5.2% in 1985.

The table also shows the change in business sector deposits held in commercial banks. These are interpreted as an indicator of changes in overall business sector liquidity and profitability. The growth rate of these deposits fell from 31.0% in 1983 to 14.9% in 1984 and 7.2% in 1985. Over the period, the change in business sector deposits fluctuated in line with changes in bank loans to the sector. Some exceptions were evident such as in 1987 and 1988. The 1988 situation was a consequence of the receipt of re-insurance inflows following hurricane damage in that year which boosted the liquid balances of business enterprises. Credit expansion by commercial banks appear to have been dependent on the liquidity position of business enterprises, as reflected by changes in business sector deposits. The direction of causation could possibly be interpreted in reverse, to indicate that changes in business sector deposits were a function of changes in commercial bank loans. However, the short-term nature of such funds and their use in financing working capital, raw materials or inventories suggests that the build-up of these deposits was independent of the use of such funds. There is, moreover, the possibility that some banks might have required these deposits as counterpart funds to provide security for the provision of credit.

Column 3 of Table 1(a) shows reserves for bad debts as percentages of total liabilities of commercial banks. These ratios have varied only marginally over the period, but tend to be higher in the earlier rather than the later years. A possible implication of this relationship is that the degree of risk attached to the aggregate commercial bank loan portfolio has remained unchanged over the period. This provides some verification of our assessment of the characteristics of commercial bank lending during the period.

Table 1(b) Distribution of the Outstanding Commercial Bank Business Sector Loan Portfolio

	Overdrafts		Demand Loans		Other Loans		Total	
	%	$M	%	$M	%	$M	%	$M
1978	34.3	152.2	53.7	238.0	11.8	53.1	100.0	443.3
1979	38.5	186.5	52.7	255.1	8.8	42.5	100.0	484.1
1980	38.5	250.0	49.4	321.0	12.1	78.7	100.0	649.7
1981	40.5	378.1	46.1	430.1	13.4	125.0	100.0	933.2
1982	39.2	506.0	45.3	584.7	15.6	201.0	100.0	1291.8
1983	41.5	702.4	43.3	732.8	15.2	257.5	100.0	1692.7
1984	41.4	806.4	47.5	924.7	11.0	214.8	100.0	1945.9
1985	39.6	828.9	48.5	1015.1	11.9	249.1	100.0	2093.1
1986	41.6	1039.4	41.2	1031.6	17.2	429.7	100.0	2500.7
1987	43.5	1420.7	38.0	1242.1	18.5	606.0	100.0	3268.8
1988	47.2	1889.4	31.7	1268.1	21.1	844.6	100.0	4002.1

Source: Monthly Balance Sheets of Commercial Banks (Form No. I)

Table 1(b) shows a distribution of the outstanding stock of business sector loans between overdraft, demand and other loans. Overdrafts have increased both quantitatively and proportionately over the years and now account for the largest share of the outstanding loan stock. Overdrafts require more careful monitoring by commercial banks than demand loans, but they provide a higher rate of return to the banks. The increasing proportion of these funds in the outstanding loan stock suggests the possible use of this facility for financing fixed investment. It could also mean that businesses were carrying a high level of inventories. Alternatively, it could mean excessive credit allocation to traditional borrowers. Whatever the causes, the increasing proportion of overdrafts in the total loan stock reflects the high volume of financing provided by the banks to their traditional and well established borrowers. In turn, this meant that the availability of financing to prospective new borrowers was limited during the period.

II - SECTORAL PERFORMANCE

Use of Bank Credit by Sector

Total commercial bank credit has grown at an average rate of 27.0 percent per annum in real terms since 1981. About 85.0 percent of these loans have been allocated to the business sector - defined as total loans less advances to Government and Households. The distribution of business sector loans by type of activity is set out in Table 2 below:

Table 2

Distribution of Business Loans by Sector in Percent

	1981	1982	1983	1984	1985	1986	1987	1988
Agriculture	15	13	12	16	18	14	13	13
Mining	1	1	1	0	0	0	1	0
Manufacturing	25	22	24	27	26	28	26	24
Construction	14	19	24	24	22	22	24	26
Financial Inst.	3	2	3	3	2	3	2	3
Transport	11	13	13	13	14	15	16	15
Utilities	5	3	2	1	1	0	0	0
Distribution	10	7	6	4	4	4	4	4
Tourism	6	6	5	5	7	8	9	9
Entertainment	1	1	1	1	1	1	1	1
Prof. & Other Services	10	13	10	6	5	5	5	5
Total Business Loans	100	100	100	100	100	100	100	100

Source: Statistical Digest, Bank of Jamaica. (Various Issues)

The data show that in the eight-year period the composition of the banks' loan portfolio moved in favour of Construction, Transportation and Tourism at the expense of Distribution, Mining, Utilities and other activities. Financing (and ownership) of the Mining sector has been largely external with little direct use of domestic credit. Agriculture and Manufacturing maintained their share of total loans in 1988 relative to 1981. Between them, Construction and Manufacturing accounted for 50.0 percent of total business loans outstanding at December 1988 as compared to 39.0 percent in the base period.

The expansion in real loans has been of the order of J$3945.0 million since 1981. Of this total the major recipients were as follows:

	Cumulative Flow In Real Terms J$ million	% of Total
Construction	1,110.0	28.0
Manufacturing	948.0	24.0
Transportation	614.0	16.0
Agriculture	520.0	13.0
Tourism	366.0	9.0
Others: of which	387.0	10.0
(Distribution)	(79.0)	2.0
Total	3,945.0	100.0

The growth in Construction credit is reflective of investment activity in the other sectors - manufacturing, tourism, business services, as well as residential housing. The scale of construction activity was heightened in the latter part of 1988 by the need to repair hurricane related damage.

The use of credit by the Manufacturing sector has shown strong and steady growth over the period. The use of overdrafts for working capital and often for capital expansion has been the preferred method of financing expansion in output. The attractiveness of bank financing vis a vis equity floats has been enhanced by rediscount facilities provided by the Central Bank. The cost of holding a high level of inventories has been justified over the period by the sharp changes in the exchange rate which brought windfalls to holders of stocks of imports and of finished goods.

The Distribution sector which accounted for 10.0 percent of outstanding loans in 1981 has reduced its use of bank credit relative to other sectors. One explanation for this may be the increased availability of suppliers credit from overseas which has been passed on through the large importers through to the retailers level. Since interest charges are not applied until after a given period, wholesalers and retailers would tend to avoid the use of bank credit to pay for goods as far as is possible. Moreover, as stock turnover generates cash, bank credit would only be required for capital expansion and overdrafts needed to finance inventory accumulation beyond normal requirements.

Since the decline in mining output in 1982, tourism has occupied centre stage as a potentially large earner of foreign exchange. Much of the credit to this sector would have been associated with acquisition, construction and refurbishing and would, therefore, have had substantial spin-offs on the Construction Sector.

Table 3

Commercial Banks' Loans and Advances

(Percent Change in Real Loans)

	1981	1982	1983	1984	1985	1986	1987	1988
Agriculture	101.2	17.2	5.4	34.3	31.9	-6.5	17.5	38.3
Mining	54.0	49.4	-11.2	-23.4	-31.3	62.8	177.7	-33.9
Manufacturing	82.2	22.4	20.3	16.3	13.5	26.5	21.3	23.3
Construction & Land Dev.	74.9	76.3	44.4	6.8	5.5	16.2	43.6	45.9
Financial Institutions	83.6	10.4	38.3	2.2	-3.6	36.6	24.3	40.9
Transport, Storage & Comm.	64.8	56.1	12.6	4.2	24.5	27.5	35.1	27.9
Electricity, Gas & Water	77.2	- 0.7	-39.7	-38.3	- 6.4	-61.6	66.2	-13.9
Distribution	67.4	1.4	- 2.5	-29.0	- 2.0	23.1	45.5	12.9
Tourism	55.0	27.0	0.0	3.4	56.9	42.6	38.8	39.2
Entertainment	26.1	18.3	36.0	- 5.7	22.4	53.5	2.4	62.4
Professional & Other Serv.	105.9	72.3	-15.3	-30.2	- 5.5	24.1	12.5	31.6
Total Business Sector	79.1	35.1	12.7	4.9	15.4	19.1	29.9	32.9
Government	26.2	25.3	216.9	-63.4	243.5	433.6	33.9	-51.3
Personal	25.8	-14.3	- 5.8	-26.6	- 1.8	57.0	28.7	17.4
Total Loans	68.7	28.6	14.4	0.3	18.1	40.0	30.6	16.9

Source: Statistical Digest, Bank of Jamaica (Various Issues)

Table 3 shows the rate of change in loans outstanding by sector. Total loans, and business loans in particular expanded rapidly from 1981 through 1983. This was fuelled in part by large external inflows of capital both to Government and the private sector. By 1983, as the impact of the contraction in the mining sector began to spread, Government instituted a tight adjustment programme which included devaluation, credit restrictions and drastic cuts in public expenditure. The rate of expansion of loans to the business sector declined in 1984 and 1985, in real terms, before recovering and expanding strongly in the following two (2) years.

Advances to the manufacturing and Construction sectors, as the main users of bank credit showed a similar pattern. While the stock of loans to these sectors never declined in absolute levels, the annual rates of growth reflected the overall pattern in business credit. Credit to both sectors expanded rapidly in the 1981/83 period, slowed and then subsequently accelerated in the 1986/88 period.

Output Trends

In 1980, Gross Domestic Product reached an all time low in recent economic history. The trend since then has been positive. By 1988, with uneven performance among the sectors, total GDP had grown by 8.0 percent since 1981 in real terms. Gross Domestic Product of the business sector (i.e. Total GDP less Government and Households) expanded by 12.0 percent or at an annual average rate of 1.5 percent.

As shown in the following statistics sector performance has been skewed towards the service sectors.

Cumulative Change in the GDP of Selected Sectors 1981 - 1988

Agriculture	+ 3.0%
Mining	- 38.0%
Manufacturing	+ 15.0%
Utilities	+ 37.0%
Construction	+ 32.0%
Distribution	+ 16.0%
Transportation	+ 35.0%

Agriculture, beset by bouts of adverse weather, slow restructuring of traditional export crops and a significantly unsuccessful experiment at high volume export of winter vegetables has shown marginal growth over the period. New investment has occurred in non-traditional agricultural exports and high profit areas such as coffee and horticulture.

Developments in the Mining sector have been mostly of external origin. Output fell sharply in 1982, stagnated for the following 2 years and then fell sharply further. Since 1986, Mining GDP has begun to recover. All the fluctuations in this performance were linked with the state of the world bauxite/alumina market and the perspective of the management with regards to medium term prospects. Financing (and ownership) has been largely external with little direct use of domestic credit. The performance of the Mining sector is important in this scenario as fluctuations in output have a significant impact on the balance of payments and, consequently, on the overall macro-economy.

Manufacturing is the largest contributor to business GDP and its 15.0 percent growth over the period has offset the lack-lustre performance of the agricultural and mining sectors. The sector grew strongly in the 1981/83 period in line with rapid expansion in credit to the sector and in Government and household GDP. Output declined during the period of deep adjustment (1984/85) and rebounded in 1986/87 as the economy as a whole benefited from an improved external environment - lower petroleum prices and better commodity export prices - and the renewed expansion in bank credit. The pace of manufacturing output growth continued into 1988 until September when production for the last three (3) months of that year was effectively lost due to hurricane damage.

Construction activity , as alluded to earlier, has been closely aligned with the performance of the manufacturing and tourism sectors. Following a period of decline, the sector grew by 24.0 percent over the 1981/83 period and then declined in tandem with the strong demand management measures in force in 1984 and 1985. Value added increased thereafter by 2.6 percent in 1986 and 14.0 percent in each of the following years.

Distribution, closely allied with manufacturing and construction activities, displayed a similar pattern of performance over the review period:- increases in value added in the early 1980s, a two year decline followed by strong recovery. Other service sectors - Transportation, Real Estate and Other Business Services followed the same route.

The pattern of the commercial bank flow of credit over the period was therefore linked to the pattern of output: strong expansion followed by stagnation or decline succeeded by a post 1985 recovery. The evident expansion of the value added of the financial institutions is thus related to the pull effect of the manufacturing and tourism sectors and their significant linkages with the Construction, Distribution and other service sectors. An examination of the basis of the "pull" sectors' magnetism and the rationale for their credit worthiness is reflected in their superior profitability. The relative attractiveness of each area of activity by profitability is discussed in the following section.

Profitability and Sector Activity

In the earlier discussion of factors determining the demand for bank credit, we argued that in the assessment of the relative risk of lending to various types of business profitability was bound to be a principal criterion. In comparing the relative attractiveness of the various sectors to bank finance we have computed the ratio of Gross Operating Surplus (GOS) to GDP at factor cost as a broad measure of profitability. The main results are presented below. A detailed comparison is contained in the Appendix (Table x)

Ratio of Gross Operating Surplus to GDP

	1980	1986	Period Average	% Change 1986/1980
Mining	0.739	0.743	0.589	+ 1%
Distribution	0.692	0.661	0.683	- 4%
Agriculture	0.562	0.390	0.488	- 31%
Manufacturing	0.172	0.488	0.309	+184%
Construction	0.099	0.488	0.209	+393%

The data show that except for the slump period of 1982/83, Mining generates the most operating surplus relative to output. The Distribution sector has been the most consistent profit maker and, over the period, had the highest average return. For reasons which are explored below, operating Surplus in the Agriculture sector has been falling. The remarkable shifts have occurred in the Manufacturing and Construction sector which have displayed a sharp upward trend in returns to investment.

Based on average profitability, the distribution sector would appear to qualify for a larger share of bank credit than the average of 7.0 percent which it absorbed over the review period. We have advanced the explanation that the operating convention of using suppliers credit would have relieved them of such a need. It is also likely that recourse to bank credit would significantly raise the interest component of factor costs and thus lower operating surpluses.

The growth in the profitability of manufacturing can be attributed to several factors directly related to macro-economic policy over the period. These policies facilitated a widening of the ratio of output to input prices via a decline in real wages. Between 1981/1988 the Consumer Price Index increased by 177.0 percent. On the other hand, wage guidelines limited settlements to 15.0 percent between 1981/83 and 10.0 percent thereafter - about 95.0 percent cumulatively.

Devaluation was especially beneficial to garment manufacturers and other light assembly operations geared towards export, for while the cost of imported inputs and exported output rose by the same factor, labour costs in United States dollar terms have fallen dramatically. Enterprises such as these have been the fastest growing sub-sector in manufacturing. Manufacturers geared towards the domestic and CARICOM markets have also experienced improved profitability through reduced duties on imported raw materials, the controls on wage increases and reduced taxes on profits. In addition, the semi-distributional nature of some manufacturing enterprises - import of raw materials on suppliers credit (with low import duty), quick assembly and high mark-up have made them more akin to distribution in their operations and in their profitability.

A similar set of factors explain the dramatic increase in the profitability of construction activity - wages fixed by contract and falling in real terms while the contractor/developer's margin is guaranteed by a mark-up over costs. Substantial gains also accrue from resale of refurbished property by developers.

Although agriculture is similarly labour intensive and, in principle, exposed to macro-economic policy incentives, the same gain in profitability to farmers would not be reflected in the data because:

(a) for major export crops (sugar, bananas), farmgate prices are contractual and relatively fixed. Where windfalls occur, they accrue to the distribution sector (marketing boards, private marketing companies), and

(b) the fall in output due to adverse weather conditions, reduced acreages and competition from imports have been associated with large financial losses. Thus while non-traditional export agriculture would show a response to the export incentives, traditional crops often incur losses which lower the average profitability of the sector when viewed as a whole.

Credit, Productivity and Growth

We have established thus far that those sectors with the best growth performance over the 1981/88 period were also those which enjoyed increased profitability as a result of macro-economic policy. These sectors also became the major beneficiaries of commercial bank finance. In the Table below we set out annual percent changes in GDP per employed worker as an indicator of relative efficiency in the productive sector.

GDP per Employed Worker in Selected Sectors

(Annual Percentage Change)

	1981	1982	1983	1984	1985	1986	1987	1988	Cumulative Change
Agriculture	- 2.0	- 3.9	13.3	5.3	-11.1	0.5	2.7	- 1.9	3.0
Manufacturing	- 6.0	2.5	- 7.9	-10.4	- 1.1	- 7.1	-11.9	- 5.0	-38.8
Construction	- 10.4	8.9	8.0	1.9	-16.6	5.7	- 6.0	6.1	-13.6
Transportation	5.4	-	- 0.7	- 5.5	4.4	7.5	- 5.1	- 5.3	- 5.5
Distribution	- 5.0	6.1	-13.0	- 2.5	-11.8	- 2.9	10.7	- 6.5	-20.1

Source: National Income and Product, and Annual Labour Force Survey, Statistical Institute of Jamaica.

The overall fall in productivity over the period has been dominated by productivity declines in manufacturing, construction, distribution and other business services. The latter two categories are somewhat more amenable to an easy explanation when one notes that the largest absorption of the labour force in recent years has been in self employment in small scale trading and support services. This also explains part of the decline in manufacturing and construction productivity - the mushrooming of small under-capitalised ventures - woodworking, handicraft, vehicle repair on the one hand and small subcontracting crews on the other. Joint consideration of profitability, growth credit and declining productivity, however, suggest that among the larger enterprises expansion in the labour force has outpaced expansion in output. As such the average product per worker falls with the marginal product falling even faster. Theoretically, this process can continue and still be profitable until the value of the marginal product is equal to the wage rate. One is led to the conclusion that the scope for profitable expansion which the manufacturing and construction sectors have experienced was created by the fall in real wages. With social pressure on policy makers seeking to avoid further erosion of real wages, the attractiveness of new investment is bound to be influenced more strongly in the future by any success in raising productivity.

The issues raised by such a requirement - technology improvement, worker incentives, interest rates and others are addressed as part of the policy implications of trend developments to date.

III - SOME POLICY IMPLICATIONS

The policy environment in Jamaica over the next three to four years is likely to continue to bear close relationship to IMF Conditionality given the fragile balance of payments position and the link between public sector spending and inflows from donor countries. Protection of the balance of payments is likely to impinge upon the permissible rate of growth of domestic credit and, by implication, on interest rates and lending conditions applied by commercial banks. As such, given the supply conditions discussed in Section I, the pattern of usage analysed in Section II is likely to extend into the near future.

The channelling of domestic resources into manufacturing construction, agriculture and tourism to finance new investment and provide working capital requirements would not, on the surface of it represent a case for policy intervention. Nor, it may be argued, should the regime of high real interest rates. For, as the argument for its justification runs, high real rates of interest force investors into the area of highest return which, in turn, are those which make the best use of scarce resources. Furthermore, the direction of resource flow among the sectors appears to be that which was envisaged by macro-economic policy makers in creating price and administrative incentives to non-traditional manufacturers and agricultural products.

The principal concern emerging from the analysis of credit usage is the coincident fall in labour productivity in the sectors which absorb the lion's share of bank credit. The co-existence of high profitability and low productivity, we have argued, was due to the dramatic fall in real wages which encouraged producers to substitute labour for capital as far as was feasible. The fall in productivity would also have been influenced by the mushrooming of under-capitalised, small scale enterprises with typically lower productivity than larger, well organised firms. Not to be overlooked also has been the practical difficulty of obtaining wage increases over and above that stated in the Wage Guidelines on the basis of demonstrated improvement in productivity. Although such improvements would conceptually be easiest to demonstrate in areas such as manufacturing the absence of precedents set by the trade unions would have had a negative impact on worker attitude and incentive.

Low and falling productivity in Manufacturing is thus a principal concern given the extent to which economic policy is geared towards the growth of this sector and the volume of domestic resources devoted to its support. Lower interest rates such as that facilitated by the Bank of Jamaica's BRF may not necessarily help. Lower interest costs preserve profitability without necessarily inducing gains in productivity or output.

Wage increase to workers outside of economy-wide guidelines may erode profit margins, discourage longer term investment and contribute to a loss in external competitiveness through higher domestic inflation. The direction of a solution would seem to lie in an upgrading of production techniques and management.

Expansion of export manufacture on a scale which would impact strongly on the balance of payments and on productivity would seem to require significant foreign investment in plant, technology transfer, management and marketing. Such a solution has been pursued through vigorous ongoing investment promotion schemes over the post several years with only limited results. Preferential trade arrangements between Jamaica and the North American markets, industrial free zones, expanded port facilities and low wage costs (in United States dollars terms) would have enhanced the attractiveness of Jamaica to foreign manufacturing plants in the 1980's. The lukewarm response and the reported snags which both local and foreign entrepreneurs have experienced in implementing projects have built a case for the relaxation of exchange controls on both current and capital payments.

Based on the preceding observations, the most feasible policy options available for improving the pattern of credit allocation appear to relate to the following:-

Use of Rediscounting Facilities

These facilities which were intended to channel relatively cheap funds to preferred activities, tended to distort the pattern of interest rates and led to less than optimal uses of credit. These facilities should be phased out in order to reflect the real cost of funds, thereby contributing to a more efficient use of resources and an increase of productivity within the sector.

Tax Incentives

Given the anticipated environment of tight credit, commercial banks are likely to follow traditional lending patterns by channelling most of their resources to their well established clients. Consequently, the availability of credit to new or potentially high growth activities is likely to be limited. Tax incentives could assist such enterprises by augmenting internally generated cash flows which would therefore provide more resources for expansion and reduce dependence on bank credit. Tax incentives could also play an important role by encouraging more equity financing of industrial activity.

Increasing Labour Productivity

Low labour productivity has been one of the main drawbacks to increasing output growth and optimising the use of commercial bank credit. Much of the decline in labour productivity over the period has been attributable to an increase in the number of small scale enterprises, particularly in manufacturing and distribution, in which labour absorption was relatively high, but value added low. But labour productivity could also have been adversely affected in some large scale enterprises if the wage guidelines under various stabilization programmes had created a disincentive to production. To prevent this, firms were allowed to grant wage increases outside of the wage guidelines if such increases were matched by productivity increases. It may be necessary to put this requirement on a firm basis by establishing measurable and agreed criteria to measure such productivity increases so as to ensure that the wage guidelines do not create an unnecessary disincentive to production, thereby contributing to the falling rate of labour productivity which has been evident across most sectors of economy since the beginning of the period.

Incentives to Increase Foreign Investment

The mix between foreign and domestic financing can be improved by increasing the volume of foreign direct investment in the private sector. This would help to raise productivity levels and value added in industry as direct investment is usually accompanied by well developed production and management technique. A review of the exchange control legislation, particularly with respect to the movement of current flows, appears to be a key factor in creating the required incentives.

Improvements in flow of Agricultural Credit

The volume of bank financing for agriculture needs to be increased. The Agricultural Credit Bank (ACB) is one of the main sources of such credit outside of the commercial banks. There is a need to improve the efficiency with which such funds are channelled to farmers. An improvement in the distribution system for such credit is required. Presently, only a small proportion of credit is channelled through People's Co-operative Banks (PC Banks), because these institutions suffer from inadequate management, poor accounting standards and un-trained staff. The relevant policy option is to optimize the use of this form of credit by improving the basic infrastructure of the PC Banks so as to achieve a more efficient allocation of credit financing for agriculture.

IV - CONCLUSION

Commercial bank credit has expanded phenomenally since 1980. Over 50.0 percent of all new business credits granted have been allocated to the Manufacturing and Construction sectors with Transportation, Agriculture and Tourism accounting for a further 40.0 percent.

The eligibility for a preponderant claim on bank finance by the manufacturing and construction sectors has been based upon the increased profitability of these activities over the period. Government policy was a major contributor as exchange rate adjustment, wage policy, tax reform and tariff charges altered the distribution of factor payments in these activities in favour of operating surplus. Some agricultural ventures, particularly non-traditional export crops, also benefited but supply disruptions and uneven success have distorted the picture painted by the aggregate data.

Not surprisingly then, the high profit, heavily financed sectors of Manufacturing and Construction have shown the best GDP performance over the period. The rate of growth of output, however, appears to be lower than would be expected given the volume of resources flowing to these areas of production. The explanation seems to lie with the continuous fall in labour productivity which has stymied growth. A scenario emerges where, given productivity trends, more and more capital would be required to increase output by any given amount annually. With none of the benign external developments of the type that created the post 1985 recovery, the issue of productivity now becomes a major policy consideration.

The issue of productivity is important because some of the sectors with the lowest average labour productivity during the period were also the largest recipients of bank credit. From a macro-economic standpoint, such uses of bank credit could therefore be considered to be sub-optimal. But commercial banks are unlikely to change their basic criteria for assessing the eligibility of borrowers to obtain credit, especially under the stringent conditions of an IMF supported stabilization programme. A necessary condition for optimizing the direct use of bank credit to raise output levels is the continued use of quantitative controls to channel the resources of the commercial banks into productive activity and away from the financing of consumption expenditure. But the required policy initiatives have wider ramifications, relating to various aspects of fiscal, monetary, exchange control and industrialization policies. Of critical importance will be policy action to increase the ratio of foreign to domestic financing since success in this regard will not only increase the volume of available resources, but will simultaneously bring technological improvements and raise productivity levels in industry.

APPENDIX - STATISTICAL TABLES

1. Loans and Advances: Stocks 1976 - 1988

2. Loans and Advances : Annual flows 1977 - 1988

3. Loans and Advances: Real Stocks 1976 - 1988

3A. Loans and Advances: Real Flows 1977 - 1988

4. Loans and Advances: Percent Change in Real Loans 1977 - 1988

5. Loans and Advances: Distribution of Real Loans 1976 - 1988

6. GDP by Industrial Sectors 1977 - 1988

7. Rate of Growth of Real GDP 1978 - 1988

8. GDP at Factor Cost 1977 - 1986

9. Gross Operating Surplus 1977 - 1986

10. Rates of GOS to GDP 1977 - 1986

TABLE 1

COMMERCIAL BANKS' LOANS AND ADVANCES

(Stock Outstanding J$ '000)

	Dec 1976	Dec 1977	Dec 1978	Dec 1979	Dec 1980	Dec 1981	Dec 1982	Dec 1983	Dec 1984	Dec 1985	Dec 1986	Dec 1987	Dec 1988
Agriculture	82385	88920	81937	93088	117793	192923	230844	265331	400992	496918	416123	479565	668554
Mining	6454	6187	5663	5796	6252	7838	11959	11572	9978	6441	9388	25580	17038
Manufacturing	123060	118948	132807	164122	213881	317343	396730	520404	681050	726138	822298	978814	1216496
Construction & Land Dev.	126794	109326	127805	126041	127310	181324	326468	513994	617444	612212	636938	897435	1319776
Financial Institutions	19871	18063	32636	35499	23049	34455	38859	58594	67345	61023	74630	90983	129143
Transport, Storage & Comm	27780	25438	43634	59228	108661	145822	232461	285251	334290	390944	446383	591545	762693
Electricity, Gas & Water	15432	19310	26687	29225	40945	59058	59886	39398	27330	24040	8266	13482	11696
Distribution	107578	71280	80730	80445	89583	122136	126495	134471	107437	98954	109108	155805	177333
Tourism	13042	10689	25775	35642	60341	76161	98778	107724	125365	184864	236132	321609	450995
Entertainment	4165	3392	6850	10187	12065	12384	14957	22182	23529	27064	37197	37363	61142
Professional & Other Serv	44696	41818	55872	65534	76689	128593	226217	208789	164037	145680	161885	178662	236932
Total Business Sector	571257	513371	620396	704807	876569	1278037	1763654	2167710	2558797	2774278	2958348	3770843	5051798
Government	16109	28363	27780	28506	23480	24124	30865	106643	43962	141884	677904	890586	436813
Personal	114702	117004	119440	167606	188034	192606	168540	173094	143046	131988	185613	234422	277370
Total Loans	702068	658738	767616	900919	1088083	1494767	1963059	2447447	2745805	3048150	3821865	4895851	5765981
Percent Change in:													
Private Sector Credit		-10.1%	20.8%	13.6%	24.4%	45.8%	38.0%	22.9%	18.0%	8.4%	6.6%	27.5%	34.0%
Total Loans		-6.2%	16.5%	17.4%	20.8%	37.4%	31.3%	24.7%	12.2%	11.0%	25.4%	28.1%	17.8%
CPI		137.9	206	246.7	317.5	332.7	356	415.3	545.1	672.3	742.5	804.6	878.623
Ratio Business/Total Loan	0.81	0.78	0.81	0.78	0.81	0.86	0.90	0.89	0.93	0.91	0.77	0.77	0.88

TABLE 2

COMMERCIAL BANKS' LOANS AND ADVANCES

(Annual Flow J$ '000)

	Dec 1977	Dec 1978	Dec 1979	Dec 1980	Dec 1981	Dec 1982	Dec 1983	Dec 1984	Dec 1985	Dec 1986	Dec 1987	Dec 1988
Agriculture	6535	-6983	11151	24705	75130	37921	34487	135661	95926	-80795	63442	188989
Mining	-267	-524	133	456	1586	4121	-387	-1594	-3537	2947	16192	-8542
Manufacturing	-4112	13859	31315	49759	103462	79387	123674	160646	45088	96160	156516	237682
Construction & Land Dev.	-17468	18479	-1764	1269	54014	145144	187526	103450	-5232	24726	260497	422341
Financial Institutions	-1808	14573	2863	-12450	11406	4404	19735	8751	-6322	13607	16353	38160
Transport, Storage & Comm	-2342	18196	15594	49433	37161	86639	52790	49039	56654	55439	145162	171148
Electricity, Gas & Water	3878	7377	2538	11720	18113	828	-20488	-12068	-3290	-15774	5216	-1786
Distribution	-36298	9450	-285	9138	32553	4359	7976	-27034	-8483	10154	46697	21528
Tourism	-2353	15086	9867	24699	15820	22617	8946	17641	59499	51268	85477	129386
Entertainment	-773	3458	3337	1878	319	2573	7225	1347	3535	10133	166	23779
Professional & Other Serv	-2878	14054	9662	11155	51904	97624	-17428	-44752	-18357	16205	16777	58270
Total Business Sector	-57886	107025	84411	171762	401468	485617	404056	391087	215481	184070	812495	1280955
Government	12254	-583	726	-5026	644	6741	75778	-62681	97922	536020	212682	-453773
Personal	2302	2436	48166	20428	4572	-24066	4554	-30048	-11058	53625	48809	42948
Total Loans	-43330	108878	133303	187164	406684	468292	484388	298358	302345	773715	1073986	870130

TABLE 3

COMMERCIAL BANKS' LOANS AND ADVANCES

(Real Stock)

	Dec 1976	Dec 1977	Dec 1978	Dec 1979	Dec 1980	Dec 1981	Dec 1982	Dec 1983	Dec 1984	Dec 1985	Dec 1986	Dec 1987	Dec 1988
Agriculture	76001	77795	54850	77731	91526	184109	215735	227445	305507	402900	376780	442552	612229
Mining	5954	5413	3791	4840	4858	7480	11176	9920	7602	5222	8500	23606	15603
Manufacturing	113524	104066	88903	137046	166187	302845	370764	446096	518877	588752	744553	903268	1114007
Construction & Land Dev.	116969	95648	85555	105247	98921	173040	305101	440602	470417	496381	576718	828170	1208586
Financial Institutions	18331	15803	21847	29642	17909	32881	36316	50227	51309	49477	67574	83961	118263
Transport, Storage & Comm	25627	22255	29209	49457	84430	139160	217247	244520	254688	316977	404180	545889	698437
Electricity, Gas & Water	14236	16894	17865	24404	31815	56360	55966	33772	20822	19492	7484	12441	10711
Distribution	99242	62362	54042	67173	69607	116556	118216	115270	81854	80232	98792	143780	162393
Tourism	12031	9352	17254	29762	46885	72681	92313	92342	95513	149888	213807	296787	412999
Entertainment	3842	2968	4586	8506	9375	11818	13978	19015	17926	21943	33680	34479	55991
Professional & Other Serv	41232	36586	37402	54722	59588	122718	211411	178976	124976	118117	146580	164873	216971
Total Business Sector	526990	449143	415304	588530	681101	1219648	1648224	1858186	1949493	2249381	2678650	3479805	4626189
Government	14861	24815	18596	23803	18244	23022	28845	91416	33494	115039	613811	821849	400012
Personal	105814	102366	79955	139955	146104	183806	157509	148378	108984	107016	168064	216329	254002
Total Real Loans	647664	576324	513856	752287	845449	1426476	1834578	2097980	2091970	2471436	3460525	4517983	5280202
CPI		137.9	206	246.7	317.5	332.7	356	415.3	545.1	672.3	742.5	804.6	878.623
% Change in CPI	1.084	1.143	1.494	1.198	1.287	1.048	1.070	1.167	1.313	1.233	1.104	1.084	1.092
Ratio Business/ Total	0.81	0.78	0.81	0.78	0.81	0.86	0.90	0.89	0.93	0.91	0.77	0.77	0.88

TABLE 3A

COMMERCIAL BANKS' LOANS AND ADVANCES

(Change in Real Stock)

	Dec 1977	Dec 1978	Dec 1979	Dec 1980	Dec 1981	Dec 1982	Dec 1983	Dec 1984	Dec 1985	Dec 1986	Dec 1987	Dec 1988
Agriculture	1794	-22945	22880	13796	92583	31626	11709	78062	97393	-26120	65771	169677
Mining	-541	-1622	1049	18	2622	3696	-1257	-2318	-2380	3278	15105	-8003
Manufacturing	-9457	-15163	48142	29142	136657	67920	75332	72781	69874	155802	158714	210739
Construction & Land Dev.	-21320	-10093	19692	-6326	74119	132061	135501	29816	25963	80338	251451	380416
Financial Institutions	-2528	6044	7795	-11733	14972	3435	13912	1081	-1831	18097	16387	34302
Transport, Storage & Comm	-3372	6954	20247	34974	54729	78087	27274	10168	62289	87203	141709	152548
Electricity, Gas & Water	2658	971	6539	7411	24545	-393	-22194	-12950	-1331	-12007	4957	-1731
Distribution	-36879	-8320	13131	2433	46949	1660	-2946	-33416	-1622	18561	44987	18613
Tourism	-2680	7903	12508	17124	25796	19632	29	3171	54375	63919	82980	116212
Entertainment	-875	1618	3921	868	2444	2160	5037	-1088	4017	11737	799	21512
Professional & Other Serv	-4646	816	17321	4866	63130	88693	-32435	-54000	-6859	28462	18293	52098
Total Business Sector	-77846	-33840	173226	92571	538547	428576	209962	91306	299889	429269	801155	1146384
Government	9954	-6218	5207	-5559	4778	5823	62571	-57922	81546	498772	208038	-421838
Personal	-3448	-22410	60000	6149	37703	-26297	-9131	-39395	-1968	61048	48265	37673
Total Real Loans	-71340	-62468	238432	93162	581027	408102	263402	-6010	379466	989089	1057458	762219

TABLE 4

COMMERCIAL BANKS' LOANS AND ADVANCES

(Percent Change in Real Loans)

	Dec 1977	Dec 1978	Dec 1979	Dec 1980	Dec 1981	Dec 1982	Dec 1983	Dec 1984	Dec 1985	Dec 1986	Dec 1987	Dec 1988
Agriculture	2.4%	-29.5%	41.7%	17.7%	101.2%	17.2%	5.4%	34.3%	31.9%	-6.5%	17.5%	38.3%
Mining	-9.1%	-30.0%	27.7%	0.4%	54.0%	49.4%	-11.2%	-23.4%	-31.3%	62.8%	177.7%	-33.9%
Manufacturing	-8.3%	-14.6%	54.2%	21.3%	82.2%	22.4%	20.3%	16.3%	13.5%	26.5%	21.3%	23.3%
Construction & Land Dev.	-18.2%	-10.6%	23.0%	-6.0%	74.9%	76.3%	44.4%	6.8%	5.5%	16.2%	43.6%	45.9%
Financial Institutions	-13.8%	38.2%	35.7%	-39.6%	83.6%	10.4%	38.3%	2.2%	-3.6%	36.6%	24.3%	40.9%
Transport, Storage & Comm	-13.2%	31.2%	69.3%	70.7%	64.8%	56.1%	12.6%	4.2%	24.5%	27.5%	35.1%	27.9%
Electricity, Gas & Water	18.7%	5.7%	36.6%	30.4%	77.2%	-0.7%	-39.7%	-38.3%	-6.4%	-61.6%	66.2%	-13.9%
Distribution	-37.2%	-13.3%	24.3%	3.6%	67.4%	1.4%	-2.5%	-29.0%	-2.0%	23.1%	45.5%	12.9%
Tourism	-22.3%	84.5%	72.5%	57.5%	55.0%	27.0%	0.0%	3.4%	56.9%	42.6%	38.8%	39.2%
Entertainment	-22.8%	54.5%	85.5%	10.2%	26.1%	18.3%	36.0%	-5.7%	22.4%	53.5%	2.4%	62.4%
Professional & Other Serv	-11.3%	2.2%	46.3%	8.9%	105.9%	72.3%	-15.3%	-30.2%	-5.5%	24.1%	12.5%	31.6%
Total Business Sector	-14.8%	-7.5%	41.7%	15.7%	79.1%	35.1%	12.7%	4.9%	15.4%	19.1%	29.9%	32.9%
Government	67.0%	-25.1%	28.0%	-23.4%	26.2%	25.3%	216.9%	-63.4%	243.5%	433.6%	33.9%	-51.3%
Personal	-3.3%	-21.9%	75.0%	4.4%	25.8%	-14.3%	-5.8%	-26.6%	-1.8%	57.0%	28.7%	17.4%
Total Loans	-11.0%	-10.8%	46.4%	12.4%	68.7%	28.6%	14.4%	-0.3%	18.1%	40.0%	30.6%	16.9%

TABLE 5

COMMERCIAL BANKS' LOANS AND ADVANCES

Distribution of Real Loans in percent

	Dec 1976	Dec 1977	Dec 1978	Dec 1979	Dec 1980	Dec 1981	Dec 1982	Dec 1983	Dec 1984	Dec 1985	Dec 1986	Dec 1987	Dec 1988	AVERAGE 1980 -8
Agriculture	11.73%	13.50%	10.67%	10.33%	10.83%	12.91%	11.76%	10.84%	14.60%	16.30%	10.89%	9.80%	11.59%	12.17%
Mining	0.92%	0.94%	0.74%	0.64%	0.57%	0.52%	0.61%	0.47%	0.36%	0.21%	0.25%	0.52%	0.30%	0.42%
Manufacturing	17.53%	18.06%	17.30%	18.22%	19.66%	21.23%	20.21%	21.26%	24.80%	23.82%	21.52%	19.99%	21.10%	21.51%
Construction & Land Dev.	18.06%	16.60%	16.65%	13.99%	11.70%	12.13%	16.63%	21.00%	22.49%	20.08%	16.67%	18.33%	22.89%	17.99%
Financial Institutions	2.83%	2.74%	4.25%	3.94%	2.12%	2.31%	1.98%	2.39%	2.45%	2.00%	1.95%	1.86%	2.24%	2.14%
Transport, Storage & Comm	3.96%	3.86%	5.68%	6.57%	9.99%	9.76%	11.84%	11.66%	12.17%	12.83%	11.68%	12.08%	13.23%	11.69%
Electricity, Gas & Water	2.20%	2.93%	3.48%	3.24%	3.76%	3.95%	3.05%	1.61%	1.00%	0.79%	0.22%	0.28%	0.20%	1.65%
Distribution	15.32%	10.82%	10.52%	8.93%	8.23%	8.17%	6.44%	5.49%	3.91%	3.25%	2.85%	3.18%	3.08%	4.96%
Tourism	1.86%	1.62%	3.36%	3.96%	5.55%	5.10%	5.03%	4.40%	4.57%	6.06%	6.18%	6.57%	7.82%	5.70%
Entertainment	0.59%	0.51%	0.89%	1.13%	1.11%	0.83%	0.76%	0.91%	0.86%	0.89%	0.97%	0.76%	1.06%	0.91%
Professional & Other Serv	6.37%	6.35%	7.28%	7.27%	7.05%	8.60%	11.52%	8.53%	5.97%	4.78%	4.24%	3.65%	4.11%	6.49%
Total Business Sector	81.37%	77.93%	80.82%	78.23%	80.56%	85.50%	89.84%	88.57%	93.19%	91.02%	77.41%	77.02%	87.61%	85.64%
Government	2.29%	4.31%	3.62%	3.16%	2.16%	1.61%	1.57%	4.36%	1.60%	4.65%	17.74%	18.19%	7.58%	6.61%
Personal	16.34%	17.76%	15.56%	18.60%	17.28%	12.89%	8.59%	7.07%	5.21%	4.33%	4.86%	4.79%	4.81%	7.76%
Total Real Loans	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

TABLE 6

GDP BY INDUSTRIAL SECTORS AT CONSTANT PRICES

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Agriculture	162.3	178.0	159.5	152.7	156.1	143.8	154.2	169.7	163.7	160.3	164.3	157.1
Mining	146.7	150.4	148.0	162.7	164.8	117.0	117.7	118.5	95.4	101.6	106.6	101.6
Manufacturing	350.2	333.7	316.3	281.4	283.6	304.9	310.8	297.8	299.3	310.2	326.4	324.6
Electricity, Water	23.4	23.7	23.3	23.6	23.8	24.6	26.8	26.8	27.5	31.3	33.5	32.3
Construction	133.5	138.3	137.4	98.6	99.0	114.7	122.4	113.7	97.4	99.9	113.9	130.0
Distribution	310.3	306.1	293.9	273.8	291.3	311.2	295.6	292.9	268.6	284.9	314.1	318.7
Transport, Storage & Comm	128.6	130.0	129.7	124.3	126.3	126.9	133.7	137.8	140.5	154.1	164.9	168.2
Financial Institutions	83.8	94.0	102.3	107.7	117.2	115.5	140.2	128.1	119.1	138.9	144.3	149.8
Real Estate & Business	219.2	211.5	214.1	216.9	223.6	229.5	236.2	232.0	227.5	233.5	245.6	254.8
Miscellaneous Services	104.5	104.7	98.7	91.1	92.9	99.5	102.9	103.7	106.2	111.4	119.3	111.9
less imputed serv chg.	53.2	60.5	63.4	73.5	81.0	76.9	88.2	70.9	68.5	103.7	112.1	121.7
BUSINESS GDP	1609.3	1609.9	1559.8	1459.3	1497.6	1510.7	1552.3	1550.1	1476.7	1522.4	1620.8	1627.3
Government Services	328.3	344.1	360.8	351.5	359.4	368.3	370.0	354.4	337.6	325.2	323.4	324.9
Households	27.8	22.3	19.4	18.1	18.5	19.8	19.9	20.4	20.9	22.4	23.2	25.4
TOTAL GDP	1965.4	1976.3	1940.0	1828.9	1875.5	1898.8	1942.2	1924.9	1835.2	1870.0	1967.4	1977.6

TABLE 7

RATE OF GROWTH OF REAL GDP

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	AVERAGE 1980-88
Agriculture	9.7%	-10.4%	-4.3%	2.2%	-7.9%	7.2%	10.1%	-3.5%	-2.1%	2.5%	-4.4%	0.4%
Mining	2.5%	-1.6%	9.9%	1.3%	-29.0%	0.6%	0.7%	-19.5%	6.5%	4.9%	-4.7%	-4.7%
Manufacturing	-4.7%	-5.2%	-11.0%	0.8%	7.5%	1.9%	-4.2%	0.5%	3.6%	5.2%	-0.6%	1.9%
Electricity, Water	1.3%	-1.7%	1.3%	0.8%	3.4%	8.9%	0.0%	2.6%	13.8%	7.0%	-3.6%	4.6%
Construction	3.6%	-0.7%	-28.2%	0.4%	15.9%	6.7%	-7.1%	-14.3%	2.6%	14.0%	14.1%	4.0%
Distribution	-1.4%	-4.0%	-6.8%	6.4%	6.8%	-5.0%	-0.9%	-8.3%	6.1%	10.2%	1.5%	2.0%
Transport, Storage & Comm	1.1%	-0.2%	-4.2%	1.6%	0.5%	5.4%	3.1%	2.0%	9.7%	7.0%	2.0%	4.4%
Financial Institutions	12.2%	8.8%	5.3%	8.8%	-1.5%	21.4%	-8.6%	-7.0%	16.6%	3.9%	3.8%	4.9%
Real Estate & Business	-3.5%	1.2%	1.3%	3.1%	2.6%	2.9%	-1.8%	-1.9%	2.6%	5.2%	3.7%	2.2%
Miscellaneous Services	0.2%	-5.7%	-7.7%	2.0%	7.1%	3.4%	0.8%	2.4%	4.9%	7.1%	-6.2%	2.9%
less imputed serv chg.	13.7%	4.8%	15.9%	10.2%	-5.1%	14.7%	-19.6%	-3.4%	51.4%	8.1%	8.6%	8.2%
BUSINESS GDP	0.0%	-3.1%	-6.4%	2.6%	0.9%	2.8%	-0.1%	-4.7%	3.1%	6.5%	0.4%	1.4%
Government Services	4.8%	4.8%	15.9%	10.2%	-5.1%	14.7%	-19.6%	-3.4%	51.4%	8.1%	8.6%	8.2%
Households	-19.8%	-13.0%	-6.7%	2.2%	7.0%	0.5%	2.5%	2.5%	7.2%	3.6%	9.5%	5.0%
TOTAL GDP	0.6%	-1.8%	-5.7%	2.5%	1.2%	2.3%	-0.9%	-4.7%	1.9%	5.2%	0.5%	1.0%

TABLE 8

GDP BY INDUSTRIAL SECTORS AT FACTOR COST (CURRENT PRICES)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	247.7	294.3	306.7	389.2	396.7	395.5	442.4	524.8	646.0	796.2
Mining	298.5	492.3	610.6	673.6	538.6	330.3	275.9	651.2	552.3	892.1
Manufacturing	375.7	430.8	434.7	490.0	569.1	699.9	1092.6	1312.5	1769.4	2150.0
Electricity, Water	59.0	84.3	89.6	75.2	91.3	109.1	169.5	287.1	345.3	402.1
Construction	181.2	252.1	311.3	279.0	365.9	475.8	597.3	837.6	948.0	1021.4
Distribution	461.3	631.0	745.7	858.8	948.5	1036.2	1161.7	1699.7	1830.4	2046.1
Transport, Storage & Comm	186.2	227.5	251.6	271.2	287.0	334.0	432.6	693.5	930.7	1056.7
Financial Institutions	96.4	138.9	184.9	225.7	312.8	367.6	521.8	560.5	620.4	983.1
Real Estate & Business	259.9	281.9	322.1	361.8	450.1	523.8	608.3	743.1	882.5	922.8
Miscellaneous Services	147.8	165.8	169.5	182.9	219.0	237.7	278.2	324.3	398.9	490.2
less imputed serv chg.	64.6	92.5	118.0	155.8	206.3	248.9	315.8	320.2	382.5	793.9
BUSINESS GDP	2249.1	2906.4	3308.7	3651.6	3972.7	4261	5264.5	7314.1	8541.4	9966.8
Government Services	436.4	509.1	566.5	667.7	753.8	893.6	994.7	1108.9	1168.9	1319.9
Households	53.0	50.2	46.9	44.1	47.7	52.5	56.6	69.7	84.1	110.8
TOTAL GDP	2738.5	3465.7	3922.1	4363.4	4774.2	5207.1	6315.8	8492.7	9794.4	11397.5

TABLE 9

GROSS OPERATING SURPLUS BY INDUSTRIAL SECTORS (CURRENT PRICES)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	136.5	156.9	161.5	218.9	216.5	194.5	205.8	231.0	243.4	310.6
Mining	197.5	348.4	449.8	497.7	349.1	119.6	88.5	337.1	252.9	662.7
Manufacturing	91.1	95.1	67.2	84.4	113.7	182.8	493.3	573.1	826.1	1049.4
Electricity, Water	11.4	29.0	16.9	-9.2	-0.5	0.2	46.2	100.7	108.1	160.7
Construction	17.3	21.2	25.4	27.7	41.3	78.2	123.0	240.2	444.2	498.7
Distribution	243.3	402.4	491.6	593.9	669.1	742.3	847.1	1297.7	1348.2	1352.1
Transport, Storage & Comm	1.8	16.7	9.1	-11.7	12.1	26.0	76.4	231.6	330.5	371.9
Financial Institutions	3.9	34.2	64.1	69.3	115.3	136.1	242.9	226.0	222.0	460.8
Real Estate & Business	128.4	136.7	154.9	178.3	223.3	256.0	297.6	364.3	426.6	416.5
Government Services	-	-	-	-	-	-	-	-	-	-
Miscellaneous Services	34.7	32.3	24.0	19.9	31.4	30.2	33.0	23.6	14.9	34.2
Households	-	-	-	-	-	-	-	-	-	-
less imputed serv chg.	64.6	92.5	118.0	155.8	206.3	248.9	315.8	320.2	382.5	793.9
TOTAL GOS	801.3	1180.4	1346.5	1513.4	1565.0	1517.0	2138.0	3305.1	3834.4	4523.7

TABLE 10

RATIO OF GROSS OPERATING SURPLUS TO GDP AT FACTOR COST

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	AVERAGE 1980-88
Agriculture	0.551	0.533	0.527	0.562	0.546	0.492	0.465	0.440	0.377	0.390	0.467
Mining	0.662	0.708	0.737	0.739	0.648	0.362	0.321	0.518	0.458	0.743	0.541
Manufacturing	0.242	0.221	0.155	0.172	0.200	0.261	0.451	0.437	0.467	0.488	0.354
Electricity, Water	0.193	0.344	0.189	-0.122	-0.005	0.002	0.273	0.351	0.313	0.400	0.173
Construction	0.095	0.084	0.082	0.099	0.113	0.164	0.206	0.287	0.469	0.488	0.261
Distribution	0.527	0.638	0.659	0.692	0.705	0.716	0.729	0.763	0.737	0.661	0.715
Transport, Storage & Comm	0.010	0.073	0.036	-0.043	0.042	0.078	0.177	0.334	0.355	0.352	0.185
Financial Institutions	0.040	0.246	0.347	0.307	0.369	0.370	0.466	0.403	0.358	0.469	0.392
Real Estate & Business	0.494	0.485	0.481	0.493	0.496	0.489	0.489	0.490	0.483	0.451	0.485
Government Services	-	-	-	-	-	-	-	-	-	-	
Miscellaneous Services	0.235	0.195	0.142	0.109	0.143	0.127	0.119	0.073	0.037	0.070	0.097
Households	-	-	-	-	-	-	-	-	-	-	
less imputed serv chg.	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
TOTAL GOS/GDP	0.293	0.341	0.343	0.347	0.328	0.291	0.339	0.389	0.391	0.397	0.355