

Accelerating, maintaining and sanctionating factors of inflation

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In order to understand inflation or stagflation in present day oligopolistic capitalism, it is necessary to distinguish the accelerating, the maintaining and the sanctionating factors of inflation. Four are the accelerating factors: change in profit margins, change in real wages above (or below) productivity, changes in the real exchange rate and in the costs of imports. The basic maintaining factors are formal and informal indexation of the economy and mark-up pricing. Given an autonomous inflation, that is, independent of sustained demand or full employment, the fundamental sanctionating factor of inflation will be the money supply.

The inflationary process in this last quarter of the twentieth century can only be clearly understood if we differentiate among the three mechanisms or factors that act on prices, determining that they constantly increase. These factors are: (1) those that cause the level of inflation to be maintained; (2) those that speed up (or slow down) inflation; and, (3) those that sanction or validate price hikes. The confusion and useless discussion surrounding inflation is, in large part, due to an inability to distinguish between these three mechanisms. Without a clear understanding of the concepts we are about to outline, it is not easy to distinguish the primary causes of inflation from the inertial factors that maintain the rate of inflation and those factors that sanction the current inflation rate.

The first section of this essay examines certain assumptions concerning the nature of contemporary capitalism and the behavior of various economic agents. The next three sections examine the factors that speed up inflation (increased profit margins or increased real wages higher than productivity levels), maintain inflation (economic agents' ability to pass cost increases on to prices), and sanction inflation (particularly the increase in the nominal money supply). To

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the extent that the increased money supply is a mechanism that sanctions inflation, it is rather a consequence than a cause of inflation. The fifth section deals with the public sector deficit, which not only serves as a buffer in relation to economic and political tension arising from the distributional conflict, but also functions as a means to assure an increase in the money supply necessary to maintain the liquidity of the system. Sections six and seven discuss some relations between the theory developed here and the Phillips curve, as well as monetarist and Keynesian models of inflation.

1

Neoclassical and monetarist economists developed their macroeconomic policies, based on the assumption that, in capitalist economies, normally the self-correcting market mechanism leads to full employment, full capacity, and price stability. Therefore, deviations from these points of equilibrium, particularly in relation to inflation, could be easily corrected by the market itself or by an economic adjustment policy that would eliminate those inflation-causing distortions: the public deficit and an excessive money supply. Keynes dropped the basic assumptions of a self-regulating market mechanism and, thus, of full capacity and full employment from his model while working with an assumption of fixed prices. But inflation continued to be a phenomenon of excessive aggregate demand, so that the economic policy he recommended for stabilizing prices did not essentially differ from that proposed by the neoclassical economists.

Nevertheless, it has become evident in the last years that, if we consider the reality of the oligopolistic and technobureaucratic capitalism of our times, the economic models must go one step beyond Keynes and abandon the assumption of price stability. This is what we will do in this essay. We will try to develop an analytical model of the inflationary process based on the general hypothesis that capitalist economies in the last quarter of the twentieth century have and will tend to coexist with unemployment, idle capacity, and relatively high inflation rates. This fact is not merely due to the structural imperfections of a market that is dominated by large corporations, unions, and the large technobureaucratic state, but also to the fact that, since 1970 or 1973, we have begun the phase of economic decline typical of a long Kondratieff cycle. Consequently, a radically new macroeconomic analysis has become of the utmost importance. If Keynes began to construct his model with a critique of Say's law, which automatically ensured full employment, we must now begin with a critique of Keynes, who maintained price stability as one of his basic assumptions and only allowed for demand inflation. In fact, it is only possible now to understand inflation, which became relatively autonomous in relation to the market, if we start from the assumption that its inertial component is a structural phenomenon of contemporary capitalist economies.

Besides assuming unemployment and imperfect markets, as administrative and stagflationist theories of inflation do, the model presented in this essay starts from a third assumption: that a given rate of inflation prevails in the economy. Instead of starting from a zero rate of inflation as most models of inflation do, this analysis departs from a given and relatively high rate of inflation (two or three-digit inflation) typical of Latin American countries. Inflation in this model accelerates or decelerates starting from an inertial rate of inflation. High inflation rates are incompatible with monetary illusion, because everybody becomes aware of the distributive conflict involved in inflation.

A fourth assumption, tied to the last one, concerns the ability of the economic agents to maintain their relative shares in the income. In a modern economy, let us make the simple yet plausible assumption that workers, entrepreneurial capitalists and rentier capitalists have certain instruments at their disposal with which to defend and eventually increase their share in the national income. Workers generally defend their wages collectively, by sector, in much the same way as technobureaucrats defend their salaries. State and private enterprises seek to maintain their profit rates and profit margins separately or in oligopolistic groups. Rentiers try to maintain or increase the interest and rents they receive. This assumption generally appears in the literature concerning inflation, in terms of the theory that inflation is the result of a distributive conflict.

The fifth assumption is that these economic agents have the maintenance of a "reasonable" economic growth rate as their common objective. This means that they will be resolutely opposed to recessive economic policies. Workers and the middle class, increasingly powerful in contemporary societies, always resist recessive economic policies. Nevertheless, as Kalecki demonstrates, capitalists tend to accept recessive policies as a form of controlling union activity in a period of accelerated inflation. Yet, due to the growing inefficiency of these kinds of measures for fighting inflation, capitalists have also begun to withdraw their support for recessive policies, demanding positive and reasonably stable economic growth rates.

Based on these five assumptions stated very briefly above, we can develop a model for the inflationary process. However, it should be made clear that these assumptions do not have to be entirely realistic in order for the model to be valid. First, this model can be very useful for low rates of inflation, provided that the economic agents are not victims of monetary illusion. The higher the inflation rate, the more aware the economic agents will be of the distributive conflict, and so, less subject to monetary illusion. But even with low but persistent rates of inflation, the economic agents can be defended from monetary illusion. Second, it is not always true that the results of the distributional conflict do not favor one group or another. Third, we still have many supporters of recessive policies among the capitalist class. Yet there is no doubt that the various economic agents, whether as individuals, interest groups, classes, or

nations have a much clearer notion of their own interests and continually offer greater resistance to the sacrifices imposed on them. Fourth, given cyclical fluctuations, insufficient demand, though a generalized and chronic problem, is not a permanent one. At certain moments, demand shocks instead of cost push factors can accelerate inflation.

2

First let us look at the factors that speed up and slow down inflation. If we start with an economic situation where prices are increasing at a stable rate, then inflation can only accelerate or decelerate if we have a variation in relative prices. More precisely, factors accelerating inflation in a closed economy will be (1) real average wage increases above productivity increases and/or (2) increased profit margins. In an open economy, two additional factors shall be considered: (3) real devaluations of the currency, and (4) an increase in the value of imported goods. If we consider the state's role in this model, we have one more factor to accelerate inflation: (5) an increase in taxes.

In this simplified economy, where the production price is equal to wages plus profits, and the only cost is the wage, which serves as the basis for the calculation of profit margins, the variation in prices, or the inflation rate, p will depend (1) on the variation in the wage rate, w , subtracting productivity increases, q , and (2) on the variation in the profit margin, m (profit over direct cost).

$$P = w - q + m \qquad 1$$

In this model, we can see that inflation always implies a distributional conflict. In the final analysis, the acceleration of inflation depends on the capacity of capitalists to increase their profit margins or on the ability of workers to increase their real wages. Yet this conflict can also take place within a given class, and especially among capitalist enterprises that maintain interindustrial relations.

Increased profit margins and/or real wages higher than productivity increases can result from one or more of the following four factors: (1) a generalized excess of aggregate demand in relation to supply, within a situation of full employment and little idle capacity; (2) sectorial insufficiency in supply; (3) autonomous wage or price increases due to monopoly control by corporations or unions; and, (4) reduction in labor productivity without a corresponding reduction in wages.

The first case is one of classic Keynesian inflation; the second is structural inflation; the third and fourth are administered or cost inflation. In the first case, all prices increase at about the same time. In the others, price increases in a specific sector spread to the rest of the economy as a result of the distributional

conflict.

Although prices of raw materials or intermediary products are fundamental links in the propagation process of inflation, they do not appear explicitly in this simplified model because, in the final analysis, every price is the sum total of profits and wages.

Real wages can increase at the same rate as productivity increases, because what is important to corporations in determining their prices is not the wage rate but, rather, the labor unit cost. If wages and productivity are increasing at the same rate, prices can be maintained constant, and the profit-wage relation (rate of plus value) will stay constant.

If we open our model up to the international market, we should specify variations in the prices of raw materials imported in the national currency, z , and the variation in the amount of raw material imported per product unit, x :

$$P = \alpha (w - q) + (1 - \alpha) (z + x) + m \quad 2$$

Variations in the price of raw materials could result from an increase in their prices in foreign exchange and/or a variation in the exchange rate above the parity rate. In the first case, we have what is called imported inflation. The wage as a part of the total cost is expressed as α , and imported raw materials as $1 - \alpha$. Increased prices for imported raw materials, as well as the devaluation of the national currency in real terms, are also factors that accelerate the inflationary process.

Corporate profit margins should not only cover the enterprise's profits, but also interest and rents paid to rentiers and taxes, as well as fixed costs and depreciation. To the extent that corporations, both in the competitive and oligopolistic sectors of the economy are able to maintain their liquid profit margins, any increase in interests, rents, taxes, or fixed costs (derived from reduced sales) implies an increase in the profit margin, and thus will serve as an accelerating factor in the inflationary process.

In the same way, measures of "corrective inflation," which aim to bring deviations in relative prices caused by price controls or by subsidies into order, cause increases in profit margins and speed up inflation.

A strictly autonomous increase (that is, independent of excess demand in relation to supply) in the profit margin would only be possible to the extent that a corporation has monopoly control over an industry. In the same way, an autonomous wage increase could only occur in a situation where workers have considerable bargaining power. The inflation rate would accelerate as a result of either of these hypotheses.

In order to maintain their rates of profit (profit over capital), oligopolist industries tend to increase their profit margins during recessions. In this way, a drop in sales is compensated for by an increased margin. However, this

accelerating factor of inflation may be compensated for by the competitive sector's falling profit margins during recession.

3

Once inflation has begun because of any of these factors, there are various mechanisms that operate in modern economies that tend to perpetuate this situation, that is, that maintain the level of inflation at a relatively stable rate, even when the factors that accelerated it are no longer acting upon the economy. If increased profit margins or real wages above productivity raise the level of inflation to a higher plateau, new pressures are not necessary to maintain this new plateau. The trend is for inflation to maintain itself at that higher plateau independently of demand and in spite of a high rate of unemployment. Therefore we have a situation of stagflation that could also be called "autonomous" or "inertial" inflation.

The factor par excellence that maintains the level of inflation is the distributional conflict, that is, the fact that various corporations and unions have economic and political instruments at their disposal to help them keep their relative income share. Given the fact that, at a determined inflation level, the prices of various commodities and labor tend to adjust with time lags among them, and fact that the prices of some of these commodities are the costs of others, subsequent price and wage increases tend to occur almost automatically. In this way, every corporation and every worker or group of workers passes on its cost increases in the form of price increases.

Although this process also happens in the competitive sector, it functions more effectively in the oligopolist sector of the economy, and takes on full force in a generally and formally indexed economy like that of Brazil. In this case, cost increases are passed on according to legally defined norms and become automatic. This is true even of nonindexed prices because, when inflation is a chronic problem, the various economic agents begin to improve their defense mechanisms so that, in effect, they develop informal indexing measures. Prices are corrected more and more frequently so that there is a smaller lag between cost and price increases. Thus it is not only formal indexation, but also this informal indexing process that serve as powerful elements in the maintenance of the level of inflation, making it inertial.

It should be made clear that this generalized mechanism of formal and informal indexation does not accelerate the inflationary process, but rather maintains the existing level of inflation to the extent that it maintains profit margins, real wages, and the structure of time lags between the adjustment of prices and wages. A slowdown would only occur if the indexation of prices, wages, the exchange rate, or interest rates was partial, including a reducing coefficient, if the adjustment were made more frequently. This phenomenon

could take place as a function of errors made in relation to inflationary expectations. When the various economic agents increase their prices in a chronic inflationary situation, they not only consider their current costs, but also their cost expectations. Nevertheless, we should not overestimate the importance of these forecasts in our analysis of the factors that keep up the existing inflation level. Effective cost variations always serve as the basis for these increases and consequently determine expectations.

The inflation level will be maintained to the extent that all agents working in the economy are relatively satisfied with their income share. However, if one of these groups feels that it can increase its profit margins or wages and thus increase its income share, and the other agents react by indexing their prices to the new level, the result will be the acceleration of inflation.

It should be pointed out, however, that the economic agents who took the initiative to increase their margins, interest rates, or wages would achieve a momentary increase in their share of real income even if the other economic groups passed on their respective cost increases. This is because they had the advantage of increasing their prices first and benefited from the time lag before the other prices were increased. The inflation would be more neutral if, as a reaction to the first agent's price increase, the other agents increased their prices a little bit more than their costs were increased in order to compensate for this time lag. Nevertheless, this would again result in an accelerated inflation.

Maintaining the inflation level by this process of time-lapsed price increases (generalized indexation) implies that inflation will be relatively neutral from the distributional point of view. Although this in fact is never entirely the case, it is important to consider this phenomenon in terms of our theoretical model.

These factors that maintain the inflationary level correspond to what Mario Henrique Simonsen calls "feedback components" (1970, 128-138), which in turn roughly correspond to the concept of "inflation-propagating factors" used by the Latin American structuralist economists to explain the spread of sectorial price hikes (Oswaldo Sunkel 1958, 19).

The existence of these factors that maintain the inflation level and ensure the relative stability of the various economic agents' real income makes it much more difficult to lower this inflation level. This fact has important implications in terms of economic policy.

In a fully indexed economy, any autonomous price increase (and consequently increased margins) implies increased inflation in direct relation to the original increase. This increase in the rate of inflation takes place by means of a multiplier mechanism that ends up raising all other prices proportionately.

When the price of a particular input increases originally, the prices of those products utilizing this input only increase in proportion to the first product's price hike. Nevertheless, these secondary increases have inflationary effects on

other commodities, as well as on wages. These tertiary increases are reflected not only in the prices of other products, but also in an increase in the goods affected by this secondary price hike. To the extent that the prices of wage goods end up being increased, wages will also automatically increase due to indexation. The multiplier effect of the initial increase will only be exhausted when all prices have risen in the same proportion, so that the structure of relative prices remains unaltered, restoring the initial distributional equilibrium (which was only upset by the lag in the price readjustments)¹ The indexation system then guarantees the maintenance of this new level of inflation, which covers its purely inertial character.

If the economic agents who made the original price hikes are not satisfied because the entire process we described above nullified their distributional advantage, they will increase their prices again, setting off a new multiplier process and a new acceleration of inflation.

However, in an economy that is not completely indexed, the multiplier effect will not be as great because the secondary prices will increase less than proportionately to the original increase. Consequently, the initial distributional equilibrium will not be reestablished. Once the multiplier effect of the original increase is over, and the economy reaches a new level of inflation, if indexation is only partial (that is to say, if the secondary increases are less than the original ones), then the newly established inflation level will begin to decline. In this case, however, we would have to assume that the various economic agents did not maintain their respective shares in the income.

Another important consequence of generalized indexation is that it makes relative prices inflexible, creating difficulties for the process of economic adjustment of the structure of production or consumption. In other words, the role that the price mechanism plays in the process of reallocating resources becomes highly inflexible and obstinate, thus requiring the government to intervene and deindex the economy and administratively establish a new structure for relative prices.

4

Last, we will examine those factors that sanction or validate inflation. Strictly speaking, only one important factor exists in this respect: the increase in the money supply. There is no doubt about the correlation between increased prices and the money supply.² In a monetary economy, the real quantity of

¹ A formal demonstration of the multiplier in relation to wage indexation can be found in Antonio Fazio (1981, p. 164).

² There is unlimited empirical proof of this fact. For example, there is Sujit S. Bhala's econometric study of twenty-nine underdeveloped countries between 1966 and 1975, in which he concludes that "the basic monetarist model of inflation performs remarkably well, given the diversity of the countries studied"

money, m , is determined by the volume of its transaction or by corresponding real income, given certain institutional factors (such as how payments are made) that determine the velocity of the circulation of money. The velocity of money can vary in the short run, as Keynes explains, depending on the motive for speculation, and, in the long run, depending on institutional changes. However, since we are not analyzing macroeconomic imbalances, but only inflation, let us simplify the matter and consider the income velocity of money to be constant.

Let us make M the nominal money supply, p the price index, and Y real income; V , the income velocity of money, is given as $V = Yp/M$, and the exchange equation, also a definition, is given as $MV = Yp$.

If V is constant, then M will be directly proportional to Yp by definition. Then it is necessary to determine the causal relationship between p and M .

An increase in the money supply would only be a factor that causes inflation, and thus, in the terminology we are using, accelerates inflation, if this increase (1) was converted into effective demand, and (2) if this effective demand was greater than aggregate demand at full employment and full capacity.

According to the Keynesian model, the conversion of the expansion of money into effective demand takes place as a result of lowered interest rates that stimulate investment. However, in order for this increased demand to imply price increases, it is essential that the economy be functioning with the full utilization of its resources. In this hypothesis, the pressure of demand would lead to increased profit margins or increased real wages. There could also be a structural kind of inflationary acceleration to the extent that only certain basic economic sectors operate at close to full capacity. In this case, even though there was not full employment, an increase in the money supply could accelerate inflation through a propagation effect.

Since approximately 1970-1973, few modern economies operate with full employment. In general, these economies are characterized by unemployment and idle capacity, given the tendency of large state and oligopolist corporations to make investments that anticipate expanded demand. Their high profit margins based on administered prices allow them to function in this way.

In these conditions, an increase in the nominal money supply cannot generally be considered to be a factor that accelerates the inflationary process. Rather, it tends to sanction inflation since, given constant price hikes, or inertial inflation, the real money supply tends to decrease, as it is defined as $m = M/p$. The decrease in the real money supply will cause a liquidity crisis and then recession. If we accept the assumption that the various economic agents seek to maintain the rate of economic growth, then there is no other alternative than to

(1981, p.84). In fact, the monetarist model is nothing but a reproduction of the exchange equation. Empirical tests based on this equation always and necessarily show excellent results, but prove nothing since they do not define the direction of the causal relation.

increase the nominal money supply and reestablish its real quantity.

In this case, an increased money supply could not be regarded as a cause or factor that accelerates inflation but merely one that sanctions this inflation. Monetary expansion simply keeps up with the price hikes, becoming one of the endogenous variables of the system, rather than an exogenous variable, as the linear thinking of the monetarists claims.

Although it is an endogenous variable, it should also be noted that as the money supply increases when there is generalized unemployment, as is common in contemporary economies, it can have an inflationary effect if it facilitates increased profit margins or wages in key sectors where there are insufficiencies in supply.

In periods of cyclical slowdowns, the state tends to compensate for unemployment and falling profit rates through fiscal measures, thus increasing its expenditures. This increase can be generalized or it can be put into practice by means of a complex subsidy scheme. At any rate, it implies public deficit and an increase in the money supply (if it is not financed by the sale of public bonds). To the extent that these increased expenditures and an increase in the money supply help those enterprises or groups of workers increase their profit margins or real wages in the sectors where there are temporary shortages, we have what we called in Section 1 compensatory inflation.”

The money supply maintains its endogenous nature in this situation. In fact, money is the expression of a social relation and, thus, cannot be manipulated at will by those who formulate economic policy. The money supply is a function of the economy’s real output and of the mechanism by which it sets its prices. On the other hand, money works as a kind of lubricant for the economic system. In this way, to the extent that inflation reduces the real money supply, society develops mechanisms to restore it.

These mechanisms may either be those that regulate the creation of money through the central bank and the commercial banks, or those of a more informal nature that create various forms of quasi-money such as credit cards, highly liquid bonds, etc.³ In this case, an increase in the money supply is not a cause of inflation but rather a consequence, a factor that sanctions inflation while ensuring its continuity. The correlation between an increased money supply and the inflation rate is beyond all question, but the direction of the causal relation is just the opposite of what the monetarists claim.

In the kind of analysis we are presently making, the assumption is implicit that there is a strict correlation between the money supply and price level, or more precisely, nominal income. Keynes observed that the income velocity of

³ Although this endogenous vision of money can be found in Keynes (1930, vol. II, p. 211), the fundamental analysis of inflation in these terms was made by Ignácio Rangel (1963). Also, see Basil J. Moore (1979).

money may vary in the short run, depending on the tendency to hoard or on the preference for liquidity, but we will consider this fact in the abstract and keep velocity constant. Milton Friedman thought he had disproven Keynes's theory in showing a stable correlation between the money supply and nominal income in the long run. However, the monetarist theory only makes sense if we consider the money supply to be a variable that is strictly exogenous to the economic system. If we postulate that the money supply is determined by monetary authorities, then we could imagine that variations in this supply would determine variations in price.

However, when we put aside this naive and linear notion that the money supply is an exogenous variable, that correlation no longer proves the monetarist hypothesis. On the other hand, if we make the assumption (which we are making in this analysis) that nominal income determines the money supply, then the correlation that has been empirically established by Friedman, among others, only serves to contradict this theory.

This notion that the money supply is endogenous to the economic system can be found in Marx when he affirms that the money supply is determined by the sum total of commodity prices, and that it is merely an illusion to think that these prices are determined by the quantity of the means of circulation (1867, Book I, p.135-137). More recently, Ignácio Rangel had also made this fact clear when he explicitly inverted the causal relationship between money and prices in the exchange equation (1963), radically interpreting the thinking of both Marx and Keynes. This idea received more precise treatment in relation to Keynes's thought by Nicholas Kaldor (1970, 1982).

In the Keynesian tradition, Kaldor points out that modern capitalist economies are "credit-money economies" rather than "commodity-money economies." Thus, money is not neutral, nor can it be manipulated according to the will of economic policy. Since it is a form of credit, it is created and destroyed by the financial system in a variety of ways. On the one hand, control over cash deposits and other assets is limited; on the other, many kinds of bonds are created so that, depending on the demand for money (M_1 or M_2), its quantity will vary in time and in different countries (1982, p.26-27).

Alain Lipietz adopts a similar position, starting from a modern Marxist perspective that emphasizes the credit form of money to the detriment of its merchandise form. He sees credit-money as strictly endogenous, created by banks that give loans. Thus one should not utilize the concept of a multiplier of the monetary base, but rather of the bank loans' "monetary divisor" (1982, p.54).

According to this point of view, the money supply is endogenous in strictly economic terms, to the extent that the financial system creates money in the absence of or against the will of monetary authorities. Without denying this fact, there is also a political element involved in the process, in that the economic

agents pressure the government when they see real liquidity diminished due to price hikes, which leads to the increase in the nominal money supply with the explicit or tacit consent of the monetary authorities.

This does not mean that the government does not have control over the money supply. Through increasingly direct or administrative means, such as the quantitative control of bank loans, or through monetary or fiscal policy affecting the interest rate, it is possible to cause modifications in the money supply for a while. Yet these changes in the quantity of money as a result of economic policy are limited in their range and duration. Heavily restrictive monetary policies not only are unable to substantially modify the money supply, but also, and more important, are unable to function for very long. These observations do not mean to deny the importance and necessity of a monetary policy in the fight against inflation, but only to point out their limitations.

5

The most linear way to explain inflation is to start with the state's budget deficit as the reason for the increase in the money supply, which in turn influences price increases. In fact, the public deficit, especially the nominal public deficit, can be considered to be an endogenous factor in the same way that money can—as a consequence of inflation rather than a cause.

The public deficit only constitutes a causal or accelerating factor of inflation if increased governmental expenditures (or decreased taxes) lead to pressure on aggregate demand in relation to supply when the economy is functioning at full capacity with full employment. Or, in other words, the public deficit is financed by an increase in the real money supply, which leads to low interest rates, high investments, and excess demand. A public deficit caused by the monetary correction of public debt is just nominal, and not a real deficit. It is a sanctioning factor of inflation, as is the increase of the money supply necessary to finance it.

The nominal public deficit facilitates the increase in the nominal money supply necessary to sanction the existing level of inertial inflation. Obviously, there are other more orthodox ways to increase the money supply. The classic formulas are for increasing credit by reducing required bank reserves in the central bank, the purchase of public bonds in the open market, and a reduction of the discount rate. Yet it is beyond question that the easiest and most convenient way for governments with a high level of inflation to increase the nominal quantity of money, and thus sanction the inflationary process, is to issue more currency.

Table 1 makes it very clear that there is no direct correlation between the public deficit's share in the gross domestic product and the inflation rate. There are countries with very high deficits and low inflation rates. There is some degree of correlation between the increase in the public deficit in each country

and an increased inflation rate. The majority of countries had an increased public debt along with an increased rate of inflation during the 1970s. Yet, even in this case, the correlation is very weak, since, in many cases, the deficit went down and inflation went up or vice versa.

Table 1 - Central Government Deficit and the Inflation Rate

| Country | 1979-81 | |
|---------------|---------------------------|----------------|
| | Deficit as a % of the GDB | Inflation rate |
| Canada | 3.1 | 10.6 |
| United States | 2.2 | 11.7 |
| Japan | 8.4 | 5.5 |
| France | 1.7 | 12.5 |
| Germany | 2.1 | 5.2 |
| Italy | 12.0 | 17.9 |
| Britain | 4.9 | 14.4 |
| Sweden | 7.0 | 11.0 |
| Brazil | 7.5 | 82.7 |
| Argentina | 3.1 | 121.6 |
| Mexico | 3.2 | 24.2 |

Source: Conjuntura Econômica, FGV, and International Finance Statistics, I.M.F.

Naturally, those countries with low inflation rates and large deficits finance their deficits through the public debt and thus discourage an increase in the money supply. Why don't the countries with high inflation rates do the same thing? It is certainly not due to a lack of available domestic savings, or to a process where the private sector is crowded out by high interest rates. These problems exist in every country that has a high public deficit and seeks to finance it by using public bonds, rather than only in those with high rates of inflation. In fact, sales of open-market bonds are limited by the fact that there is a high autonomous inflation to be sanctioned by the increase of the nominal money supply.

Stating that the public deficit, as well as the increase in money supply, are factors that sanction inflation does not mean that these factors cannot also speed up the inflationary process when they pressure aggregate or sectorial demand. We also recognize the fact that the public deficit serves to mitigate the distributional conflict. When the state increases its expenditures without being able to cover this spending by its tax revenue, it serves the interest of some

specific sectors and helps in maintaining aggregate demand. An acceleration of inflation may be a result of this practice. However, one of the explicit assumptions in this analysis is that, starting in 1973, if not sooner, capitalist economies have functioned with both idle capacity and unemployment. In this situation, the public deficit does not result in strong pressures on aggregate demand and thus is not the cause of increases either in profit margins or in real wages.

6

Although we consider an increased nominal money supply and the nominal public deficit to be a consequence and not a cause of inflation, this does not mean that a restrictive fiscal and monetary policy cannot serve as a tool to control inflation. It is a curious phenomenon that one can fight inflation and reduce its level by attacking its consequences (monetary expansion) rather than its original causes (increased wages and profits).

By reducing the money supply (which generally occurs together with reducing the public deficit), what one hopes to do is to reduce effective demand. As a result, competitive corporations and workers who are not very well defended by their unions are forced to lower their profit margins and wages. The oligopolistic corporations raise their profit margins in order to make up for reduced sales.⁴ However, the decrease in wages and profits in the competitive sector is sufficient to cause a general drop in the inflation rate.

According to a commonly used Keynesian model, the inflation rate is directly proportional to the increases in nominal wages.⁵ Returning to Equation 1, this means that the corporations' profit margins are constant, $m = 0$, so that they can be taken out of that equation; thus, the variation in prices is given by:

$$P = w - p \quad 3$$

The model is completed by the Phillips curve, which establishes a relation between the variation in nominal wages, w , and in the unemployment rate, d .

$$W = a + b d^{-1} \quad 4$$

To the extent that unemployment increases as a result of fiscal measures (preferred by the Keynesian) or of monetary measures (referred by the monetarists), the wage rate decreases, causing a drop in the inflation level. The reduction in the money supply, which occurs in both cases, has an indirect effect on prices in that it causes unemployment and reduced wages.

⁴ See Yoshiaki Nakano (1982). Between May and June 1981, when the annual inflation rate was 85 percent in Brazil, the oligopolistic corporations raised their prices an average of 170 percent, in comparison with the competitive sector, which raised its prices by approximately 60 percent.

⁵ The idea can be found in Samuelson and Solow (1960).

However, it should be pointed out that the monetarists do not accept the Phillips curve, except as a short-term transitory phenomenon, caused by errors in relation to the expected rate of inflation (Friedman 1968, p.8-9).⁶ In keeping with this position, they stress monetary contraction as the means to reduce the inflationary level much more than the Keynesians. Since they deny the validity of the Phillips curve (or assume it to be completely inelastic), the more orthodox monetarists deny, in theory, that reduced inflation should be analyzed in terms of increased unemployment. Nevertheless, in practice, the economic policy measures adopted by the monetarists are the most strongly recessive, given their radical nature in terms of reducing state expenditures and the real money supply.

By refusing to accept the Phillips curve, the monetarists tie themselves merely to the exchange equation. Yet this leaves them with no explanation for the intermediary mechanisms that link a reduction in the money supply to a reduction in prices.

7

In the continuing debate between Keynesians and monetarists, our theoretical position is radically opposed to the monetarists, and much closer to that of the Keynesians. Nevertheless, although the economic policy proposals made by each of these tendencies are quite distinct, their recessive implications often end up being quite similar.

Our critique will be limited to the simplified form of the Keynesian model we have presented here (Equations 3 and 4) since the monetarist proposal takes refuge in the universe of the Walrasian equilibrium, which has little to do with the reality of the capitalist world.

The analysis of inertial inflation that we are making differs on four points from that of the more commonly adopted Keynesian view. The first is that it considers not only the money supply, but also the public sector deficit, as endogenous variables—that is, as factors that sanction inflation. The only instance when this is not true is when the economy as a whole, or at least some of its most important sectors, is working at full capacity and/or with full employment. This situation becomes increasingly unusual as inflation becomes a generalized phenomenon in contemporary capitalism.

A second difference is that we distinguish those factors that accelerate (or cause) inflation from those that maintain the level of inflation, making it inertial. We attribute to the latter greater importance in the conditions of contemporary capitalism. The oligopolization of corporations and the strength of the trade unions, on one hand, and the indexing systems on the other, are new phenomena

⁶ Meghnad Desai has made a precise critique of the monetarist view concerning the Phillips curve (1981, p. 69-76).

that tend to perpetuate inflation even when there are no factors acting to accelerate inflation. In addition, the factors that maintain inflation make it much more difficult for the inflationary level to go down. Even though they may have an effect in terms of lowering the inflation rate, recessive economic policies that seek to reduce real wages and profit margins are inefficient. The relation between the costs of this kind of policy and its results is an increasingly negative one.

The third difference is that we do not accept the assumption that profit margins are constant. Although this assumption is not essential to the Keynesian model, it is present when price increases are identified with wage increases, which make it possible to explain inflation in terms of the Phillips curve (Equations 3.3 and 3.4). In reality, profit margins are not constant, especially in times of recession. Generally speaking, the profit margin is constant when the economy develops relatively normally and uneventfully. Aside from this, it is also necessary to distinguish the competitive sector from the oligopolistic sector. Although it is always a little hazardous to generalize, it has been empirically confirmed that competitive sector corporations tend to increase their profit margins in periods of cyclical expansion, thus accelerating inflation, and tend to reduce their profit margins in recessive periods. Their counterparts in the oligopolistic sector maintain or even decrease their profit margins (if these were excessively high) in the expansive phase, and increase their margins during recession, in order to compensate for the drop in sales and to maintain their rate of profit. However, in indexed economies (such as Brazil's) the reduction in wages and profit margins during the recessionary period tends to be quite small, even in the competitive sector, due to the strength of those factors that maintain the level of inflation.

If we accept the idea of increasing inflation levels as a function of the conjugate effects of the factors that accelerate and maintain inflation, and especially of indexation's effect on the economy, then we would have to consider that the Phillips curve tends to move to the right as a fourth difference. Consequently, with the same unemployment rate, we have increased wage and inflation rates, so that the direct correlation among the three disappears. Thus, we have the phenomenon of inertial inflation and stagflation, that is, high unemployment rates in a recessionary situation together with high inflation rates.

It is necessary to add at least three more observations in relation to the underdeveloped countries: (1) because of the imperfect functioning of the market, the accelerating factors of a structural nature are more important; (2) given the trade unions' weak bargaining power and the high incidence of underemployment, the variation in the employment index has less direct influence on the inflation rate; and (3) given the imperative need to accumulate and to make up for their backward position in the world economy, the local dominant classes tend to utilize inflation as a mechanism for forced savings in

the expansive phase and as a compensatory mechanism for their reduced rates of profit during periods of economic slowdown. In each case, inflation serves quite clearly to concentrate income, a phenomenon that does not necessarily tend to occur in the developed countries.

It is viable to reduce the inflation rate by recessive policies only to the extent that a reduction of profit margins in the competitive sector and of wages has a greater effect than that of increased profit margins in the oligopolist sector. However, the high economic and social cost of this kind of economic policy has become increasingly evident, both in terms of the trade unions' resistance to accepting cuts in their real wages (expressed as formal indexation), as well as in terms of the ruthless behavior of the oligopolistic enterprises.

Although we have not specifically dealt with economic policy in these remarks, we hope we have made it clear that recessive monetarist economic policies are inefficient. Monetary policy is merely one of the economic instruments that can be employed to control inflation, and its limitations are great. When monetary restrictions and recession become the main tools in the fight against inertial inflation, the result is stagflation in the industrialized countries. In those underdeveloped countries with a large industrial base, the insistent and prolonged use of these mechanisms can result in a serious process of deindustrialization.

REFERENCES

- BHALLA, Surjit 5. (1981) "The transmission of inflation in developing countries", em William R. Cline (org.), *World Inflation and the Developing Countries*, Washington, The Brookings Institution.
- BRESSER-PEREIRA, Luiz C. (1981) "A inflação no capitalismo de estado (e a experiência brasileira recente)", em *Revista de Economia Política*, vol. 1, n.º 2, abril-junho 1981.
- DESAI, Meghnad (1981) *Testing Monetarism*, Londres, Frances Pinter Publishers.
- FAZIO, Antônio (1981) "Inflation and wage indexation in Italy" em *Banca Nazionale del Lavoro Quarterly Review*, n.º 137, junho 1981.
- FRIEDMAN, Milton (1968) "The role of monetary policy", em *The American Economic Review*, vol. LVIII, n.º 1, março 1968.
- KALDOR, Nicholas (1982) *The Scourge of Monetarism*, Oxford, Oxford University Press.
- KALDOR, Nicholas (1970) "The new monetarism", em *Lloyd's Bank Review*, julho 1970.
- KEYNES, John Maynard (1930) *A Treatise on Money*, Nova Iorque, Harcourt, Brace & Company.
- LIPIETZ, Alain (1982) "Credit money: a condition permitting inflationary crisis", em *Review of Radical Political Economics*, 14, (2).
- MARX, Karl (1867) *O Capital*, Livro I, Rio de Janeiro, Editora Civilização Brasileira, 1968; translation from the 4th German edition, 1890.
- MOORE, Basil J. (1979) "The endogenous money stocks", *Journal of Post-Keynesian Economics*, 2 (1).
- NAKANO, Yoshiaki (1982) "Recessão e inflação", em *Revista de Economia Política*, 2 (2).
- RANGEL, Ignácio (1962) *A Inflação Brasileira*, Rio de Janeiro, Tempo Brasileiro, 3rd edition, São Paulo: Brasiliense, 1978.
- SAMUELSON, Paul and Robert Solow (1960) "Analytical aspects of anti-inflation policy", *The American Economic Review*, vol. I, n.º 2.
- SIMONSEN, Mário Henrique (1970) *Inflação: Gradualismo x Tratamento de Choque*, Rio de Janeiro, APEC.
- SUNKEL, Oswaldo (1958) "La inflación chilena; un enfoque heterodoxo", *El Trimestre Económico*, vol. XXV, n.º 4. Also in O. Sunkel et al., *Inflación y Estructura Económica*, Buenos Aires, Paidós, 1967.