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NOTES ON THE BRAZILIAN EXPERIENCE SINCE 1963

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The perplexing thing about the present Brazilian situation is the simultaneous presence of inflation and stagnation. Industrial output has increased by no more than 9% during the last 5 years and agricultural production has been growing at arount 2% per year during the same period. Prices have more than quadrupled during that period. The government has had the worst of both worlds, inflation without growth. Though differing in details, this description applies to both the Goulart and the Castello Branco periods. We, considering possible changes in the economic policy presently in force, must ask, what went wrong? What characteristic in this economy allows increases in the money supply to bring higher prices but bot more goods.

The phenomenon of inflation without growth has led many observers to conclude that Brazil is in a cost push inflation. The arguement is that the prices of government goods, services and borrowed money have increased significantly in relative terms, thus raising fixed costs. At the same time the government has been reducing aggregate demand by raising taxes and redistributing income away from wage earners. If firms use a mark-up price system, then reducing demand will raise prices, because of higher per unit costs which are partly due to the increasing cost of governmentally supplied inputs, and partly to the lower volume of operations. Therefore if firms use a pricing system based on unit costs, and if demand is reduced at the same time that unit prices are increasing, the result will be an inflation with no real growth in output.

The cost push explanation of the Brazilian experience has one weakness that has caused many people to conclude that the inflation is primarily one of excess demand. In order for falling output or idle capacity to occur, there must be a reduction in aggregate demand.

Surely it is difficult to see how there could be a reduction in total demand when the money supply and money income have been expanding as fast as they have in Brazil during the last four years. If this expansion has not brought growth as well as inflation, the demand pul group would argue that this must be due to some structural factors such as a radical shift spending in patterns, or inefficiences brought on by the inflation itself. It is theoretically possible for income redistribution or increased government spending to so change the structure of demand that certain sectors are faced with excess demand and are forced to raise prices while simultaneously other sectors have reduced sales. Prices rise on average, and output may even fall, depending on the importance of the sectors whose demand is reduced. This is the demand shift inflation. The excess demand explanation car only account for economic stagnation if it can show some sort of structural readjustment in the economy, for it is quite clear that during the past four years the inflation in Brazil has not brought either full employment or economic growth, two of the chief distinguishing characteristics of an economy with excess aggregate demand. In summary cost push and demand pull explanations appear to be incompatible with the Brazilian experience, the first because rapid monetary expansion is impossible to equate with reduced demand, and the second because there has been unemployment and stagnation.

It is impossible theoretically to distinguish between cost push and demand shift inflations. One can only look at the actual record to see whether there has been a shift in the leading and lagging sectors and which are the primary sources of inflationary pressure. In a demand shift situation, one would expect a change in leading sectors with the new leaders showing above average increases. This is not the case in Brazil. Looking at industry one finds that the dynamic sectors have been and continue to be paper, rubber, chemicals and metallurgy. Textiles, foods, clothing, and leather products have been and continue to be stagnant. These leading sectors are chiefly intermediate products, and a significant part of their growth must be due to import replacement. But the market for final products has not been expanding so rapidly which is what one would expect in an economy where there has been a deterioration in the real wage, a rise in the personal tax rate, and a scarcity of consumer credit. This is not a new situation, in that roughly the same relative growth pattern which was present in 1961 is still present today. In the earlier period, the consumer industries were squeezed to make more resources available for basic industry, import replacement, and investment. Now they are being squeezed inadvertently because of the inflation control program. But the result is that there is no evidence of a shift in spending patterns, as required by the demand shift theory to explain the stagnation after 1962.

Turning now to the evidence on relative price behavior, one finds it, too, does not support the demand shift hypothesis. A characteristic of this type of inflation must that sectors experiencing increases in demand raise their prices faster than those from whom demand is shifting. In the following table I show the price of various industrial products relative to the industrial price index, with 1963 equal to 100. Sectors with values greater than 100 are generating above average inflationary pressure.

TABLE ONE

MANUFACTURED PRICES RELATIVE TO INDUSTRIAL PRICES

	Food	Drinks	Fuels	Metals	Shoes	Textile	Chemical
1961	99.4	89.6	114.9	88.0	116.4	103.7	79.8
1962	104.2	99.7	103.4	94.2	116.3	101.5	87.0
1963	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1964	121.1	109.0	107.9	96.9	87.9	94.8	123.0
1965	114.3	109.9	120.6	102.2	88.1	89.8	127.0
1966	167.5	111.6	112.1	100.0	100.3	91.6	103.1

Source: Conjuntura Econômica

Some of the most inflationary sectors are ones with slower than average rates of growth such as foods, and beveridges. Others are dominated by state companies such as fuels and chemicals where prices may be set on non-market considerations. This set of indices is a crude measure, but it does indicate that there is no wide divergence in the price behavior of any sector. A further bit of evidence, discussed in a previous paper, showed that rank correlations between growth and inflation rates for various industrial sectors were negative and significant for 1963 and 1964. It seems that the behavior of sectoral prices does not support the demand shift hypothesis.

If one rejects the demand shift hypothesis on the basis of the evidence just cited one appears to be left in the uncomfortable position of having to choose between two alternatives neither of which exactly fits the Brazilian economy. The excess demand theory has to explain unemployment and stagnation, while the cost push coupled with demand control has to account for the rapid monetary expansion, which seems inconsistent with demand control. I am now going to try to show that since 1965 this dilemma is a false one. Rather than having had either excess demand or cost push inflation, Brazil has had both at different periods, and is now in a cost-push phase. It has been difficult to recognize this purely because the phasing was not by calendar years.

During the second quarter of 1965 the government moved to reduce taxes to offset an troublesome recession, and banks increased their loan activity. In real terms both loans to the private sector and the money stock began to expand in March. Production responded in the following quarter, and it would be acceptable to date the beginning of a demand pull inflation as of July, 1965. During the year that followed the money supply increased by 45%, output rose by 9.5%, and prices rose by a total of 37.8%[1]. This appears to be a classic demand pull situation with excess monetary demand, rapid expansion of output, and inflation.

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[1] This growth rate is calculated from the quarterly output estimates of the Central Bank, Relatorio 1966, p. 24

However the excess demand situation did not last. The government, acting to curb the excess monetary expansion of late 1965, applied a rigid monetary control program. The expansion of the money stock fell far below that of prices starting in January, and the rate of increase of output also fell. Banks offset this contraction to some extent by reducing sharply the level of their reserves. However the increasing scarcity of liquidity, coupled with overall reduced demand finally stopped the growth of the economy, and in the fourth quarter of 1966, output fell in real terms for the first time in five quarters. Unfortunately this control program did not stop the inflation. In the following table are shown the quarterly rates of inflation of the wholesale price index that occurred during both the period under discussion. In the first line are the first three quarters of a period I am labelling demand pull inflation. In the second line are the comparable subsequent quarters.

TABLE TWO
QUARTERLY RATES OF INFLATION

	3rd.Qtr.	4th.Qtr.	1st.Qtr.	accumulated
Demand Pull Phase (1965)	5.2%	5.3%	13.0 (1966)	25.2%
Cost Push Phase (1966)	7.4	4.5	10.9 (1967)	24.4

The monetary control program during 1966 did not stop inflation as one can see from the table. But it did stop economic growth and produce the classic signs of cost push inflation -- inflexible prices, reduced demand and unemployment.

Let us review again the evidence in favor of the cost push hypothesis. We know that there has been a substantial upward move in both the cost of government services, mixed company products and interest rates (a table is presently in preparation showing the relative prices of some important products and services). Taxes have been increased. The government's monetary program has raised the cost of borrowed working capital. While the extra interest charges could be passed along in the form of higher prices, if demand were sufficient this has not been possible because the level of disposable income aggregate has not been expanding fast enough. For, demand has in fact been controlled. There has been a substantial reduction in the real wage, disposable income has been cut by higher taxes, and higher interest rates have reduced investment expenditure sharply. In monetary terms the end result has been a reduction in the rate of increase of the means of payment. From June 1966 to February 1967 the means of payment have risen only 12%, a modest increase by Brazilian standards. This disposes of the major argument against cost-push inflation - the inconstancy of lack of demand and rapid monetary expansion. Since last June the expansion has not been rapid. During the second half of 1965, when it was, so was the expansion of output.

The conclusion one draws from the experience of the past two years is the pessimistic one that at present there is a minimum rate of inflation of between 20% and 25%, and that any governmental attempt to reduce the expansion of the money supply below this rate will be met, by falling output, not falling prices. To some extent this must be due to one-time cost increases such as taxes and interest which could be lowered through governmental policy. However, inflation has also been institutionalized in price corrections for contracts, wages and government debt. This gives the system a built in inflationary inertia which can only be corrected over a number of years. The appropriate government policy at present would be to expand the money supply at a steady rate somewhat faster than the inflationary floor. Judging again by table 2, as long as there is excess capacity, this should be possible to do with hardly any differential effect on prices.

May/1967
SAM/rcr.