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Inflation in Oligopolistic and Technobureaucratic Capitalism

THE THEORY OF INERTIAL INFLATION

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Inflation has accelerated and taken on new characteristics in contemporary capitalism, that is, in oligopolistic and technobureaucratic capitalism. In short, instead of being merely a monetary phenomenon, inflation has become an intrinsic element of the economic system not only of the underdeveloped countries, but also of the central countries. In this chapter, I will try to make a general analysis of the new inflationary processes. I would especially like to call attention to "administered inflation," which is administered both by large corporations and trade unions with monopoly power, and to "inertial inflation"—the reproduction today of past inflation, given expectations, and the distributive conflict in which economic agents are permanently engaged. Next, I would like to look at "compensatory inflation," which is caused by the pressures exerted on the government to guarantee the rate of accumulation and to compensate economic agents for the eventual losses caused by the recessive phases of the economic cycle. Last, I would like to look at "corrective inflation," which is produced by the government when it tries to correct the distortions caused by its own economic policy. A dialectic is set up between these three types of inflation, which, when added to structural inflation, turn inflation into a phenomenon inherent to oligopolistic capitalism or technobureaucratic capitalism, a social formation characterized by large companies, big trade unions, and the high salaries of the top executives.

This chapter is divided into fourteen sections: (1) the new inflation; (2) the exchange equation and the monetarist view that attributes inflation to the increase in the money supply; (3) the causes of the direct increase in prices that are validated by an increase in the money supply: Keynesian or demand push, structural and administered, or cost push accelerating factors of inflation; (4) a new fact: market power; (5) the neoclassic "firm" and the

modern "corporation"; (6) administered inflation, markup pricing policy, and the inflation rate; (7) the idea of inertial or autonomous inflation as a result of the struggle for distribution; (8) the oil shock or inflation administered by governments; (9) the transformation of direct increases in the money supply into an endogenous variable and to the distortions caused by the economic policy that cause the state to have an unbalanced budget: compensatory inflation; (10) the political factor: inflation and legitimacy; (11) compensatory inflation in the context of the economic cycle and corrective inflation; (12) summary; (13) the recent Brazilian experience; (14) monetarist economic policy compared with administrative policy.

1

In the last ten or fifteen years, since the international capitalist system began to show the first signs of the crisis, which finally broke loose in 1973, inflation has accelerated on a worldwide level. At the same time, it took on new characteristics that suddenly made old theories obsolete. These new characteristics had been taking form for some time, but it was only at the end of the 1960s that, in the central countries, two things happened that created the need for a new explanation of the phenomenon of inflation. These two events were: (a) the coexistence of inflation and stagnation, and (b) a decisive increase in the average rate of inflation in the central capitalist countries. For years, these rates were in the range of 1 to 4 percent; then, suddenly, they tripled or even quadrupled. Double-digit inflation rates, which had been the exclusive privilege of the underdeveloped countries, became normal in the central countries. In other words, the obvious correlations of the ascendent phase of the economic cycle with inflation, and of recession (the declining phase of the cycle) with deflation, were no longer prevalent. We began to have inflation in all phases of the cycle, and now it can even accelerate during recessive periods.

After the classic analysis of Ignácio Rangel (1963), it was not only verified that in Brazil this correlation did not exist, but also, in the period 1960-1980, it was inverted. Shorter periods aside, inflation tended to decrease during prosperity (1967-1973) and to increase during recession (1960-1966, 1974-1980). Seventeen years have passed since Rangel's pioneering work, and history has only confirmed his fundamental analysis.

During this period, in Brazil as well as in the other underdeveloped countries, the average inflation rates also tended to increase. Although the inflation rates of different countries fluctuated, they definitely had a tendency to: (1) remain higher in relation to the developed countries; (2)

increase in relation to the previous period; and, (3) accentuate the lack of connection between prosperity and inflation, and between recession and deflation. In fact, the term deflation almost disappeared from the economists' vocabulary as declining prices became so rare as to be almost unheard of. Now what we have are increases or reductions in the rate of price increases, but never decreases in prices, as was common in previous crises of capitalism in the central countries.

Tables 2.1 and 2.2 present the average rates of price increases for five-year periods in some developed and underdeveloped countries.

Stagflation in the United States and the United Kingdom, for example, can be seen in the following data: in the United States, during the period from 1954 to 1958, the average annual per capita growth rate of

Table 2.1 Inflation Rates in Central Countries[a] (Annual geometrical averages) (%)

Period	Germany	USA	France	Japan	United Kingdom
1955-59	2.1	1.7	5.3	0.6	3.0
1960-64	1.5	1.2	2.9	5.2	2.7
1965-69	2.5	3.2	3.8	5.0	4.2
1970-74	5.5	6.1	7.6	10.6	9.5
1975-79	4.1	8.0	10.0	7.2	15.5

Source of raw data: *Statistical Yearbook*, United Nations (1959 and 1977)
International Financial Statistics, IMF nº 6 (June 1980)
[a]Consumer Price Index used as deflator

Table 2.2 Inflation Rates in Underdeveloped Countries[a] (Annual geometrical averages) (%)

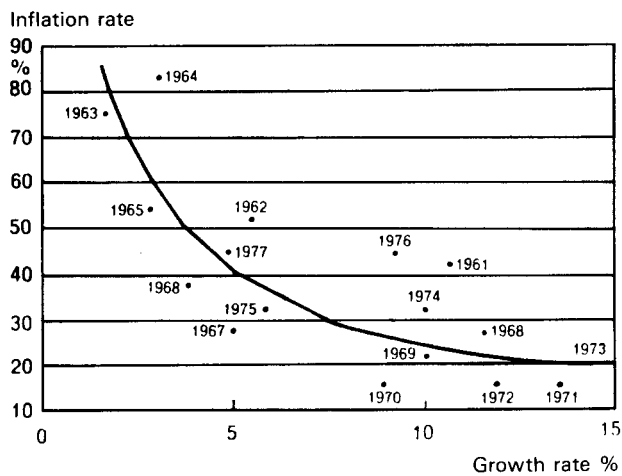
Period	Brazil	Colombia	Mexico	Portugal	Venezuela
1955-59	22.5	8.6	7.8	1.4	1.4
1960-64	53.5	12.1	2.1	2.4	0.4
1965-69	35.4	9.5	3.0	5.8	1.2
1970-74	19.9	15.1	10.0	13.2	4.0
1975-79	40.9	23.5	18.9	21.3	8.9

Source of raw data: *Statistical Yearbook*, United Nations (1959 and 1977)
International Financial Statistics, IMF nº 6 (June 1980)
[a]Consumer Price Index used as deflator

the GNP was -0.2 percent and inflation was 1.5 percent. At that point, the phenomenon of stagflation did not exist. But in the period from 1969 to 1971, the yearly growth rate of the GNP was 0.7 percent against an inflation rate of 6.5 percent. This difference became even more accentuated in the period 1974-1975, when the annual rates were -1.8 percent and 9.9 percent, respectively. In the United Kingdom, from 1965 to 1969, the real per capita GNP grew only 1.8 percent against an average inflation of 4.2 percent. There we already see a moderate example of stagflation. From 1974 to 1975 there was a real decrease in production of -1.2 percent, together with a yearly price increase around 20 percent. Here the process of stagflation is very clear.[1] In Brazil, it is known that inflation rates accelerated during the cyclical declines beginning in 1962, and have continued to accelerate in new cyclical declines since 1974. Based on the original ideas proposed by Rangel, Marcos Fonseca constructed a graph that clearly shows the inverse relation between inflation and growth in Brazil since 1961 (Figure 2.1).

There are, therefore, clear indications that inflation took on new characteristics in the last ten to fifteen years: (1) the quantitative acceleration of the inflation rates was significant and implied a qualitative jump in the economic process; (2) the phenomenon of stagflation appeared, on a worldwide scale, as prices continued to increase and

Figure 2.1 Inflation and Growth



Source: Marcos Fonseca (1979)

eventually to accelerate their rate of increase while the economy itself was declining.

Given these facts, it is not only necessary to find new theories to explain this situation, but also, and more important, to determine the historical facts that cause these changes, which are transforming one of the most ancient economic phenomena in the world, inflation, into a "new inflation." Everything indicates that there has been a change in the very nature of the inflationary process. The old economic texts define inflation as a disproportionate increase in the means of payment in relationship to the national income.[2] The very etymology of the word implies this connotation. Increases in prices were thought to be the consequence of inflation, not inflation itself. It was never asked if an increase in the money supply did or did not cause a generalized increase in prices; this was an undisputed point. The question was to determine the causes of the increase in the money supply.

Today, it does not make any sense to define inflation in these terms. Inflation is simply a generalized and persistent increase in prices: it is the process that makes money lose its buying power. An increase in the money supply can be one of the causes of inflation, but it itself is no longer inflation.

The change in the definition of inflation occurred not because past economists were wrong, nor because their theories were incorrect, but because of new historical facts that modified the nature of inflation, given new decisive factors for the persistent and generalized increase in prices.

2

For traditional economic theory, whose contemporary representatives are the neoclassic or monetarist economists, the exchange equation explains the whole inflationary process.[3] According to this equation, which comes from the definition of the income velocity of money, V, as equal to nominal income Yp (real income, Y, inflated by the general price index, p) divided by the nominal money supply, M, we arrive at:

$$MV = Yp \qquad 2.1$$

If we admit, in the terms of the monetarist viewpoint, that there is a demand function for real money that is stable or, more simply, that V is constant, and that the money supply increases due to exogenous factors, an increase in M that is more than proportional to the growth of Y would necessarily cause an increase in prices. This would happen, in the first

place, because this equation is definitional, making it impossible to discuss the relations between the variables. In the second place, because with an increase in M and V remaining constant, consumers would confront producers with an excess of money—they would try to buy more merchandise than was being produced, and thus would set off an inflationary spiral. Thus, with inflation resolved theoretically in these terms, the only problem the monetarists have is to determine the exogenous, extraeconomic causes for the increase of M. These are easily defined as the incompetence and populism of governments that do not resist pressures from different sectors of the economy; in more sophisticated terms, the increase in the money supply would be the result of governments' attempts to guarantee, through a Keynesian administration of effective demand, that income grew at a rate above the "natural" growth rate.[4]

In this type of analysis, using an impeccable linear logic, its authors forget or dismiss the idea that an increase in the money supply can be considered endogenous to the economic system. It also does not take into consideration that the causal relations between the variables M and p can occur as much in the sense that M determines p as that of p determining M.

If something outside the exchange equation, but endogenous to the economic system, forced prices to increase, keeping V constant, either M would have to increase or Y diminish.

Another way to see the same problem is to look at what would happen to the real money supply given the original rise of p. If one takes the real money supply as m = M/p, then when p increases and M is kept constant, the real money supply decreases. Given that the fundamental function of money is to permit transactions, this would immediately provoke a liquidity crisis. A liquidity crisis either leads to a reduction in the gross domestic product, and therefore to a crisis, or else it forces the government and banking system to increase the money supply. For a period of time, an increase in the income velocity of money, and therefore a process of reducing cash balances, could postpone an increase in M, but in the end the increase of the money supply would be inevitable. It would happen even if the state budget were to continue to be balanced. Faced with a generalized reduction in liquidity and with the menace of a recession, the monetary authorities would be obliged to issue more currency, as well as to release credit, if the banking system did not do this on its own.

It is clear that, in this case, a monetarist could assert that it was the increase in the money supply that "caused" inflation after all, but this would be confusing causes with effects. What we can confirm in this case is that the increase in currency "sanctioned" or validated inflation that had

already been unleashed, making the increase in M endogenous. However, monetarist economists do not accept the argument that the increase in the money supply becomes endogenous. As they are used to thinking in terms of "must be" rather than in terms of "is," they argue that economic policy could refrain from increasing M and validating the increase in prices. The continuing recession would then control inflation. In the meantime, we can see that those who are responsible for economic policy do not in fact have this liberty, which could only be granted in terms of the voluntarist idealism of the neoclassicists. On top of that, given the monopolistic practices of the corporations and the trade unions, which refuse to reduce profit margins and wages, this eventual recession does not have the means to control prices, unless it turns into a profound and disastrous depression.

In these terms, although there may be (and in fact there is) a high correlation between M and p at any time in any country, this is not absolute proof that the monetarist theory is correct. We have heard often enough that regression analyses do not establish direct causal relationships. There is no doubt that M can cause an increase in p, as well as that p can cause an increase in M.

3

It obviously would be unthinkable to blame the generalized increase in inflation rates and stagflation on the incompetence and populism of governments all over the world. Therefore it would be useful for us to look for the factors that can endogenously and directly determine the initial price increases, which, in turn, provoke an increase in M, which would reinforce an increase in p. But we will not limit our analysis to the historically new factors that directly determine an increase in p, leading to the increase in M. In addition, we will examine the intrinsic and historically new factors that directly determine an increase in M, which in turn causes inflation.

There are three theories for explaining the initial increases in prices, independent of an increase in the money supply: (a) the Keynesian theory, which is based on an excess of aggregate demand over aggregate supply at the peak of the economic cycle; (b) structural inflation, caused by sectorial imbalances between supply and demand; and, (c) administered inflation, caused by the monopolistic power of corporations, trade unions, and the state.[5]

The first and second theories are, like the monetarist theory, based on demand. There is no doubt that in the ascendent phase of the cycle, and especially when, at the peak, the economy tends to reach full employment and full capacity, inflation tends to accelerate because of the pressure of

aggregate demand. But it is also clear that this theory does not explain either stagflation or the recent elevation of the inflation rates.

The Keynesian theory of inflation received important empirical corroboration with the research of the British economist A. W. Phillips, who established the relationship between the unemployment rate and variation in the rate of wage in 1958. The Phillips curve shows that as the unemployment rate goes up, the rate of variation in wages goes down. If we substitute prices for wages, we would have inflation caused by the pressure of demand when the unemployment rate goes down. The Phillips curve had immense theoretical repercussions not only because it was based on solid empirical data, relative to inflation in Britain in the period 1861-1957, but also because it permitted the establishment of an "optimum" level of unemployment that would guarantee price stability.

Conservative economists, who reduced Keynesian thought to a neoclassical scheme, imagined establishing a trade-off between an acceptable unemployment rate based on the Phillips curve (which they then called the "natural rate of unemployment") and an acceptable inflation rate. Without realizing it, they were reinforcing the Marxist theory of the industrial reserve army, because they were confirming the utility of unemployment for the capitalist system. But they were also trying to confirm the thesis that recession (or output gap) would cause inflation to slow down. Next, the monetarists, who are even more conservative, found themselves in difficulties and were forced to perform a series of theoretical acrobatics in order to make the empirical data compatible with their own theories. This is because, for the pure monetarist, the Phillips curve should be completely inelastic in the long run. In other words, for them, an inverse relation between the inflation rate and the unemployment rate, and therefore the growth rate, does not exist. The "natural" growth rate would be not only compatible with full employment, but also with price stability. Any attempt to manage the aggregate demand would only be inflationary, instead of raising the long-term growth rate of GDP.

Although this discussion can be very interesting and has attracted the attention of almost all of the economists in the central countries, who are divided between Keynesians and neoclassical monetarists, the fact is that it does not help us to understand the new inflation. As Phillips's data refer to an earlier period, they are about "old inflation," and demonstrate the exact opposite of stagflation. Empirical tests referring to recent inflation do not show a correlation between the unemployment rate and inflationary deceleration. On the contrary, recession tends to provoke an elevation of the inflation rate, especially in highly oligopolized economies like Brazil's, at least in the early phases.[6]

The same thing happens with the structural theory of inflation, as this

theory is limited to the problem of bottlenecks in supply and to the mechanisms by which these imbalances spread throughout the whole economy, thus remaining inside the framework of demand inflation. Structural imbalance, which arises from the imperfections of the market, is the fundamental cause of inflation, especially in the underdeveloped countries. Bottlenecks in the availability of certain products provoke price increases in those sectors. In an economy with a well-organized market, these price increases would be corrected quickly, including by falling back on imports, and prices would return to their normal level. In an underdeveloped economy, with poorly structured markets and chronic balance-of-payment problems, it takes a long time to the correct these sectorial imbalances. In the meantime, prices in those sectors remain high. The capitalists in the other sectors, forced to buy goods at higher prices, then try to increase their own prices and the workers to increase their wages, thus setting off the inflationary spiral.

Just as with the theory of inflation provoked by the excess of aggregate demand, the structural theory of inflation does not explain the recent acceleration of inflation rates coexisting with unemployment, that is, stagflation, because it does not supply us with any new information. Quite the contrary, in the underdeveloped countries that are growing, the importance of structural causes tends to diminish as their markets become better structured, thus allowing supply to respond more quickly to the stimulus of demand.[7]

4

Monetarist inflation, Keynesian employment-related cyclical inflation, and structural inflation are therefore perfectly legitimate kinds and causes of the acceleration of inflation. Cumulatively, they continue to explain the inflationary processes that occur all over the world; but, obviously, they do not explain the new inflation. They are all theories that assume demand inflation and, as such, they cannot explain stagflation. Besides, they don't concern themselves with new historical information that explains both stagflation and the decisive acceleration of the inflation rate all over the world.

In searching for new information to explain this new inflation and, consequently, in defining a new theory that takes the new historical processes into account, there seems to be no doubt that the fundamental phenomenon is the growing power of public and private enterprises, trade unions, and the state over the market.

The power of the oligopolistic corporations over the market is a

decisive phenomenon of the second half of the twentieth century. Big corporations have been emerging in the central countries since the last quarter of last century, but the oligopolistic sector of the capitalist economies was still secondary to the competitive sector, especially in the United States, Britain, and France. The two countries in which the oligopolistic sector assumed an important role from the beginning of their industrialization—Germany and Japan—were not effectively integrated into the world capitalist economy until after World War II.

In general, the quantitative growth of the oligopolistic sector in central countries and in industrialized underdeveloped countries caused a qualitative jump, as shown by the definitive dominance of the oligopolist or technobureaucratic system over the competitive or market system. One integral part of the monopolistic system is the large, modern, technobureaucratic state, which, aside from its classical political functions of repression and legitimation, assumes the new economic functions of regulating the market and producing goods and services.

This process was also characterized by the advent of the multinational corporations. Just like the large producing and regulating state, multinational corporations assumed their complete form and actually spread all over the world after the end of World War II, completing the process of the internationalization of capital. At first, capital internationalized itself commercially, and then, beginning at the end of the last century, financially. However, it was only in the last thirty years that capital actually internationalized itself in the sphere of production through the multinational manufacturing corporations.

The advent of the multinationals on the international level corresponded to the decisive predominance of large oligopolistic corporations on the national level. It was only after the war that they actually assumed the character of an alternative to the market, although this process had been identified by Marx in the last century as the process of the concentration and centralization of capital. Since then, we have begun to have, in both the central and the underdeveloped industrialized economies, what Galbraith (1968) called a planning system and a market system.

Rather than sectors of contemporary capitalist economies, these systems are alternatives for controlling the economic system. The market system is a competitive system of small- and medium-sized firms that the classic and neoclassic economists take for granted in their economic models of perfect competition. The planning system is the oligopolistic system dominated not only by the large public and private corporations, but also by the large trade unions and the vast regulating state. Corporations and trade unions try to substitute themselves for the market

by administering their prices. At the same time, the regulating state, faced with the relative paralysis of the mechanisms of the market, is also forced to substitute itself for it by counteradministering prices through various forms of price controls.

The advent or formation of a planning system has decisive effects on inflation, because it means that the self-regulating market does not exist anymore. It signifies that the basic definition of society would no longer be merely capitalist, based on the self-regulating market, but rather technobureaucratic-oligopolistic-capitalist. At the same time that a new class of technobureaucrats emerges in large corporations, in the state, and also in the large trade unions, the planners substitute themselves for the market. They do this by administering the system of prices, not for the whole economy, but for large, and now dominant, sectors of the economic system.

The formation and recent dominance of the oligopolistic or planning system, and therefore the transformation of capitalism into oligopolistic or technobureaucratic capitalism, is the most general and decisive new fact that can explain the new inflation of the 1970s. The attempts of the oligopolistic corporations and the trade unions to increase their participation in the income by administering prices, interest rates, and wages cause administered inflation. The tendency of the regulating state, which has become the main agent responsible for the rate of accumulation, is to control prices—given the growing incapacity of the market to do this. This, in turn, tends to provoke distortions that cause what we call "compensatory" and "corrective" inflation. On the other hand, prices administered by corporations, unions, and the state make the inertial component of inflation stronger.

5

With technobureaucratic capitalism and the dominance of the large corporations, inflation has become a "normal", or everpresent, phenomenon, since the regulating mechanisms of the market do not work as they are supposed to. However, new administrative forms for controlling prices that can adequately substitute for the mechanisms of the market do not appear immediately.

When the orthodox, neoclassical economists think about inflation, they still imagine a competitive market made up of an infinite number of "producers" or "firms." That is the way productive units are presented in the majority of the neoclassical microeconomics textbooks. The expression "corporation" is beginning to be used, but it has no place in the

neoclassical world. The neoclassical concept of a firm is still dominant in economics textbooks, presupposing small societies of limited responsibility, or the notion of the producer—that is, of the capitalist businessperson who individually and directly runs his or her business.

In these terms, perhaps it would be more appropriate to differentiate between two types of capitalist economic units, the business firm and the corporation, rather than to speak of small companies and large companies.

The neoclassical business firm is a small unit of production that does not have any market power. It is a unit of production that limits itself to adapting to the demands of the market and attempting to maximize its productive efficiency, which translates into a reduction in costs. A firm is only managed on the production level. On the market level, it does not have any policy on prices, products, trademarks, or advertising, because it has no power to do anything in these areas. A firm has no marketing strategy besides efficiently producing a homogeneous product.

The corporation has a legal definition. In economic terms, however, it may be characterized as a production unit that has market power, which carries out a marketing strategy, has a policy on prices, and tries to set its prices by making tacit or explicit agreements with its competitors, or by setting up areas of monopoly through product and brand differentiation. It is generally a large production unit. However, the concepts of "small," "medium," and "large" are arbitrary. What effectively distinguishes a corporation is its market power and its ability to formulate a policy on prices, generally based on setting a margin over variable costs (markup).

The planning system is made up of corporations, the units of production with market power. Market power is a decisive factor for inflation because it permits the corporations to maintain their margins and raise their prices automatically, inertially or, in other words, independently of the market, that is, independently of the existence of an excess demand over supply. On the other hand, this signifies that the laws of the market no longer control the economy, which in fact is a tautology, since we defined the planning system, where corporations operate, as the alternative to the market system, where firms still exist.

Summing up, orthodox economic policy, based on controlling the economy through market mechanisms, has lost a large part of its validity. Monetary and fiscal policies, which are based on the self-regulating market, become inefficient because they assume that, if authorities are able to correct the market on the aggregate level (state expenditures and revenues or the money supply), the market will recover its ability to control the economy. Macroeconomic policy continues to be perfectly valid for the maket system, but it loses part of its validity in the oligopolistic system, where market mechanisms no longer function as

they should. We will see that, in this sector, the consequences of the macroeconomic policies could even end up being the opposite of those desired.

6

The fundamental objective of the price policy of large corporations is to guarantee their profits and, second, to maximize their own expansion, or at least to maintain their participation in the market. Although, in principle, the planned rate of profits has precedence over the expansion rate, corporations are frequently driven to make a trade-off between these two objectives.

In order to understand both the basic phenomenon of stagflation and that of inertial inflation based on the price policy of the corporations, we should imagine the economy entering a recession or a descending phase of the cycle. At this point, corporations are faced with declining sales. In order to maintain their profit rates (profits divided by capital), the obvious alternative is to raise profit margins (profits divided by sales or profits divided by costs). This will necessarily signify an increase in prices because the productivity rate is considered constant for this analysis. If the recession were provoked by restrictive monetarist and fiscal policies, the response of the corporations would be even more pronounced in terms of raising prices and margins. In this situation, macroeconomic policies have the opposite effect of that desired. Corporations can raise their margins and prices because they do not have any direct competitors, or because their competitors accompany them through tacit or explicit agreements. This is how stagflation is set into motion. Acceleration of inflation and recession come together.[8]

The normal response of corporations to recession is not to raise profit margins but to keep them fixed. But even if we make the assumption that margins remain fixed during recession, stagflation, or more precisely inertial inflation, would occur.

Given the market system, what should happen as the economy slows down is not an increase or even a maintenance of margins, but rather their diminution. That is one of the basic assumptions of the orthodox economic policy about inflation. In order to try to maintain their sales, corporations should lower their margins, and thus not transfer the increases in costs on to prices. However, corporations do not belong to the market system. Their logic is the logic of the planning or oligopolistic system. So the fundamental law and practice of corporations in their price policy is that of markup pricing, of adding a fixed margin to direct costs. In this

way, the corporation automatically transfers the whole increase in direct costs to prices. Margins remain fixed, and prices rise inertially.

In order to understand this phenomenon, however, it is necessary to add one more variable. The increases in costs and in prices do not all take place at the same time in all of the corporations. They alternate between one corporation and another. This lack of synchronization is a decisive factor. Let us take three corporations, A, B, and C. If these three corporations rigorously and alternately apply the policy of a fixed margin over costs, the inflation rate, once started and established at a certain level, will become permanent. The combination of fixed margins over costs, with alternating price increases, does not necessarily lead to an acceleration of the inflation rate, but rather to the maintenance of a determined level of inflation. Given the maintenance of the margins and the alternating price changes, prices will continue to grow at the same rate at which they were growing before. Any other factor that raises this level, among which could be an elevation of margins, implies the maintenance of this new level.

Thus, we have here the informal process of the indexation of the economy, with the automatic passing on of costs to prices. This is a factor that maintains inflation, or inflationary inertia, keeping inflation from falling independently of aggregate demand.

There is a third factor that should be taken into consideration: the speed with which the corporations change their prices. If this speed, which is measured by the lag between one alternation and another, is increased, it immediately has an additional inflationary effect.

At this point, we could imagine one of the corporations breaking the golden rule of the planned system—that of never getting into price competition—causing what is disparagingly called a "price war." However, unless it is supported by gains in productivity resulting from exclusive technological innovations, a decrease in prices is unthinkable for a corporation, because it knows that its competitors will follow its lead.

Inflation that is the result of the corporations' pricing policies is called "administered" or "cost" inflation. When corporations are only maintaining their margins, they are also maintaining the inflation level, as long as the speed of the price changes is maintained. This is inertial or autonomous inflation. When they manage to increase their margins in order to compensate for a fall in sales, the effect is to accelerate inflation.

However, administered inflation does not necessarily occur only in the recessive phase of the cycle. When there is relative equilibrium between supply and aggregate demand, as well as when there is prosperity, an increase in margins is an alternative that is always available for corporations. Depending on the elasticity of demand, an increase in margins could be especially advisable when the corporations' productive

capacity is reaching its maximum level. Once margins are elevated, however, it will be very difficult to bring them down again; it is at this moment that the inertial component of inflation shows its weight. Thus the initial effect of an increase in margins is the acceleration of inflation and the result of fixed margins is the maintenance of inflation.

7

This analysis, especially in respect to what it has to say about the corporations A, B, and C who take turns raising their prices, assumes that inflation has very important distributive effects, making the corporations' pricing policies a form par excellence for conserving or increasing their share in total income. In general, one could say that in the world of technobureaucratic capitalism, made up of corporations, trade unions, and the state, inflation is a pitched battle between corporations, between industrial sectors, between corporations and trade unions, between social classes and even between fractions of classes, and finally between the public and private sectors, in the fight for the appropriation of the economic surplus.[9]

In competitive capitalism, inflation seemed to be an impersonal phenomenon, the result of distortions between supply and aggregate demand, for either monetary or cyclical reasons. It was never the result of isolated economic agents, because neither companies, nor workers, nor consumers were capable of making decisions or of establishing price policies. In technobureaucratic or oligopolistic capitalism, it is clear that inflation is the result of the struggle of economic agents or of associations of economic agents organized into groups, systems, or classes, to increase, or at least to maintain, their participation in the economic surplus.

In this situation, inflation is transformed into a mechanism for transferring income to the sectors that are the strongest economically or the most powerful politically. For example, as the planning system becomes economically more powerful than the market system, inflation becomes an excellent mechanism for the planning sector to appropriate part of the surplus generated in the market sector for itself. In underdeveloped countries, where the workers are unorganized, inflation functions to lower their wages and to assure high profit rates and the accumulation of capital.

However, in underdeveloped countries where the workers have already reached a higher level of political and trade union organization, inflation tends to lose this function. There, the fundamental struggle of workers is to index their wages to inflation and to introduce a productivity clause in

the wage negotiation. In this way, they assure their participation in the national income, and their wages are not inflationary . However, as trade unions become stronger (and this tends to happen as the planning system expands), they tend to demand wage increases above inflation plus the rate of productivity. At this point, in view of the threat to profit rates, this also sets off inflation.[10]

It is important to take into account that even if wages are perfectly indexed, inflation can be set off by a change in the corporations' policies. This is partly what happened in Brazil after the passage of the wage law of November 1979. This law simply assured a complete semestral indexation of wages. Indexation already existed before this and, in practice, it was often semestral. But the announcement of the new law led corporations with market power to make preventive increases in their prices. This was a new inflationary factor that set off a discussion of whether inflation is or is not caused by wage policy. Actually, this discussion was not well stated: one of the causes of inflation was obviously not a real increase in wages, because they were not really increasing. But the reaction of corporations with market power to the possibility of a decrease in their profits, as a result of the new wage law, had very clear inflationary consequences. This fact reminds us that, in political economy, given the distributive conflict, what is most important for us to know is not what has already happened, but what the corporations' and consumers' expectations are.

The main thing to note is that, in technobureaucratic capitalism, the economic agents that have the will and the means to influence prices are in constant and direct, if not personal, conflict with each other. It is very different from competitive capitalism, where this conflict is watered down by the impersonality of relations between thousands and thousands of economic agents who have no other alternative than that of adjusting to the conditions of the market. Inflation is based directly on the following struggles: the class struggle, as seen in the conflict between trade unions and corporations; the inter-corporate struggle, between buyers and sellers; the struggle between sectors, as between the financial and industrial sectors; and, finally, the struggle between systems, which is the struggle between the planning and the market systems.

Even the struggle between corporations and consumers, which is unbalanced in favor of the former, is not just a struggle of a few businessmen against powerless, disorganized consumers. Consumers are beginning to form cooperatives and associations, but this is not the most important fact. What is more important is that the state, under pressure from consumers, is frequently forced to set prices for consumer goods. At this point, it takes the side of consumers against corporations. This obviously does not signify that the state is losing its fundamental

characteristic of being at the service of capitalist accumulation. It only highlights the relative autonomy that is necessary for the state, which could lead it to defend, within very strict limits, workers against capitalists. This type of action by the capitalist state, which allows it to maintain an appearance of neutrality, is essential for exercising its function of legitimating the existing system of the relations of production. It also serves to emphasize the illusion that the state controls the monopolistic power of corporations.

In the context of this process, the economic agents that are in conflict over the division of the economic surplus try to administer their prices, with an eye to maintaining their participation in the income. Thus, they tend to constantly raise the inflation levels and then to conserve these new levels, giving the whole economic system a tendency toward rigidity.

8

Price administration, with its inflationary consequences, can be carried out by private corporations, state corporations, trade unions, and by the state itself. All that is necessary is for one of these types of organizations to have some power over the market, individually and/or in the form of a cartel, for price setting to be possible, and thus for administered inflation to be established.

However, there is still another possible origin of administered inflation that has taken on decisive importance in the last few years: the administration of prices for exported goods by the states themselves. There had been attempts along these lines for a long time; one example was the international agreements on the price of coffee. But it was only after OPEC's success in quadrupling the price of oil in 1973 that this form of administered inflation on the international level, directly between states, became significant.

The inflationary effects of the increase in oil prices are obvious. It implied an enormous gap between costs and prices; by dealing with a scarce, unrenewable natural resource, it was possible to completely disconnect its price from its value. This increase in margins benefitted not only the oil corporations, but especially the oil-producing states.

The most obvious inflationary effect of the oil price increase is in the corporations' practice of passing increased costs on to prices. There are also workers who consume gasoline, principally lower-level executives and technobureaucrats in all countries, who felt the need to pass their increase in expenses on to nominally higher wages and salaries. Thus, the inflationary spiral was set off, this time called "imported inflation," but

which actually was an example of administered inflation, because it was the result of OPEC setting the international price of oil.[11]

The increased oil prices and the subsequent price war between the oil consumers and producers, between the intermediate and final consumers of oil, and also between those who do and those who do not directly use oil undoubtedly played an important role in the acceleration of inflation in the last decade, as well as in aggravating the phenomenon of stagflation. It is important, however, to point out that these last two phenomena had been occurring since before 1973.

In the meantime, the increase in the price of oil did not limit itself to being inflationary by provoking a price war; the corporations attempted to maintain their profit rates and the workers and technobureaucrats to maintain their wages and salaries. It was also inflationary because of its effects on the real and potential national income, the balance of payments, and the foreign debt of each country.

The sharp increase of oil prices provoked a strong deterioration in terms of trade for the oil-consuming countries. This purely and simply means that these countries became poorer; in fact, from that moment on, they had to produce more merchandise in order to buy the same amount of oil. This impoverishment could have been postponed by increasing the external debt of the consumer countries. Some countries could have managed to increase their exports in a compensatory manner by utilizing their idle capacity. All of them tried to counterattack by increasing their own prices in order to reduce their losses in terms of trade.

Although the capacity of the international financial system to recycle petrodollars is great, it is certainly limited. The utilization of idle capacity and the ability to increase exports was possible only for a limited number of countries. Increases in the prices of exports, aside from being very limited, were also counterbalanced by subsequent increases in the price of oil. In view of this, a world recession or, more specifically, the end of a long wave of investments, which had already been foreseen since the beginning of the 1970s, was sparked.

However, contrary to the predictions of neoclassical economic theory, economic deceleration did not contribute to a reduction in inflationary pressure. Corporations had to pass on to prices not only the increase in the price of oil, but also the expectations (and the reality) of a reduction in sales, due to a general, although moderate, recession of the world economy starting in 1974. Increases in, or even attempts to increase, corporations' margins at that point certainly resulted in accelerating inflation all over the world.

9

The state can play various roles in administering prices. It can be a primary cause of administered inflation by increasing its corporations' and agencies' prices, or else by making agreements like that of OPEC. It can also contribute to inflation by its policy of trying to administratively control prices and wages that are the origin of administered inflation, as it ends up legitimating prices higher than the market can allow. In this way, the state, and in particular its agency for controlling prices, is transformed into a substitute for cartels.

The state can also provoke an increase in prices when it decides to set high levels for the interest rate or for exchange rates. We will see that this happens especially when the state is led to engage in a policy of "corrective inflation."

Actually, when the state acts as the administrator of prices, it takes on a very special role. In general, its job is to hold prices down, substituting itself for the market as the only alternative for controlling prices in an economy that is dominated by the planning system. This administration of prices by the state is fundamentally an administration of profits, wages, and salaries. Therefore, it is an income policy. By administering the price of merchandise, the state tries to control the profits of the corporations; by controlling wages, the profits of the corporations and the wages of the workers; by controlling interest rates, the profits of the banks and the incomes of the financial rentiers; and by controlling rents, to control the profits of real estate rentiers.

This control has very defined limits. The state can try to control the big distortions. It cannot try to paralyze price increases at the cost of large distortions in the market. The price of merchandise should maintain its basic relationship to the amount of direct and indirect work incorporated in them. Profit rates, on the other hand, should be relatively equalized between sectors. Put another way, the market prices of merchandise should maintain their basic relationship to the prices of production; any deviation in relation to this parameter should be avoided. In the same way, wages should relate to a given profit rate that is considered "acceptable" and to a given rate of productivity. An increase in real wages, therefore, should necessarily be tied to an increase in productivity, assuming a constant profit rate. In other words, state controls cannot go against the law of value, or rather, cannot provoke serious distortions in the market. These distortions would quickly become insupportable, resulting in the emergence of free parallel markets and/or in a political and economic crisis.

In this setup, the state feels an inescapable need to control rising

prices because the market mechanisms are incapable of doing this. Given this, as well as the inherent limitations of control determined by the law of value, or, which is almost the same, by the law of the need for parity in the exchange of any merchandise, another tendency appears at the heart of the state itself. This is the tendency to concentrate the negative aspects of price controls in its own hands; it makes the state assume the losses that come from the rigid control of certain prices.

The state's absorption of these distortions, which seems to be necessary in order to control prices (although they actually aren't), can take various forms. State corporations can inadequately set their own prices, or the state can control certain prices and compensate the producing corporations with subsidies. In any of these hypotheses, the state is carrying out a compensatory policy: it controls the prices of determined sectors within or without the state, and compensates for the losses that occur with ever-increasing transfers of funds. However, the limitations of this type of policy are obvious. The state corporations or agencies that produce goods or services below their value soon have deficits and need to cover these deficits with state funds. On the other hand, the private corporations that receive subsidies become a direct burden on the state treasury.

Similar processes tend to occur with the exchange rate. The exchange rate can be kept artificially high for a certain period in order to prevent an increase in the price of imported goods. Exporters, in turn, are compensated by subsidies, which again are a burden on the state budget.

After a while, the accumulation of these distortions, all of which have repercussions on the state budget, becomes unbearable. At this point, the state can issue money or go into debt internally in order to cover its deficits, with the obvious inflationary consequences. Rather than prices increasing autonomously, causing an increase in the money supply, it is the money supply that increases, causing an increase in prices. This provokes what we propose to call "compensatory inflation."[12]

Faced with an unbalanced budget, the government would perceive the need to eliminate the distortions, restoring prices to their proper places in terms of their value and, therefore, of their true costs. Here would be a policy of "corrective inflation," in which the prices of the distorted sectors are adjusted, because they had been repressed and then compensated for by state subsidies in an effort to balance the state budget.

Corrective inflation will probably accelerate inflation, unless it is extremely well balanced. Actually, it is a new form of administered inflation, characterized by a strong increase in the profit margins of the corporations whose prices had been repressed. As a result, the other corporations and the trade unions, which had already fit their profit rates

and wages to the distorted prices, would immediately pass the increases in their costs on to prices, even if aggregate demand is controlled.

This process of compensatory inflation and administered inflation reinforcing each other in a phase of structural imbalance occurred in Brazil between 1974 and 1979, aggravated by a cyclical decline. Inflation in this period grew slowly from approximately 25 percent to 60 percent. At the end of 1979, the decision was made to apply corrective inflation.[13] As this consisted of administering the prices of basic products, it resulted in an explosive increase in prices, raising the level of inflation to more than 100 percent in less than one year.

10

This analysis of the behavior of the state serves as an ideal bridge for us in analyzing the role of the increase in M as a cause of inflation. At the beginning of this chapter, we criticized the monetarist theory that states that inflation is caused by increases in M, which, in turn, are caused by exogenous factors (or, in other words, by the demagoguery and incompetence of governments) as simplistic. This does not mean that we should or could discard the idea that the increases in M that originate in government deficits could cause inflation; it is clear that an increase in the money supply above the growth rate of the GDP is inflationary, or at least reinforces inflation.

For example, in Brazil, between approximately 1966 and 1973, the federal budget was basically balanced. Nevertheless, the government was forced to issue money during this entire period in order to guarantee the liquidity of the market. This was because the market was faced with an inflation that obviously was not caused by government deficits and the issuing of currency, but rather by structural and price-control-related factors. Although the data in this respect are very vague given the separation between the fiscal and monetary budgets, everything indicates that, beginning in 1974, the government began to have growing deficits. The fiscal budget remained balanced, but the monetary budget, where more and more subsidies for agriculture based on interest rates tied to a growing inflation rate were concentrated, showed larger and larger deficits. The total economic deficit was finally acknowledged and quantified in 1979, having been estimated at about 5 percent of the gross domestic product.

There is no doubt that, in this case, the government deficit, which forced massive issues of currency, was inflationary. The increase in the money supply was not simply for reestablishing the liquidity of the financial system. It covered not only the nominal public deficit, but

financed a real public deficit that sustained the economy near full employment.

In this case, however, can it be confirmed, as the monetarists propose, that the government deficits come from causes that are exogenous to the economic system, specifically from demagoguery or from government incompetence? The authoritarian government of that period certainly cannot be accused of demagoguery. As for being incompetent, it was neither more nor less so than the previous governments; therefore, it also seems unjustifiable to attribute the inflationary acceleration of this period to such a cause.

Actually, this kind of simplistic and personalized reasoning is inconsistent with the dynamics of historical processes. Demagoguery and incompetence can most certainly cause governmental financial instability. On the political level, however, it is necessary to be more careful in examining the processes that lead to this instability. Pressures are put on the government to increase its expenditures from all sectors of society. In societies that are characterized by technobureaucratic capitalism or oligopolistic capitalism, the state is a fundamental agent for the redistribution of income. Through a complex system of transfers, taxes, and subsidies, the state concentrates or redistributes income and harms or helps one class or another, one sector or another, one group or another, one region or another.

These pressures can become unbearable for a government that is politically weak or has no legitimacy in the eyes of civilian society. This happened in Brazil during the Kubitscheck government and especially during the Goulart government; it also took place during the Geisel government. The first two governments were populist democracies, the last a technobureaucratic authoritarian regime; but, all three governments' lack of legitimacy for the dominant classes, whose power is decisive in a civilian society, was clear. This lack prevents the government from limiting expenditures or from increasing taxes, which results in a deficit. At this point, compensatory inflation becomes dominant.[14]

This political analysis of inflation helps explain, among other things, why the plans for stabilization proposed by the monetarist economists are generally only viable in dictatorial regimes, which receive strong protection from the local bourgeoisie and from the interests of international capitalism. This was the case of Brazil between 1964 and 1974, of Chile from 1973 on, and of Argentina from 1977 on. Note, however, that the fact that these plans were possible does not mean that they were successful. Generally, they cause heavy recession and the failure of small- and medium-sized businesses. Also, they only have some success if they are accompanied by the political-administrative measures of wiping

out trade unions and strangling wages, which has no support in the monetarist theories. Containment of inflation by democratic means generally not only implies the existence of governments with political legitimacy in the eyes of civilian society and with popular representation, but also acknowledges that an unbalanced government budget is not the only cause of inflation.[15]

11

According to this analysis, an unbalanced state budget is sometimes endogenous from a political point of view. Meanwhile, are there any reasons of a more strictly economic type could help explain the unbalanced state budget, making it at least partially endogenous to the economic system as well?

In the ninth section of this chapter, we looked at two fundamental economic causes that are opposites, but which complement each other. On the one hand, there is the need felt by the government to carry out price controls through the state itself, with these controls causing an unbalanced fiscal budget, which then forces it to print more and more new currency, provoking demand inflation. On the other hand, there is the tendency to apply a policy of corrective inflation, which causes cost push inflation.

The first mechanism corresponds to compensatory inflation. We can, however, examine the problem from a complementary angle. The most general cause of the tendency to have an unbalanced state budget is related to movements of the economic cycle. Our hypothesis is that it is in the declining phase of the economic cycle that the tendency toward imbalance is accentuated.

Economic deceleration is immediately and directly reflected in the collection of taxes, especially in underdeveloped countries, where indirect taxes tend to dominate. On the other hand, the vast majority of expenditures that maintain the state cannot be cut back. There may be some flexibility in expenditures for investment, but it is precisely these which should and do tend to increase at this point because of the need to counterbalance the cyclical movement in retraction. The imbalance of the state budget begins to be based on this contradiction: decreasing revenues opposed to the need to maintain, if not increase, state expenditures.

Actually, due to the (historically new) role of the state in technobureaucratic capitalism, fundamentally responsible for private accumulation and as a substitute for the market in the allocation of resources and the redistribution of income, the economic policy of the government takes on decisive significance. In this type of social

formation, the state partially substitutes itself for the market in controlling or coordinating the economy. What is expected from the state is that it will limit the cyclical fluctuations that result from pure and simple coordination of the economic system by the market. One would expect compensatory action from the state when there is a declining cyclical movement.

This compensatory action can take place in two fundamental ways. One, obviously, is the Keynesian fiscal policy, which tends to be implemented not only because of the theoretical beliefs of the economists who design economic policy, but principally due to pressure from civilian society. It proposes to increase state expenditures or to cut taxes in order to induce investments, as well as to reduce unemployment and idle capacity. Theoretically, in a situation of unemployment, this policy would not be inflationary; however, if we imagine that certain sectors will reach full capacity before others, it is not difficult to link compensatory inflation to structural inflation.

There is a second, more direct, compensatory action, which is to simply subsidize certain activities or certain types of consumption. In the last analysis, this kind of compensatory action is caused by cyclical decline, as is the Keynesian fiscal policy. Its mechanisms, however, are much more casuistic, and its distortions much deeper. They are more common in underdeveloped countries, but they also occur in developed ones. In the latter, which are characterized by the welfare state, expenditures for social ends tend to increase systematically. The governments are permanently faced with pressure from the society for higher standards of living, and the alternative—private consumption through higher wages—is not only in general more expensive (therefore less efficient), but it also offers fewer opportunities for supplier contracts for capitalist corporations. During the cyclical slowdown of the economy, there is even more pressure to increase expenditures for social consumption.

One of the most common compensatory actions, which is directly related to private accumulation rather than to social consumption, is the sectorial fixation of interest rates below the existing inflation rate. This implies a subsidy for accumulation for that sector whose volume, meanwhile, is indefinite. It increases as the inflation rate increases, given a controlled interest rate. The subsidy is obviously paid from the coffers of the government, whose deficit grows.

Another compensatory action is to reduce the taxes of a sector in the name of economic planning and the need to stimulate that particular sector or region. A reduction in the state revenue is immediate and a deficit inevitable. In the same category, we find the acquisition of corporations

that are in the process of bankruptcy because of cyclical retraction. Transformed into the main party responsible for the level of employment, the state has no other choice than to assume, in various forms, these debts.

Actually, in contemporary technobureaucratic capitalism, the state was made responsible for the process of capital accumulation and the rate of economic development. Thus, put at the service of private accumulation, it has no other choice than to continue to make investments itself and to finance private investments, generally by subsidizing them.

In underdeveloped industrialized countries, which tend to be strongly technobureaucratic, long-term financing is generally the direct responsibility of the state, as the private mechanisms for financing accumulation (stock markets and private banking systems, including investment banks) are unable to perform this role. If the state is made responsible for development, and if it directly controls a considerable part of investment through its own corporations, as well as the rest of investment indirectly through long term financing, it has no other choice than to compensatorily maintain the accumulation rate of the system.

Its freedom of action in this process is very limited, because the state is not an organism from outside the economic system or some kind of external regulatory agent, but rather an intrinsic part of the productive and financial economic system.[16] When the economy enters a cyclical decline, the economic policy of the state tends to become even more endogenous and immobilized. It becomes much more the result of the pressures and limitations that come from the system itself than the result of decisions of a relatively autonomous regulatory agent, as those who formulate economic policy claim.

These are characteristics of technobureaucratic capitalism, in both the developed and underdeveloped industrialized countries. They tend to be more accentuated in the latter because private interests are weakly controlled by the state, because the structural inflationary factors related to points of strangulation in supply are more accentuated, because of the frequent lack of legitimacy of governments, and finally because of the pressures that are put on the state to guarantee the accumulation of capital and the level of consumption at any price.

12

All of this analysis can lead us to various general conclusions. First, the acceleration of the inflation rates, and especially stagflation, which characterize the new inflation, are related to the substitution for competitive capitalism by technobureaucratic or oligopolistic capitalism.

Only in this type of capitalism is it possible to have inflation that maintains itself and sometimes even increases in the recessive phase of the cycle.

Second, inflation always has causes that are endogenous to the concrete social formation.

Third, these causes can, in the exchange equation, MV = Yp, act both directly on the money supply, provoking an increase in prices, and directly on prices, implying a need to increase the money supply in order to reestablish liquidity.

Fourth, the autonomous increases that operate directly on the level of prices are: (a) an imbalance between supply and aggregate demand at the peak of the cycle; (b) structural inflation; (c) administered inflation.

Fifth, only administered inflation is a historically new factor that can explain this new inflation.

Sixth, administered inflation is a result of the capacity of the large corporations, the trade unions, and the state itself to carry out a pricing policy in technobureaucratic capitalism—particularly in the subsystem that characterizes it, the planning system.

Seventh, this administration of prices makes it clear that inflation can be independent of excess demand. It is the result of an undeclared struggle for the division of the income between corporations, between corporations and trade unions, between corporations and consumers, and between various sectors of the economy.

Eighth, economic agents, in the distributive conflict process, change their prices alternately, one after the other, making inflation autonomous or inertial.

Ninth, the state is always an active, although at times contradictory, member in this struggle for the division of income. It tends to sustain capitalist accumulation, but its policy is the result of the class struggle.

Tenth, in this process, and particularily in the declining phase of the economic cycle, the state tends to intervene in the economy, either by controlling prices or by compensating for the losses caused by recession. In this process of intervention, the state tends to provoke distortions in the market and incur growing deficits, which are covered by an inflationary increase in the money supply.

Eleventh, governments' lack of power, which is a result of a lack of legitimacy (support from civilian society), leads them to carry out a compensatory policy in a generally irrational way, resulting in public deficits and profound distortions in the economic system.

Twelfth, correcting these distortions by using the mechanism of "corrective inflation" ends up provoking even greater inflationary pressures because the state administratively raises margins and prices, which the

businesses then immediately pass on to the other areas of the economy.

Thirteenth, in an economy characterized by technobureaucratic capitalism, by price controls, and by the tendency toward compensatory distortions (which are all reflected in the public deficit), we can distinguish between the causes that maintain the inflation level and those that raise it. Administered inflation, characterized by establishment of fixed margins and wage indexation, is the main cause of the maintenance of the existing inflation level. The causes of an acceleration of inflation are: (a) prices set by the oligopolistic corporations, which succeed in increasing margins; (b) prices set by trade unions, which manage to increase their wages above the average increase in the productivity rate; (c) "corrective inflation," which is nothing more than the administered increase of repressed margins; (d) the structural sectorial imbalances between supply and demand; (e) excess demand at the peak of the cycle; (f) an excess of currency caused by compensatory deficits endogenous to the state; and (g) imported inflation.

Fourteenth, any one of these seven causes can raise the inflation level. However, once the level is raised, it becomes extremely difficult to lower it because this would imply a generalized reduction of margins, which is incompatible with the oligopolistic corporations' policies of price controls. It would mean that these corporations would be forced to pass on only part their cost increases to prices.

To sum up, inflation has numerous causes, which operate directly on the administration of prices and through the imbalance of the state budget. The new facts that explain the acceleration of the inflation rate, as well as inertial inflation and stagflation, are related to the setting of prices by large corporations and trade unions and by the corrective-distortive actions of the governments' attempts to control a process that the market no longer has the means to control.[17]

13

The model that we just developed for explaining inertial inflation and the generalized worldwide increase in the inflation rate is obviously based on the Brazilian experience during the 1970s. According to this model, there are some factors that help raise the inflation rate. Others, specifically that particular form of administered inflation that maintains fixed margins even when the economy is in a recessive phase, guarantee that once each inflation level is reached it is maintained. Inflation then becomes autonomous of demand, with prices increasing inertially.

Among the factors that accelerate inflation, there are some that act directly on prices, which then force an increase in the nominal money

supply in order to maintain the liquidity of the system. Some of these, such as structural inflation and demand inflation at the peak of the cycle, appeared before technobureaucratic capitalism became dominant and continue to be active. Others are peculiar to this new social formation: inflation administered by corporations that raise their margins, by trade unions that increase their wages above productivity, by the OPEC nations that have caused the so-called imported inflation, and "corrective inflation" provoked by the government when it decides to raise the profit margins of the sectors whose prices had been repressed. On the other hand, there are those factors that act directly on the money supply, starting with state deficits, as well as pressures from the private sector to increase the money supply. These factors are especially active when there is a cyclical deceleration. In these cases, the increase in the money supply is not simply the fruit of demagoguery or of governmental incompetence. Rather it is a phenomenon endogenous to the social formations defined as technobureaucratic capitalism, in which the state is transformed into the main agent responsible for the process of accumulation.

The inflation rate in Brazil was declining from 1964 until 1972. In the first period, from 1964 to 1966, this was principally the result of a violent repression of wages, and, secondly, of some orthodox means for fighting inflation. In the second period, from 1967-1972, it was the result of administrative price controls that restrained profit margins, together with high profit rates that were possible not because of an increase in margins, but rather because of an extraordinary increase in production.

Beginning in 1973, the inflation rate began to climb again, with a decisive acceleration in its growth rhythm starting in 1979 (see Table 2.3). The change in the direction of inflation in 1973 is clearly related to a cyclical peak, with full employment and full capacity. In 1974, inflation continued to accelerate because of prices set by OPEC. Probably beginning in 1976, when deceleration became clear, growing state subsidies and pressures from the private sector provoked compensatory inflation. This process continued until the first semester of 1979. During this whole period, the government was practicing a stop-and-go policy; it would try to carry out an orthodox policy for fighting inflation, and then, being pressured by the corporations, would give up the attempt. This giving up was inevitable, because the Brazilian authoritarian state had been going through a profound political crisis of legitimacy in the eyes of civilian society since 1974. During the third period, from 1973 to 1979, there was no administered inflation characterized by an increase in the corporations' margins or caused by increases of real wages above the production rate.

Table 2.3 Inflation in Brazil: 1964 - 1980

Year	General Price Index	Cost of Living Index
1964	91.9	72.9
1965	35.5	53.9
1966	38.8	52.3
1967	24.3	25.9
1968	25.4	26.1
1969	20.2	22.3
1970	19.2	16.5
1971	19.8	24.8
1972	15.5	22.5
1973	15.7	26.7
1974	34.5	35.2
1975	29.2	28.5
1976	46.3	44.2
1977	38.8	39.2
1978	40.8	40.1
1979	77.1	70.8
1980*	110.2	93.6

Sources: General Prices Index (IGP) - Getúlio Vargas Foundation
Cost of Living Index, São Paulo - Departamento intersindical de estatística e estudos sócio-econômicos.
Variance for the twelve months ending in October.

Inflation administered by corporations and trade unions was limited to guaranteeing the stability of each inflation level reached due to the three courses mentioned above (demand inflation in the cyclical peak, imported administered inflation, and compensatory inflation). Naturally, structural inflation should be added to this, because it did become a permanent part of the Brazilian economy, although its role did not increase.

There is a fourth period, which began in mid-1979 with a change in the economic policy. The level of inflation changed dramatically (almost doubling). The main cause of this was corrective inflation, including the maxidevaluation in December of that year. The effects of the corrective inflations were aggravated by the new wage law, which also was approved in the second semester of 1979. This law guaranteed full and semestral indexation of wages, into which production increases should be incorporated. This law did not succeed in increasing the real average wage only because corporations, faced with the perspective of a reduction of their profits, managed to increase the inflation rate, thus increasing the loss in the workers' real wages between each readjustment.[18] A third factor that

increased inflation was the new increase in oil prices, which occurred in the middle of 1979.

At the end of 1980 (when this chapter was finished), a new economic policy of an orthodox nature was being presented. On the one hand, this new policy was the result of errors that had been committed previously, especially the violation of the law of value as evidenced by the preannouncing of the monetary and exchange corrections. On the other hand, it was also the result of pressures from an international financial system that could not accept not only the growing international debt, but also the constant deficits in the Brazilian trade balance. Its consequences were to raise the inflation level once more. The new economic measures, which are oriented toward freeing prices and interest rates, and a new exchange devaluation (because the economy had already accumulated profound distortions due to the extraordinary policy of preannouncing monetary corrections and exchange devaluations) clearly aim to achieve a balance-of-payments adjustment through "deflationary," recessive monetary and fiscal policy. Actually, as this policy includes new adjustments of relative prices, they show that, given a choice between balanced trade and reduced inflation, it is the former that is preferred. The result will be corrective inflation, or, in other words, a curious trade-off between inflation and a balanced trade account which neither neoclassical nor Keynesian theories can explain. Orthodox economic theory assumes that a recessive economic policy contributes to balancing international trade, as well as to decelerating inflation by increasing the hiatus of production. In an economy like Brazil's, which is dominated by oligopolies and state corporations and is full of distortions, it is very clear to everybody, including those who formulate the economic policy, that this theory is not valid. Recession could help to achieve trade balance, but it will also most certainly push inflation to a higher level.

Everything points to the fact that the government made a conscious choice for this option, giving priority to balance-of-payments adjustments at the price of an increase in the inflation rate. This reminds us that inflation is useful for capitalist accumulation; it transfers income from wage earners and the capitalist sectors that are politically weaker (or that are not considered to be a priority by the planned system) to the more dynamic and powerful capitalist sectors.

On the other hand, we should note that during the whole period that we were analyzing, the "anti-inflationary" economic policy was notable for its endogenous nature. Given the government's lack of legitimacy, as well as the lack of clear objectives of the economic authorities who (in the final analysis) were incapable of deciding if they really wanted to fight inflation or not, economic policy was no longer the result of decisions made

rationally and implemented coherently. Rather, it was the result of pressures and counterpressures from the different factions into which the dominant classes are divided and, secondarily, from the pressures of the workers themselves.

14

The assertion that the market hasn't the resources to control inflation in a technobureaucratic capitalism characterized by administered prices means that the orthodox economic policies, which aim to cool off the economy and provoke a recession, are inefficient (or least insufficient) to fight inflation. If inflation tends to accelerate during a cyclical decline, either as the result of the oligopolistic corporations' mechanisms for defending their profit rates or as a result of the compensatory policies of the state, it is clear that orthodox policies, unless of an extremely severe nature, will work to stimulate rather than inhibit inflation. The simple fact is that these policies are forced to start off with corrective measures for relative prices, aiming to reestablish the truth of the market—that is, to eliminate the distortions in the law of value inherent in monopolist technobureaucratic capitalism. This is an indication that their character is inflationary instead of deflationary, at least in the beginning. Once the inflation level is raised in this way, it becomes most difficult to lower it unless the recession becomes a profound and long-lasting depression.

The only alternative to the orthodox policies is administrative price controls. This is extremely necessary; but we have already seen that it has narrow limits and tends to provoke distortions, which in the end are inflationary. When intervening in the price system, the state should, in principle, concentrate only on those sectors that are clearly monopolistic, able to raise their margins, or maintain them at artificially high levels. In this process, in which the state is substituting itself for the market to a certain extent, it could react selectively by stimulating certain sectors and penalizing others through a combination of income, balance-of-payments adjustment, and capital accumulation policies. The limitations, however, on the process of administering prices are narrow, not only because prices should not become disconnected from value or, more precisely, from the price of production, but also because of the administrative and political difficulties involved. On the one hand, a very complex information system is needed; on the other, the officials responsible for the controls are submitted to all kinds of pressures by the corporations, and thus they often end up simply making official the price increases. Instead of reducing the inflation rate, they stimulate it or at least maintain it at a given level.

Effective price controls would not imply that corporations should be impeded in their efforts to increase their profits margins, but rather that they should be forced to lower these margins, thus preventing them from passing on all of their increases in costs to prices. It is plain that this is not an easy task in any kind of state, and even less in those that suffer from crises of government legitimacy.

Therefore, the general conclusion about economic policy is obvious. If inflation has various causes—monetary, structural, administrative, or aggregate demand-related—which all add up, it is useless not only to pretend that there is only one correct theory for explaining inflation, but also that there is only one valid policy for fighting inflation. An anti-inflationary policy should necessarily utilize, in various degrees, all the weapons of economic policy, from the classical instruments of monetary and principally fiscal policy to the mechanisms of administering prices and wages, as well as the interest and exchange rates.

An orthodox policy for controlling inflation, which, in the last analysis, comes from the belief in the capacity of the market to control the economy, consists of: (a) decontrolling prices, interest rates, exchange rates, and (contradictorily) administratively reducing wages; (b) rapidly eliminating government deficits by reducing expenditures and increasing taxes; and (c) drastically reducing the money supply. As a result of these policies, the economy would go into a recession, and the market, given an aggregate supply greater than demand, would automatically take it upon itself to reduce wages, margins, and prices.

An administrative policy for controlling inflation would, in the first place, have to be based on a respect for the law of value. It should interfere with the four basic prices of an economy (those of merchandise, interest, exchange, and wages), but this must be done within strict limits, respecting the balance of relative prices in order to avoid distortions: high profit rates or capital gains in certain sectors and losses in others. The objective is not to guarantee equal profit rates in all sectors, since, in technobureaucratic capitalism, economic policy is used to establish a hierarchy of profit rates in keeping with the economic priorities defined by the planners. But, in the short run, difficult decisions have to be made about which sectors should suffer more and which should suffer less from the anti-inflationary policy. In other words, it has to be decided who will "pay the bill" for controlling inflation.

The only sure thing is that it is impossible to fight inflation without profits, interest rates, rents, and wages being reduced in some way. Orthodox economic policy attempts to affect all profits indiscriminately through recession. In practice, it ends up mainly affecting wages via additional means of direct control. The administrative policy should decide

which ones should and will be penalized. In principle, rentiers and the business sectors that are not considered to have priority in the development process should be chosen. However, these decisions are always political and extremely difficult, not only in their making, but especially in their implementation.

We don't propose to substitute this administration for the market. We only propose that the imperfect, oligopolistic market of a technobureaucratic capitalism pattern function without great distortions in relative prices, thereby guaranteeing realistic and planned rates for profits and wages—an essential condition for price stability. This is possible—always respecting values and production costs, which should be taken as a referent for the main prices—by controlling the stategic prices of the economy: interest rates, the exchange rate, wages, and the prices of the cartelized oligopolistic sector. Other prices should be left to the whims of the market. It is important to note that, in technobureaucratic capitalist societies, a large part of these controls already exist to one degree or another; the difficulty lies in applying them efficiently.

This policy of price controls would naturally be complemented by fiscal policies (mainly tax increases) that would aim to balance the state budget in the medium term, as well as by a flexible monetary policy.

It is not a question of choosing between the market and administration, but of recognizing that, in oligopolistic capitalism, the market and the planning systems are both present. The problem is to know how to live with inflation, accepting that the inertial mechanisms for its maintenance are very powerful and, at the same time, to fight it, using the different policies in varying degrees of intensity, according to the needs of each situation.

The serious problem entailed in this conclusion is that the state, in charge of carrying out this economic policy, is definitely not a neutral agent. It is not a referee who can be put above society, but rather an intrinsic element of it. In oligopolistic or technobureaucratic capitalism, the state is no longer simply a basic juridical-institutional superstructure for society; it also takes part in the economic infrastructure when it acts as a producer.

Aside from this limitation, which is outside the scope of this analysis, it is certainly possible to control inflation in technobureaucratic capitalism by using an adequate economic policy. However, in order to obtain results, this policy should not only be intelligent—using flexibly any kind of instrument of economic policy—it should also be the product of a government with effective power, of a government that is legitimate in the eyes of the civil society.

There is an implicit fact behind this whole analysis that should be made explicit here. The monetarist proposal for a constant, neutral increase in the money supply in exact proportion to the increase in real income is obviously ideal. However, it is strictly out of the question in an economic system that not only develops in the midst of cycles of expansion and contraction, but also in which inflation is imbedded in an intrinsic or structural way.

Given these conditions, there are only two economic policies left for fighting inflation: either the orthodox policy of provoking recession by a drastic reduction in the money supply and state expenditures, or else the administrative policy of controlling prices through a variety of methods. These could be not only of a monetary or fiscal nature, but also of the state's firmly administering the prices of the oligopolistic sector and trying to find a medium-term solution for the bottlenecks in the economy, by moderately increasing production instead of decreasing it, and, finally, by living with a certain inflation rate.[19] An orthodox policy necessarily results in a stop-and-go process that the monetarists blame on the Keynesians, but which really is inescapable during an attempt (naturally not achieved) to apply a recessive economic policy all the way to its ultimate consequences. It results in a medium-term depression of the growth rate, rather than in a guarantee of a "natural" growth rate as the monetarists expect. An administrative policy would probably guarantee higher rates of medium-term economic growth for the system; as well, it would succeed in maintaining inflation at acceptable levels. Its assumption is that any policy for controlling inflation will only have results from success in diminishing the corporations' resistance to a reduction in their profit margins through price controls, and, at the same time, allowing the workers to limit wage demands to maintaining their real wages plus the average productivity increase. Given the market power of corporations and the growing bargaining power of workers, these two conditions for controlling inflation will be much easier to attain in a growing economy, which reduces the idle capacity and increases the employment level. That is the only way that it would be possible to make a moderate but constant increase in wages consistent with almost full employment, as well as a reduction in profit margins consistent with maintaining profit rates.

April 1981

Notes

1. The source for the data on inflation and on the growth of the GNP is the same as that for Tables 2.1 and 2.2.

2. As one person, who is both a journalist and lawyer, told me one day, quite perplexedly, "In my youth, when I studied political economy in law school, inflation was the issuing of money, it was an excess of money in circulation. Now everything has changed and I don't understand anything anymore."

3. Of course, one could make a distinction between pure neoclassicals, who are more interested in reestablishing the predominance of the competitive market, the neoclassicals who are influenced by Keynes, and the monetarists whose emphasis is on controlling the money supply.

4. The bibliography on the monetarist theory of inflation is immense, especially after Milton Friedman (1956) developed and refined the ideas of Hayek on this subject. For this type of bibliography, see Helmut Frisch (1977). It helps to note that the monetarist theory as developed by Friedman, more than being a theory on inflation, is a neoclassical alternative to Keynesian macroeconomics based on the concept of effective demand. However, this discussion is completely outside the scope of this work.

5. In this chapter, we do not intend to make a complete list of the theories on inflation. These lists have already been made, among others, by Bronfenbrenner and Holzman (1963), who did an especially interesting list of the theories of administrative inflation; Harry Johnson (1963), who emphasizes the monetarist view; Helmut Frisch, who contrasts the monetarists theory with the theories based on the Phillips curve (which, after all, is a Keynesian inspiration), in addition to presenting the structural and administrative theories and the recent attempts at synthesis; Francisco Lopes (1978), who lists the Brazilian works on inflation; and, Paul Davidson (1978), who reworks the Keynesian view.

6. Francis Cripps analyzes the Phillips curve and its monetarist revision and concludes, based on studies carried out in Britain, that the inverse relation between unemployment and nominal wages (and therefore inflation) has not been verified since World War II (1977, 109-110).

7. We will examine the different theories on inflation and bring up the basic Latin American literature on this in Chapter 4. An interesting formal exposition of the structural theory of inflation, emphasizing a survey of non-Latin American contributions on this subject, is done by André Franco Montoro Filho (1977). In this work, the author stresses that, as based on Lipsey's contribution, structural inflation can occur even when there is unemployment, because all that is needed is for one of the sectors to have reached full capacity. Note that we are limiting the concept of structural inflation to the sectoral imbalances between supply and demand. Sometimes

the concept is used to include all structural and, therefore endogenous, imbalances in the economic system that cause inflation, including the monopoly power of the business community.

8. A study carried out in the United States (Wachtel and Adelsheim, 1977), relating to the recessions of 1948-1949, 1953-1954, 1957-1958, 1960-1961, and 1969-1970, shows that the majority of the corporations, especially in the more concentrated industrial sectors, but also in the less concentrated ones, tended to increase their margins or to maintain them in those recessive periods. Among the more concentrated corporations, taking a general average, 52.6 percent increased their margins, 9.3 percent maintained them, and 38.1 percent reduced them. However, in longer periods of crisis, it is possible that the margins of the corporations ended up declining slightly, and as a result, the profit rates also went down. That is what has been happening all over the capitalist world since the second semester of 1979 despite all the inflationary resistance of the corporations.

9. André Lara Rezende (1979) and Edmar Bacha (1980) recently made two interesting formalizations of the inflationary process related to the redistributive process. According to Bacha, who even managed to incorporate administrative inflation into the model, "Inflation is an instrument for reducing the share of real wages in the income, so as to permit the capitalists to invest and consume at the levels that they want to" (p. 545). *See* also Adroaldo Moura da Silva (1978), who tries to combine various points of view on inflation into a general model.

10. James O' Connor (1977, 48) observes that usually the workers in the oligopolistic sector, being better organized, initiate an inflationary increase in wages, being followed by the workers of the public sector. An increase in wages is a way for the monopolist and public sectors to keep gains in productivity for themselves, to the detriment of the competitive sectors. But it is also a source of administered inflation.

11. Some economists have used the name "supply shock" both for phenomena like the oil price increase and for inflation that is the result of sudden and generalized deficiencies in supply, such as crop failures. Even though both phenomena occur at the level of supplies, they are very different from each other. In the firstcase, we have prices set for supply: administered or cost inflation is always "supply" inflation. In the second case, there actually is a "supply shock," but the inflation is a market inflation, as prices rise because of a drop in supply for reasons that are independent of the wishes of the business community (therefore without any "administration"), making them insufficient to meet demand.

12. For James O' Connor, this is one of the bases of fiscal crisis, whose consequences are inflationary. This fiscal crisis, which is marked by a tendency for a systematic increase in state expenditures, is structural in the capitalist system. In order to face this, the governments increase taxes or take on internal debts (which often are loans to itself, because it first permits an increase in bank deposits and therefore in the money supply).

O'Connor calls this process "inflationary finances" (1977, 54). The last resource is naturally the pure and simple issuing of money to finance the deficit in the state treasury.

13. It was José Serra who called my attention to the problem of "corrective inflation." Beginning with the first measures of Delfim Netto in the second semester of 1979, in an attempt to correct repressed prices, Serra published articles and interviews in *Folha de São Paulo*, pointing out the explosive effects that they would have on the inflation rate.

14. The first time I tried to make this analysis, which tries to make the deficits of the government and the issuing of money endogenous to the capitalist system, was in *Desenvolvimento e crise no Brasil* (1968, 59-65).

15. It is necessary, meanwhile, to point out that the tendency toward public deficit in technobureaucratic capitalism is structural, regardless of the legitimacy of the governments. James O' Connor's analysis of this subject is definitive (1973), but it is also worthwhile to quote Manuel Castells (1977, 186) here: "The socialization of prices and the privatization of profits have structural limits that the state in a monopolist capitalist society cannot overcome without provoking uncontrollable inflation." It is important to note that for "socialization of prices" Castells means the tendency of the modern state to continually increase its expenditures for social consumption, especially for the urban areas.

16. For state intervention in a state capitalist an economy, *see*, among others, Claus Offe (1977), Heinz Rudolf Sonntag, editor (1977), J. M. Vincent, J. Hirsch, M. Wirth, E. Alvater and O. Yaffe (1975), Alberto Martinelli, editor (1977), Nicos Poulantzas, editor (1977), Carlos Estevam Martins, editor (1977), Luiz Bresser Pereira (1977a), Francisco de Oliveira (1977), João Manoel Cardoso deMello (1977), Luiz Gonzaga de Mello Belluzzo (1977), Luciano Coutinho (1977), Fernando Henrique Cardoso (1977).

17. Labinini called attention to a factor that is inflationary and reduces profit rates at the same time, aside from the pressure from the workers for higher wages and the oil shocks: the elevation of indirect costs, especially the salaries of the top executives, "who set the salary levels for themselves and for other top executives in such a way that the profits of the companies are partly institutionalized and transformed into salaries for the top administrators" (1979, 13). Of course, this factor only accelerates inflation, as the corporations manage to compensate for the increased salaries with higher margins through price administration.

18. This chapter was already written when I became aware of the excellent theoretical and econometric work of Francisco Lopes and André Lara Rezende (1980) on the causes of the recent acceleration of inflation in Brazil. In this work, the authors not only show that there is no correlation between recession and inflationary deceleration, but they also construct a model that begins with the inflation level accounted for by a markup policy, and thus explain the recent acceleration of inflation by the increase in oil

prices and the new wage law. The model and their econometric tests confirm the hypothesis of this chapter. Their explicative power would have been better if they had taken the policy of the "corrective inflation" of 1979 into consideration, which actually brought about an increase in margins, thus becoming a third fundamental cause for the recent inflationary acceleration.

19. In the case of Britain, Francis Cripps notes that, because it is not the demand for workers that determines wages (as is assumed in the Phillips curve), but rather the bargaining power of the workers, recessive monetarist policies are inefficient for fighting inflation. It should be fought with production increases and a moderation of the workers' wage goals (1977, 111). In the case of Brazil, the recommendation for increasing production is the same (Ignácio Rangel 1963), it only being necessary to moderate the profit goals rather than wage goals.

3

The Theory of Inertial or Autonomous Inflation

The inflationary process in this last quarter of the twentieth century can only be clearly undertood 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 chapter 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 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 chapter. 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 chapter 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, $\dot{p}$, will depend (1) on the variation in the wage rate, $\dot{w}$, subtracting productivity increases, $\dot{q}$, and (2) on the variation in the profit margin, $\dot{m}$ (profit over direct cost).

$$\dot{p} = \dot{w} - \dot{q} + \dot{m} \qquad 3.1$$

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, $\dot{z}$, and the variation in the amount of raw material imported per product unit, $\dot{x}$:

$$\dot{p} = \alpha (\dot{w} - \dot{q}) + (1 - \alpha) (\dot{z} + \dot{x}) + \dot{m} \qquad 3.2$$

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 Mário 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 difficultes 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 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 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 pratice 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 Chapter 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 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, 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, 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, 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 3.1 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

Table 3.1 Central Government Deficit and the Inflation Rate

Country	1979/81	
	Deficit as a % of the GDP	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.

weak, since, in many cases, the deficit went down and inflation went up or vice versa.

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 avaliable 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 3.1, 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:

$$\dot{p} = \dot{w} - \dot{q} \qquad 3.3$$

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

$$\dot{w} = \dot{a} + b\,\dot{d}^{-1} \qquad 3.4$$

To the extent that unemployment increases as a result of fiscal measures (preferred by the Keynesian) or of monetary measures (preferred 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.

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, 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 pratice, 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 3.3 and 3.4) 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 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.

December 1983

NOTES

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

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

4. *See* Chapter 6. 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).

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

4

Administrative Policy: Gradualism or Shock

Any policy for controlling inflation must necessarily be related to the corresponding diagnosis of the causes of the current inflationary process. If it is demand inflation, then monetary and/or fiscal policy will be indicated. If inflation is administered or autonomous, the market is imperfect, and therefore price controls and an income policy will be the natural course. If inflation is structural, it will be necessary to live with inflation for a while and, at the same time, adopt long-term measures to remove the structural bottlenecks. As these causes do not exclude each other, a combination of these policies will probably be necessary. However, emphasis should always be given to the principal cause of the continuing inflation.

The object of this chapter is to discuss the anti-inflationary policy that is needed when inflation is mainly autonomous or administered, as tends to happen more and more in the oligopolistic capitalist economies in the last quarter of the twentieth century. In these economies, be they already industrialized or be they characterized by industrialized underdevelopment, this kind of inflation became even more relevant as the world economy entered the declining phase of a Kondratieff cycle at the beginning of the 1970s. Since then, inflation has started to coexist with high unemployment rates and idle capacity, this being called stagflation and, later, inertial inflation when, independently of aggregate demand, persistent high rates of inflation became common, especially in developing countries.

In order to discuss the anti-inflationary policy needed for this kind of economic situation, in the first section of this chapter we will present an abbreviated model of inflation. In the second, third, and fourth sections we will discuss and criticize the Keynesian and monetarist policies for controlling inflation. In the following sections we will examine the

"administrative" policy for controlling inflation, which is based mainly on price controls and partial deindexation of the economy, and, secondarily, on a monetary and fiscal policy. We will end by examining the "heroic" policy for controlling inflation, the freezing of prices, wages and the exchange rate.[1]

1

In any inflationary process, it is important to distinguish the factors that maintain, accelerate (or decelerate), and sanction the inflation level. The maintenance or inertial factors are a result of the economic agents' capacity to automatically pass their increases in costs on to prices, wages, and interest and exchange rates. Accelerating factors are wage increases above productivity, increases in the corporations' profit margins, and, in an open economy, a real devaluation of the currency and increases in the prices of imported components. The public deficit and an increase in the money supply, which in an economy close to full employment could be accelerating factors of inflation, are factors that merely sanction inflation in an economy with a high rate of unemployment and idle capacity. In keeping with this perspective, the inflation rate depends on the following variables: variations in the wage rate, $\dot{w}$; variations in productivity, $\dot{q}$; variations in the price of imported products in international currencies, $\dot{v}$; variations of the exchange rate, $\dot{e}$; variations in the quantity of imported raw materials per unit of production, $\dot{x}$; and, variations in the profit margins (profit above direct costs) of the corporations, $\dot{m}$:

$$\dot{p} = (\dot{w} - \dot{q}) + (1 - \alpha)(\dot{v} + \dot{e} + \dot{x}) + \dot{m} \qquad 4.1$$

In this model, the most important variables in the short run are the wage rate, the exchange rate, and profit margins. In the long run, and when inflation is not at a very high level, the rate of increase of productivity is also very relevant.

2

The aim of any anti-inflationary economic policy is to act against the components of Equation 4.1 in order to succeed in reducing its variations and, thus, in reducing the level of inflation.

Generally, the models for an anti-inflationary economic policy concentrate all of their attention on wages.[2] The reason for this is simple.

Profit margins are generally considered to be constant, or at least beyond the control of those who are responsible for economic policy. Given the need to avoid an uneven balance of payments, it is assumed that the parity exchange rate remains constant. And, by definition, those responsible for economic policy are powerless over the prices of imported goods.

The exclusion of the last variable is very natural. However, the exclusion of the variations in the real exchange rate is less acceptable, since it is common for the countries which directly control their exchange rate, not having convertible currencies, to use the valorization of the local currency as a way to combat inflation. This policy was especially used by the countries that adopted monetarist strategies based on the rational expectations theory for combatting inflation, such as Chile and Argentina at the end of the 1970s. They had hoped that by announcing beforehand the exchange rate they could establish rational parameters for their inflationary expectations. The example of Mexico at the beginning of the 1980s, however, makes it clear that the temptation to overvalue the local currency is not the prerogative of the monetarist economists.

The exclusion of profit margins does not make any sense, especially when we consider that in technobureaucratic and oligopolistic capitalism, corporations have ample opportunities to manipulate their margins.[3] Obviously, there are ideological motives for this exclusion.

The use of only nominal wages to orient an anti-inflationary policy, in accordance with the Keynesian analysis of inflation, has the advantage of simplifying things. More important, however, is that, via the Phillips curve, it is possible to relate inflation to aggregate demand, that is to the rate of unemployment that will have a direct effect on wages. On the other hand, the correlation between the variations in nominal wages and the inflation rate is always—and obviously—very high in every empirical study.

Thus, by neutralizing the other components of Equation 4.1, the inflation rate then depends exclusively on wages and on productivity:

$$\dot{p} = \dot{w} - \dot{q} \qquad 4.2$$

Productivity itself could, in the name of simplification, be ignored or put on a secondary level, especially if the inflation level is very high or if we consider that, in the short run, it is not possible to change productivity. Hence,

$$\dot{p} = \dot{w} \qquad 4.3$$

On the other hand, in accordance with the Phillips curve (1958), there is an inverse relation between the variation of the wage rate and the rate of unemployment, d (Figure 4.1). This gives us the following equation, in which a and b are constant:

$$\dot{w} = a + bd^{-1} \qquad 4.4$$

According to this, the lower the rate of unemployment, the greater the variation in the wage rate. Theoretically, we could even have wage deflation when there are extremely high levels of unemployment, as nominal wages go down and the curve crosses the abscissa.

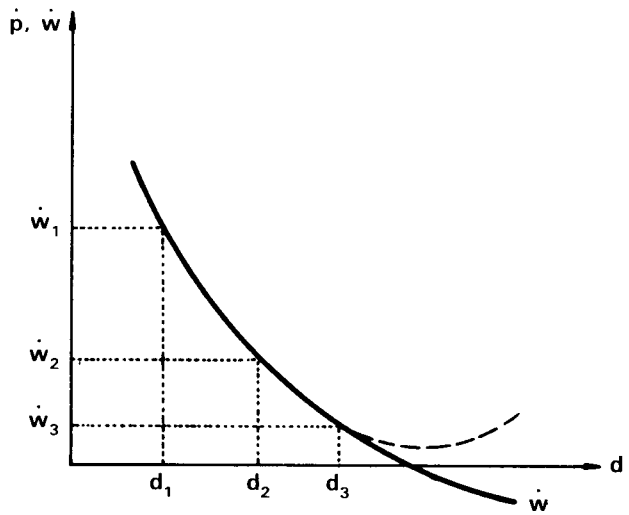
There is a trade-off in the Phillips curve between rate of unemployment and the variation in the wage rate. These, in turn, determine variations in prices. Substituting Equation 4.4 in Equation 4.3 the inflation rate is given by

$$\dot{p} = a + bd^{-1} \qquad 4.5$$

As unemployment increases or aggregate demand slackens, the rates of both the nominal wage increase and inflation fall.

The model of the Phillips curve is adopted by the Keynesian economists, as well as by the followers of the neoclassical synthesis.

Figure 4.1 The Phillips Curve and Autonomous Inflation



The anti-inflationary policy that obviously results from this is the reduction of aggregate demand by monetary, and preferably fiscal, measures. These are preferred because the most general assumption is that full employment and the consequential inflation are mainly caused by the public deficit or, more precisely, by the increase in public sector borrowing requirements (PSBR).

There is nothing to prevent establishing a direct relation between the variation in the inflation rate, p, and the variation in the profit margins, m in this model. However, it becomes difficult to establish, because profit margins, unlike unemployment, are not necessarily related to aggregate demand. Theoretically, one would expect that, as aggregate demand slackens, corporations would reduce their profit margins, just as the workers reduce their pressure on wages. But it is common knowledge that oligopolistic corporations tend to do the opposite.[4]

Going back to the basic model of the anti-inflationary policy based on demand management, its limitations become obvious when the economy in question does not have full employment.

First of all, as is made clear in Figure 4.1, as the unemployment rate increases, the gains in terms of reducing the inflation rate become proportionately less. Up to unemployment level d_1, the policy of controlling demand is highly efficient. Starting with level d_2, the policy of controlling demand becomes extremely inefficient. There is an intermediate situation between d_1 and d_2.

Second, there is no reason for an oligopolized economy that has high unemployment rates and idle capacity to maintain a direct correlation between the variations in wages and in prices. In order to simplify things, we will assume that this correlation exists in Figure 4.1 up to the point of unemployment d_3. After this point, however, the oligopolistic corporations begin to increase their profit margins in order to compensate for the loss in sales. As long as the increase in margins is above the decrease in wages, the price curve (which, after point d_3, separates itself from the wage curve) begins to increase as unemployment increases.

As we will see more precisely in the next chapter, this "inflection," which at first glance seems very unlikely, becomes understandable if the economy is not only oligopolized, but also large sectors are state-controlled, and especially if the economic authorities decide that, besides controlling demand, they will put into action a process of "corrective inflation" for the distorted (artificially low) prices of the goods and services produced by the state corporations. This measure, which is justified by the need to adjust relative prices, is actually imposed because of the growing

fiscal difficulties in which the state and its corporations find themselves as a result of the recessive policy.

This is basically what happened in Brazil in 1983. The inflation level doubled in that year, while the economy went through a strong recession. The jump of the inflation rate was due not only to an increase in agricultural prices and the real devaluation (maxidevaluation) of the cruzeiro, but also to the "corrective inflation" measures such as the elimination of certain subsidies and the increase in the prices of the state corporations.

Third, controlling inflation by reducing demand, and consequently lowering wages, may become ineffective in terms of the Phillips curve, as the direct relation between unemployment and nominal wages is broken. There are two reasons for this break: the bargaining power of the trade unions and, especially, the need (generally translated into agreements with the unions or into laws) to index wages as a result of chronic inflation. In both cases, the Phillips curve is upwardly dislocated, that is, given the same level of unemployment, we will have a higher variation of the wage rate and of the rate of inflation. The trade unions' bargaining power can even lead to a real increase in wages, and thus to an acceleration of inflation, but what is more likely is that we will have inertial inflation with the indexation of wages. In this case Equation 4.4 takes on the following form:

$$\dot{w} = a + b\,d^{-1} + c\dot{p}_{-1} + \dot{w}_a \qquad 4.6$$

where c is the indexation coefficient, with c = 1 in the case of a full wage indexation to past prices $\dot{p}_{-1}$ and $\dot{w}_a$ represents the rate of the autonomous variation in wages due to the bargaining power of the trade unions.

To sum up, the policy of controlling inflation by demand management and a reduction of the wage rate loses its effectiveness as the oligopolist corporations raise or at least maintain their margins to compensate for the loss in sales and, especially, as the workers, given their unions and their political power, obtain the indexation of wages, leading to continuous upward dislocations of the Phillips curve.

3

The policy of demand management must be clearly distinguished from the monetarist policy. For the Keynesians (and for the middle-of-the-road adepts of the neoclassical synthesis), there is an exchange between unemployment and inflation, whereas for the monetarists this exchange

does not exist, except in the short run. In the long run, the Phillips curve is inelastic, that is, vertical in relation to the horizontal axis. Strictly speaking, for the pure monetarist, the Phillips curve does not exist, so that it is theoretically possible to reduce prices without increasing unemployment.

The monetarist theory developed at the University of Chicago is naturally very complex. It is useful, therefore, to reduce it to its simplest form so that it can be more easily understood. We are not interested here in all of its nuances, as they can be found in the works of Milton Friedman and his followers.[5]

The monetarist school represents a counterrevolution against the Keynesian school; it claims to have reestablished the old neoclassical theory of general equilibrium, following Walras and Pigou. For the monetarists, money does not have any real effects on the economy. Money only determines the general level of prices, without having any influence on the level of production. This is possible because monetarist economists adopt the hypothesis of a constant relation (in the long run) between the demand for money and real income. The money demand function is converted into a nominal theory of income, postulating that the exogenous supply of money determines the nominal level of income and the price level. Therefore, for the monetarists, the process of hoarding, which was studied by Marx and Keynes, does not exist. The real rate of interest is determined in the real sector of the economy where aggregate savings determine the level of investments at the full employment level. Without going into details of the "new quantitative theory of money" developed by Milton Friedman, we can use the following equation to express their propositions:

$$M + V = Y + p \qquad 4.7$$

in which M is the rate of variation of the money supply, V the rate of variation of the income velocity of money, Y the rate of growth of real income and p the rate of increase of the price index.

As V is maintained constant in the long run, variations in M reflect ultimately on the level of prices p, for the real sector of the economy, represented by Y, is given exogenously by the natural rate of growth determined by supply factors such as the rate of population growth and technical progress. The basic argument is that, as the empirical relation between the real demand for money, M/p, and real income, Y, is stable, in the long run, prices would vary in direct proportion to the increase in the nominal money supply above the natural rate of growth of the real national income.

The basic monetarist strategy for controlling inflation is therefore very simple: stick firmly to a program of rigid control of the supply of money so that inflation will come down. In the short run, control of the money supply can have some effects on real income, but, in the long run, this will adjust to its natural level and the price level will stabilize. This control will only have real effects, bringing about a reduction in aggregate demand, as long as it is greater than aggregate supply. However, once an equilibrium between aggregate supply and aggregate demand is achieved, prices could theoretically be brought down by a continuous and programmed reduction of the money supply without affecting the employment level.

In order to understand how this would be possible, it is necessary to consider the role of expectations. For the monetarist, current inflation is basically a function of the expectations of increases in future prices, $\dot{p}^e$. Instead of writing, as would a structuralist, based on the inertial theory inflation, that present inflation is equal to past inflation, the monetarist will write:

$$\dot{p} = \dot{p}^e \qquad 4.8$$

It is important, therefore, in monetarist anti-inflationary policy, to counteract the expectations of the economic agents. For the monetarist, the basis for inflationary expectations is not past inflation, about which nothing can be done, but the expected economic policy: (1) an expected increase in the money supply, (2) expected devaluations of the currency in relation to foreign currencies, and (3) expected increases in nominal wages. Therefore, it is up to the economic authorities to act on these three variables, establishing guidelines for the corporations, the workers, and the consumers. In this way, the economic authorities should establish limits for the nominal growth of the money supply in a descending rhythm. They should also establish limits for the nominal exchange rate devaluation (announcing beforehand a declining rate of devaluations) and for nominal increases in wages, making both compatible with the reduction in the money supply and with the predicted future inflation rate.

As long as the basic guidelines are formulated correctly (have internal coherence) and as the economic authorities have credibility in the eyes of the economic agents, prices will automatically begin to fall. Although nominal wages would be going down, real wages theoretically would not go down, since the inflation rate would be reduced concomitantly. On the other hand, there would be no need for unemployment to force real wages down, since the workers and the corporations would tend to adjust

themselves in a disciplined manner to the basic guidelines established by the economic authorities.

In this best of possible worlds described by the monetarist economists, in which there is no crisis because the automatic mechanism of the market permanently guarantees full employment, there is one ingredient missing: the interest rate. According to the orthodox monetarists, it would not go up as a result of the restrictive monetarist policy for two theoretical reasons: (a) because the international interest rate is the same in all countries; and (b) because, internally, the interest rate does not depend on the supply and demand for money, but rather on the supply and demand for savings.

The lack of realism in this theory is obvious. On the one hand, an *ex ante* relation as stable as the monetarists claim between the real demand for money and the production level does not exist. On the other hand, the idea that inflation is based on expectations is obvious, but the corollary that it is sufficient to establish basic guidelines that are compatible with each other, so that the economic agents will obediently reduce their expectations, is far from true. Economic agents base their expectations on past inflation (distributive conflict theory) rather than on future economic policy.

Actually, the monetarist experiments in combatting inflation generally result in a serious recession. They assume that inflation is the result of the public deficit, which provokes excess demand and an increase in the money supply. Thus, they end up adopting a policy of controlling aggregate demand. On the other hand, the policy of establishing basic guidelines for the exchange rate has the result, as was seen in Chile and Argentina, of overvaluing the local currency, with serious consequences for the balance of payments. Also, the policy of establishing basic guidelines for nominal increases of wages ends up being transformed into an authoritarian policy for a compulsory and drastic reduction of real wages.

4

Actually, the Keynesian demand management policy, which the monetarists in the end also adopt, emphasizing the control of the money supply, is perfectly acceptable when the economy is near full employment. Given this situation, restricting aggregate demand should lead the corporations to cut their profit margins and the workers to accept cuts in their wages or, at least, not increase their wages above increases in productivity.

The greatest restriction to this kind of policy, the fact which makes it inefficient, is that its defenders tend to also use it when there is unemployment. They adopt this practice, however, because (a) to constrain demand through macroeconomic fiscal and monetary policies is politically much easier than to adopt administrative controls (in fact, monetary policies are even easier than fiscal policies because they are less discriminating); (b) because, in spite of its inefficiencies, this policy always attains some results, given the existence of competitive sectors, especially those producing agricultural and mineral raw materials and the unorganized sectors of the working class.

The strict monetarist strategy is unacceptable on all levels. The strongest argument in its favor would be the stable relationship between the money supply and the real income. But, first of all, this relation is often not verifiable. A correlation exists most of the time, but in an *ex post* form, which therefore does not establish a causal relationship. On the other hand, the concept that it is possible to reduce inflation without recession through a reduction of the money supply is strictly false, since the economic agents do not accept the basic guidelines on inflation established by the economic authorities. As a result, the monetarist strategy reduces itself in practice to a strategy of controlling aggregate demand, as reducing the money supply and the volume of internal credit provokes a recession.

Actually, the monetarist policy tends to be much more pernicious than the Keynesian policy for a number of reasons. First of all, the belief in a stable relationship between the demand for money and real income leads to much more prolonged policies to restrain the high-powered money and internal credit than the Keynesian defenders of the policies for controlling demand are disposed to adopt. Second, the resulting rise in the interest rate inhibits investments and impedes or stifles the cyclical recuperation of the economy. On this point, the Keynesian theory that the interest rate depends on the supply and demand for money is much more realistic than the classical theory, adopted by the monetarists, that the interest rate depends on the supply and demand for savings. In spite of the fall in investments, the interest rate goes up in keeping with the monetary restriction.

Autonomous or inertial inflationary pressures, being independent of excess demand, continue to manifest themselves, even in the middle of a recession, thus generating stagflation—the combination of inertial inflation with recession. In this situation, the reduction of the real money supply maintains high interest rates, favors financial speculation, and prevents or hinders the recuperation of the economy. Last, because the guidelines are not voluntarily obeyed, there is the tendency toward a real

exchange rate valorization and larger deficits in the balance of payments. On the internal level, the most likely outcome will be the authoritarian imposition of limits for nominal wage increases, given the inefficiency of the monetary restrictions.

To sum up, the policy of controlling aggregate demand when there is unemployment can lead to a reduction in the inflation rate, but with a very high social and economic cost, given the inefficiency of this kind of policy for this part of the Phillips curve. The monetarist policy, in turn, only succeeds in obtaining results to the extent that it generates unemployment and, thus, confuses it with that of controlling aggregate demand. Or else, it succeeds to the extent at which authoritarian governments are able to impose a drastic reduction in real wages and/or promote an artificial valorization of the local currency.

5

We have a third type of anti-inflationary economic policy, which we will call the administrative policy for prices and incomes or, simply, the administrative policy. This kind of economic policy is based on the theoretical assumption that, in modern capitalist economies, coordination of economic activities is carried out more and more by administrative measures—by the big corporations and the state—which are partial substitutes for the market mechanisms.

Although this policy can also be useful during full employment, it is especially valid when there is unemployment and idle capacity, or when there is inertial or autonomous inflation, which comes together with administered inflation. The only efficient way to fight administered and inertial inflation is by the adoption of administrative measures—basically price controls.

The broad objective of the administrative policy is to reduce the inflation rate without either deepening the continuing recession or hurting, in terms of income distribution, the workers and the competitive sectors of the economy. Monetarist and Keynesian (demand administration) policies not only deepen the current recession, but they also tend to aggravate the concentration of income. This happens because the economic authorities only act on the economic aggregates—the money supply, public expenditures, aggregate demand—leaving the adjustment of relative prices to the market. The result is that the oligopolist sectors tend to increase their income share at the expense of the workers, the salaried middle class, and the small- and middle-sized competitive businesses. An administrative policy is used to try to make the reduction of the inflation rate compatible

with controlled economic growth and, through income policy, to avoid greater distributive imbalances.

To the extent that the economy is already operating with high rates of unemployment and idle capacity, the first measure taken is to stimulate aggregate demand through a more flexible monetary policy. This also lowers the interest rate and, in consequence, increases investments and the corporations' sales. Lowering the interest rate has a directly anti-inflationary effect, as interest is a cost the corporations pass on to prices. The increase in sales, in turn, allows the corporations to lower their profit margins (profit over sales) without hurting their profit rate (profit over capital).

It is necessary, however, to note that demand should be stimulated moderately, with caution, so that the economy does not achieve full employment. If this happens, the sectors that have reached full employment will then increase their margins and wages, thus reactivating inflation.

Also, if the economy has balance-of-payments disequilibrium, an accelerated recovery would aggravate this problem because the demand for imports increases. Even though an administrative control of imports could be useful for this, its ability to restrain the increase in imports will always be relative.

6

The fundamental strategy for an administrative policy is to hinder the operation of the accelerating factors of inflation and to succeed in weakening or annulling the inertial factors that maintain the inflation level. This can be done in two alternative ways: gradually or, if inflation is already too high, by utilizing a shock strategy.

In order to make this strategy operational, the fundamental instruments are administrative price controls and a planned deindexation of the economy. Concomitantly, it would be necessary to gradually reduce the real public sector budget deficit and increase the money supply in such a way that the whole economy can adjust to progressively lower levels of inflation.

If inertial inflation, or stagflation, is accompanied by a balance-of-payments deficit, as was the case of Brazil at the beginning of the 1970s, these measures would only have results if the adjustment policy adopted is not intended to correct the distortions in relative prices by using measures of "corrective inflation." If this happens, as in Brazil in 1983, inflation will tend to accelerate rather than to reduce its rhythm. Although the

orthodox adjustment policy is aimed not only at the equilibrium of the balance of payments, but also at reducing the inflation rate, its effect on inflation is the opposite of that desired. This is especially true in the first phase of the adjustment process, because of the real exchange rate devaluation and the other measures to correct relative prices, especially through the elimination of a large variety of subsidies that characterize orthodox adjustment policies.

These policies, which are supported by the monetarist and Keynesian theories, are actually extremely inefficient for combatting inertial inflation. This is because they insist on not accepting inflation as autonomous of demand and thus inertial, but rather as caused by the public deficit and an excess of available credit. The public deficit and excess supply of money would also cause the foreign trade deficit, so that the same policy would solve both of these imbalances. Aside from an exchange devaluation and adjustments in relative prices, there would also be a reduction in the absorption of external resources by a cut in the public sector borrowing requirements, or rather, in the public deficit, and a cut in the money supply, or more precisely, in banking credit. These measures would provoke an increase in the interest rate, a cut in investment, a reduction in demand, and recession. Consequently, once excess demand is eliminated, profit margins and wages would be reduced and, therefore, the result would be an inflationary deceleration, as well as a diminution in the demand for imports and an increase in the supply for export.

We have already analyzed the inadequacy of this theory for explaining inertial inflation, which is not a result of excess demand. In the same way, a balance of payments problem, expressed by a deficit in the current account balance of the country while the trade account presents a surplus, is not necessarily the result of an excess in current effective demand. The current account deficit can be derived from external causes, such as a deterioration in the terms of exchange of the country or an increase in international interest rates. It can even be provoked by interest on past debts—interest that has no relation to current aggregate demand. This was precisely the case of Brazil in the first half of the 1980s. Thus, the economy can be in a deep recession and, nevertheless, not only have inflation, but also have a deficit in its current account, which is not the result of excess current expenditure. The current amount deficit may originate from a structural imbalance due to a large interest payment on a stock of debt accumulated in the past. In this situation, cutting the absorption of goods may have little effect because the problem lies in the payment of interest.

7

Let us first examine the gradualist administrative strategy for controlling inertial inflation. Price controls and partial deindexation, or indexation according to a future declining rate of inflation, are the two basic instruments of an administrative policy for controlling inflation.

The difficulties related to administrative price controls are well known: (1) it is not possible to control all prices; (2) a very competent and big bureaucracy is necessary in order to exercise partial control; (3) the bureaucratic apparatus is easily subject to corruption; (4) the unavoidable errors when prices are administered provoke discrepencies between the set prices and equilibrium value, or, more precisely, production price, resulting in serious allocatory distortions; and (5) when setting wages, the tendency is to reduce the real wages of the workers.

Although all of these difficulties are real, administrative price controls are still recommended for the simple reason that, when there is inertial inflation and stagflation, there is no alternative. Given that prices increase autonomously of demand (inertially), we have already seen that the administration of aggregate demand is highly inefficient. Thus, there is no better strategy than that of trying to administratively control prices, especially those of the oligopolist sectors that are capable of increasing their prices independently of the existence of pressures from demand.

In order to do this, it will be necessary to create a specialized bureaucratic apparatus. This apparatus must be permanent, since the oligopolization of the economy is a permanent factor in contemporary capitalism. No doubt, this bureaucratic apparatus will undergo the risks of corruption, and it will certainly commit errors. But corruption is a phenomenon that can be partially controlled. Although the errors in setting prices can be significant, they will be fewer than those committed by an imperfect market where inertial inflation prevails.

As for errors in controlling prices, it is necessary to point out that they can be serious, provoking large distortions in the allocation of resources and in income distribution, if two basic precautions are not taken. First of all, prices must be set by a permanent process of trial and error, of successive approximations, instead of by technocratically established formulas. Second, the aim of this process of trial and error should be for the set price to come as close as possible to the production price, that is, to the price that a competitive market would tend to establish.

These two correlated precautions are essential for simultaneously (1) reducing the inflation rate, (2) guaranteeing a satisfactory allocation of resources, and (3) avoiding distortions in income distribution.

The permanent temptation to those who control prices is that of giving special treatment to the first objective to the detriment of the other two. In these terms, they confront the law of value: they artificially valorize the exchange rate, lower real wages, and maintain the prices of the state-owned corporations and some private sectors with less political power at artificially low levels.[6] As a result, aside from the distortions in relation to income distribution and the allocation of resources, there are other problems: disregarding the officially set prices, the buildup of inventories, the black market, and disorganization of the economic system. Inevitably, the short-run results will be annulled in the long run or even worsened by a new price explosion.

Administrative price and wage controls could be complemented with incentives and fiscal penalties aimed at obtaining the adherence of the corporations. These kinds of measures were suggested by Weintraub (Weintraub 1978, 153), and could be an important auxiliary instrument for directly controlling wages and profit margins. In Brazil, during the 1960s and 1970s, firms that failed to obey price controls were not only fined, but were also excluded from financing by state-owned banks and forbidden to sell to the state.

8

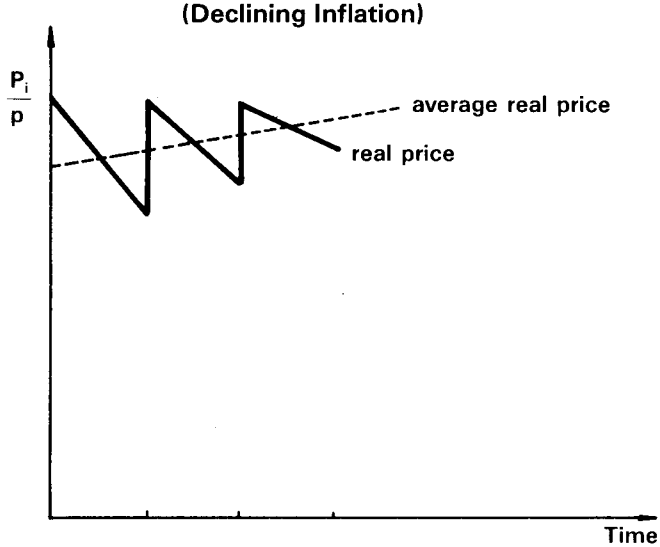
Once the necessary precautions are taken, administrative price controls can be successful in gradually reducing inflation by controlling the factors that accelerate and maintain the inflation level.

The basic maintaining factor of inflation, that which makes it inertial, is the formal or informal indexation of the economy or, in other words, the capacity of the economic agents to pass increases in costs on to prices independently of the existence of demand pressure. The first concern of the administrative policy should, therefore, be directed toward breaking this indexation.

The basic rule in the process of breaking the indexation process is to establish an index to correct prices in keeping not only with past inflation, but also with future inflation, which is bound to decline. The object of this type of indexation is to reestablish the average real price of either merchandise or the work force (wages), thus annulling the perverse effects of the eventual acceleration (or deceleration) of average real price inflation on them.[7]

Let us suppose that the general rate of price increases is going down because of a fall in the price of raw materials and agricultural products, which we shall assume are not indexed. The usual formula for indexing prices and nominal incomes—the application of the past inflation rate—has the effect of increasing average real prices and real incomes since the loss of value in the previous period is greater than in the current period. This idea is valid not only for the prices of goods, but also for wages and all other incomes. It can be understood more easily by looking at Figure 4.2, where we can see the usual formula for correcting prices "by peaks," that is, by the application of past inflation to reestablish the peak real prices. As inflation declines, average real prices and incomes increase, impeding the action of the anti-inflationary policy. In the axis of ordinates of Figure 4.2 are real prices or wages, p_i, (or w), in which p_i is the real price or income that corresponds to a determined indexed sector, and w is the real wage rate. In the abscissa, we have the successive periods of readjustment in which indexation was practiced. The solid line corresponds to the real price or wage, which decreases between two periods of monetary correction. The inclination of the curve is smaller between corrections, because, in the example, inflation is declining. At the end of each period, the price or income is completely corrected because the rate of inflation of the preceding period restores the real price or income of the previous peak. As a result, the dotted line, which connects the midpoints of real prices or

Figure 4.2 Indexation Based on Past Inflation (Declining Inflation)



wages, corresponding to the average real price or wage, goes up. The indexation, therefore, is inconsistent because it increases rather than maintains the average real price or income. Thus, it becomes much more difficult to reduce inflation, since this kind of indexation tends to automatically reproduce the past real inflation in the present.

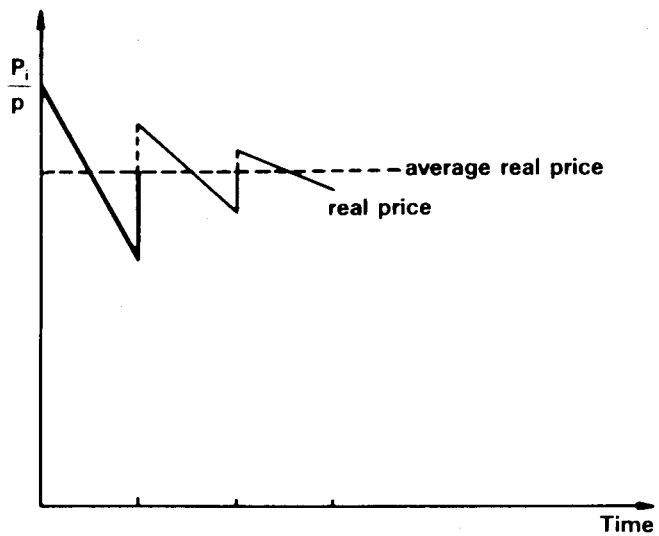
Actually, prices, wages, and nominal incomes are corrected periodically, but with different time lags, each one trying to recover the real peak price or income of the previous period. But, as it is distributively inconsistent to maintain real peak price or income simultaneously, inflation does its job by reducing their purchasing power.

The formula for alternative indexation, which takes into account half of the past inflation in order to reestablish the average real price, and half of the predicted future inflation, in order to guarantee that the average real price is maintained in the following period, is shown in Figure 4.3. The inflation rate undergoes the same decline in this figure as in Figure 4.2. However, as the correction is made in keeping with half of the past inflation and half of the predicted future inflation, the average real price is kept constant.

This formula can be expressed in the following way:

$$P_{t+1} = P_t(1 + 0{,}5\dot{p} + 0{,}5\,\dot{p}_f) \qquad 4.9$$

Figure 4.3 Indexation Based on Past and Future Inflation (Declining Inflation)



in which P is the nominal price for goods or services, p is the past inflation rate and p_f is the future predicted inflation rate.

Naturally, the difficulty with this formula is in predicting future inflation. However, it is possible to introduce corrections *a posteriori*, in order to cancel the effects of erroneous predictions.

This formula should also undergo corrections in keeping with increases in productivity. It would be necessary to increase wages in real terms in keeping with the average increase in productivity. Once this measure is adopted, and assuming that there is neutral technical progress in which the capital output ratio remains constant, the rate of surplus value, that is, the relation between profits and wages, also remains constant, and there will be no inflationary pressure.[8]

In relation to the price of goods and services, it would be necessary to consider the increase in productivity in each sector of the economy and reduce real prices correspondingly. As wages are supposed to increase according to the increase in the average productivity of the economy—rather than proportionally to the reduction of real prices due to the increase of productivity in each sector, as is assumed in pure (fundamental) economics—the reduction of real prices in each sector due to increases in sectorial productivity should be less than if there were no real increases in wages in keeping with increases of the average productivity of the economy.

To sum up, it must be emphasized that a gradual, planned deindexation should be carried out by taking into consideration a declining future inflation and variations in productivity.

9

The planned deindexation and administrative price controls should reach all sectors of the economy, including financial assets. In a formally indexed economy such as Brazil's, wages, the exchange rate, financial assets, and the prices of the state corporations are generally indexed. A planned and partial deindexation, corresponding to indexation in keeping with past inflation and predicted future inflation, should therefore reach all sectors. This is the only way that it is possible to reduce inflation without provoking serious distributive distortions.

As the prices of the corporate sector are not formally indexed, it is necessary to control them administratively. Actually, it is sufficient to control the prices—and therefore the profit margins—of the oligopolistic

corporations and of some essential products. Control of the competitive sectors is, in pratical terms, impossible, given the large number of firms and of goods. Aside from this, it is not necessary because the market is capable of controlling them.

But, in relation to the essential products of the competitive sectors—especially agricultural, mineral, and animal products, it is also necessary to take two types of administrative measures: price controls and the formation of buffer stocks, emphasizing the latter measure.

All of these interventions in the market have a relatively arbitrary nature. Formulas can be applied, as referred to in the previous section, but their accuracy is always very relative. For this reason, trial and error is inevitable in the process of administering prices.

In the previous section, we referred to a method of indexation that takes future inflation into account. This kind of indexation strictly corresponds to a process of partial deindexation, to the extent at which it assumes a declining future inflation. A more direct formula for partial deindexation would be to arbitrarily establish a percent reducer for the past inflation rate (80 percent, for example) and correct prices, wages, the exchange rate, and financial activities in accordance with this formula. If inflation were declining, a reducer of this kind would correspond to the indexation formula based on future inflation. Partial deindexation and indexation based on future inflation are, therefore, very similar processes.

On the other hand, any formula for indexation or partial deindexation of prices is a form of administering prices, of an administrative control in keeping with a predetermined rules. When the inflation is autonomous in relation to demand, there is no other alternative for controlling it than to combine various types of administrative price controls, including partial deindexation and indexation based on predicted declining inflation.

10

Controlling inflation by using the formula being proposed here—a combination of administrative price controls for the oligopolistic sectors and a partial deindexation (via a reducer and/or considering a declining future inflation) with a fiscal and monetary policy that reduces the public deficit and the money supply as inflation falls—could only be successful if the government is capable of assuring a satisfactory allocation of resources and avoiding distortions in income distribution.

Obviously, this is not an easy task. It would not even present immediate results. It would be much easier to reduce inflation through a violent reduction of wages or else by harming the firms in the competitive

sectors. This has happened systematically in Brazil. However, the resulting distortions in relative prices eventually need to be corrected and, when they are, space is opened for a new acceleration of inflation.

The danger of increasing the distortions in relative prices is, therefore, the biggest problem that appears when fighting inflation. Prices cannot be far from the price of production for much time. This is true for both the small competitive firms, including the agricultural ones, as well as for the large state-owned corporations. These are the two kinds of firms that tend to be used the most for combatting inflation, but, sooner or later, they are forced to reconstitute their prices in order to survive and maintain their rate of profit, thus causing new inflationary acceleration. This is because the factors that accelerate inflation—increases in profit margins and real wages—are nothing more than changes and recompositions of relative prices that come from the function of the law of value.

It should be noted that these kinds of distortions can be derived from government incompetence and political pressures put on governments. But even if there is no incompetence, the distortions will necessarily appear if the program for controlling inflation by using administrative methods has the tendency to last indefinitely. Also, new corporations' strategies for outwitting the controls are developed as the controls are prolonged.[9] Thus, it is necessary to think about administrative controls as a temporary strategy or, more precisely, as a strategy of variable rigidity, mixed with partial liberalizations—which allow the market to correct certain distortions—followed by new emphasis in the scheme of control. Otto Eckstein observed, however, that the minimum period for a price- and wage-control program should be three years (1981, 110).

11

The efficiency of administrative price and wage controls has been the subject of various studies whose results have not been absolutely conclusive, but which, in general, tend to confirm the effectiveness of this kind of policy. Otto Eckstein and James A. Girola studied five episodes in which price controls were adopted in the United States (World War I, World War II, the Korean War, wage-price guidelines of the Kennedy-Johnson administration, and the direct controls of the Nixon administration). They concluded that these controls were highly effective in retarding price increases during the two world wars and during the Nixon administration (1978, 323-333).[10]

Studies carried out in Britain and reported by Victor Argy (1981, 354) and A. J. Hagger (1977, 206) concluded that wage and price controls

succeeded in controlling wages but not prices. However, according to Argy, the wage controls only succeeded in retarding wage increases in such a way that "every attempt at a prices and incomes policy [PIP] in the United Kingdom since 1965 ended in a wage explosion" (1981, 395). Hagger, in turn, concluded:

> To sum up this discussion of the findings of the various econometric studies of the effectiveness of prices and incomes policy, we may say that while the United States studies give consistent support to the view that prices and incomes policy is effective, the weight of the United Kingdom Studies appears to be fairly heavily in the other direction. (1977, 208)

These studies are undoubtedly useful because they recount experiences that had both good and bad results. They are not and cannot be conclusive because their results depend on many factors: the competence and political support of those in the government, and the favorable situation of the other economic variables, especially an increase of productivity.

In Brazil, for example, the administrative price controls established since 1967, when the Interministerial Price Council was formed, have had good results. At that time, however, the government counted on high political legitimacy (support from the civilian society), and was favored by an expansionary phase of the business cycle, during which there was a large increase in productivity. The attempt to repeat this performance in 1980 failed because the government no longer could count on the same political power, and the attempt to stimulate economic growth was artificial in that it found no support in an expansive movement of the business cycle. The measures of corrective inflation adopted in the immediately preceding period (the second semester of 1979) also had produced an inflationary acceleration that administrative controls were unable to stop.

The existence of unsuccessful experiences with administrative price controls does not condemn this kind of policy, just as the successful ones do not confirm it. They only serve to point out the errors that should not be repeated and the strategies that have been shown to be most effective. The concrete fact is that, in oligopolized and indexed economies, when there is unemployment together with stagflation, this is the only valid alternative for economic policy. Monetary and fiscal policies with demand management are also important, but they perform a complementary role. When they are put in the forefront, the result is more recession and more distortions in allocation and distribution and, in some cases (as happened in Brazil in 1983), more inflation.

12

Our first proposal for an anti-inflationary policy is to gradually control inflation through administrative price and income controls, including a partial and planned deindexation of the economy combined with measures to reduce the public deficit and money supply as inflation is lowered. Thus, monetary and fiscal policies appear in a subordinated form, as the money supply and the public deficit, when inflation is autonomous or inertial, and are factors that only sanction inflation.

Meanwhile, it is possible to imagine a point at which this kind of gradual policy is no longer effective. This would be when inertial inflation reaches levels that are so high, and its autonomous character is so strong that the gradual mechanisms no longer function. This will happen especially when the measures for partial deindexation and for administrative control are counterbalanced by new supply shocks, that is, by new accelerating factors resulting from disorganization of the economy, distortions in relative prices, and from the need to correct these distortions through corrective inflation. At this point, it will be necessary to think about a second and more radical alternative for fighting inflation.

The analyses of the historical experiences of controlling inflation also indicate that, in certain circumstances, a global and rapid attack is preferable to a gradualist treatment. After looking at various experiences with anti-inflationary policies, Leland B. Yeager concluded that "almost all of the successes that have come to our attention involved stopping or drastically slowing price inflation within a few months." (1981, 38).

In these conditions, a "heroic" policy of administrative price controls and the total deindexation of the economy could be the only adequate alternative. It needs to be clear that this is not the classic "shock treatment" of the orthodox economists; it is not intended for wiping out autonomous inflation by a violent repression of demand and a consequent recession. The inefficiency of this kind of policy has already been shown. For example, in 1981, a shock treatment was applied to the Brazilian economy and the rate of inflation more than doubled.

Assuming that the economy is indexed and is strongly oligopolized, what is intended is that, on a given day, a decision be made to completely deindex the economy—wages, prices, the exchange rate, rents, and interest—and then to freeze all prices from that point on. For example, if inflation is around a level of 300 percent, the most optimistic hypothesis would be that, with these measures, it would be reduced to zero the next day.

Obviously, this hypothesis is not entirely realistic. But, in order to reduce inflation substantially once the "heroic" solution is adopted, it is necessary to imagine the process in several stages.

There would be a first stage, prior to the act of deindexation, and the freeze (D Day) in which it would be necessary to make the last adjustments in relative prices. This would not be difficult for merchandise prices because, when inflation is at very high levels, business firms tend to make adjustments more and more frequently in their prices, so that the lags between the readjustments are reduced. As for wages, it would be ideal if the readjustments were already semestral or even quarterly, and would take place on the same day for all categories of workers. Then, if D Day were on a day exactly in the middle of two readjustments, the workers would receive the equivalent of the average real wage on that day. If this is not possible, it will be necessary to adopt a somewhat complicated formula (for the understanding and agreement of the workers) to convert nominal wages, with different months as the basis for indexation to the average real wage of the previous six or twelve months.

Next, on D Day, inflation would not fall to zero because it would be impossible to control all prices. There would still be some distortions in relative prices to be corrected. Also, control of the competitive sectors through administrative means is almost impossible. The important thing is for the inertial mechanism that maintains inflation to be broken, if not totally, at least in great part. A low rate of inflation will continue to exist through new accelerating factors that will be the result of the necessary adjustments in relative prices.

Finally, as a third stage, the freeze will have to be partially relaxed. At this point, however, the inflation level will probably be very low. It will continue to be reduced through the gradual administrative policy that we described earlier.

We call this policy "heroic" because it is risky. Its objective is to not provoke a recession, and it aims to not produce distortions in allocation or distribution. However, the measures are radical and can lead to the disorganization of the economic system and especially of the financial system which, in inflationary situations of this kind, is both a big beneficiary and a big factor for instability. Because of this, the heroic policy for fighting inflation can only be adopted when inflation has clearly gotten out of the control of conventional economic policy, or when civil society as a whole is convinced that the distortions caused by the high inflation rates are more serious than the eventual risks of the heroic solution.[11]

July 1984

NOTES

1. *See* Chapter 2 in this respect.

2. *See*, for example, A. J. Hagger (1977), who makes an excellent, didactic summary of the theories of inflation and of controlling inflation.

3. It is true that, in normal operating conditions, the oligopolies, when avoiding price competition, tend to maintain their profit margins constant; but, in an inflationary economy subject to shocks and with wider cyclical fluctuations, margins no longer continue to be constant.

4. *See* Chapter 6.

5. For a critical summary of monetarism and of its empirical tests, *see* Meghnad Desai (1981).

6. The radical economist Howard J. Sherman, after observing that Nixon, between 1971 and 1974, used wage and price controls in peacetime for the first time in the history of the United States, noted that these controls caused allocative inefficiencies and were clearly geared toward favoring the corporations, as well as toward favoring the black market (1983, 212).

7. This is basically the formula that was used by Mário Henrique Simonsen to correct wages in Brazil during the 1970s, when he was still an advisor to the planning ministry. The distortions were the result of its poor application and not of its theoretical conception.

8. Cf. Luiz Bresser Pereira (1986).

9. Cf. Charles E. Lockwood (1979, 168).

10. The failure of the policy of "wage-price guidelines" is debatable even for the Kennedy-Johnson administration. As James Tobin notes, between 1961 and 1966, unemployment was reduced from 7 percent to 4 percent, while inflation was maintained at 2 percent. In the following period, from 1966-1969, inflation grew as a result of the financing of the Vietnam War (1981, 22).

11. This chapter, including this last section proposing the "heroic solution," was written in the second semester of 1983 and published in the *Revista de Economia Política* in July 1984. In August of this year, after a great acceleration of Brazilian inflation, Francisco Lopes published a short paper proposing, not as a second alternative but as the only one, the same type of policy and calling it a "heterodox shock." When we wrote this chapter, the inflation level was changing from the 100 to the 200 percent level (*see* Chapter 7). In the second semester of 1984, the 200 percent level was well established, and new accelerating factors began to act. The

inflation rate only reached the 300 percent level in the beginning of 1986, when the Brazilian authorities opted for the shock.

5

Inertial Inflation and the Phillips Curve

The Phillips curve establishes an inverse relation between inflation and unemployment. But when the rate of unemployment and idle capacity go above a certain level, the oligopolistic corporations increase their profit margins in order to compensate for the loss of sales. As a result, the Phillips curve undergoes an "inflexion," causing inflation to accelerate as unemployment increases. Vellutini (1985) correctly observed that this inversion would be the result of successive dislocations of the Phillips curve. In this chapter, we will try to relate more systematically inertial inflation (the automatic reproduction of past inflation) and administered inflation (the acceleration of inflation because of shocks in supply provoked by the monopoly power of corporations, trade unions, and/or state) with the Phillips curve.

Inflation can be accelerated as much by an increase in demand and a consequent reduction in unemployment, which provoke movement along the Phillips curve, as by shocks in supply (or increases in the monopoly power), which momentarily raise prices above this curve. If, by considering the propagating effects of inflation, we add the inertial component—the straight reproduction of past inflation in the present—we will have an upward movement of the Phillips curve. In the first section of this chapter, we examine the case of a supply shock combined with inertial inflation. In this situation, there is one upward movement of the Phillips curve, with inflation then becoming inert at the new level. In the second section, we examine the case of demand pressure leading to a reduction in unemployment. In this situation, the maintenance or inertial factor of inflation would provoke recurring dislocations of the Phillips curve as long as the excess in demand lasts, leading to an inflationary spiral, that is, to a continuous acceleration of inflation. The "inflexion" in the

Phillips curve, which we analyze in the third section, takes place when the inflation rate accelerates because of unemployment increases. Inflation accelerates as the result of successive supply shocks, especially from autonomous increases in the profit margins that successively move the Phillips curve. Finally, in the fourth section, we develop a simple mathematical model that will combine the demand (Phillips curve) and supply shocks—the accelerating factors of inflation—with the inertial component of inflation, that is, the maintaining factor of inflation.

1

Let us begin with a simplified equation for inflation:

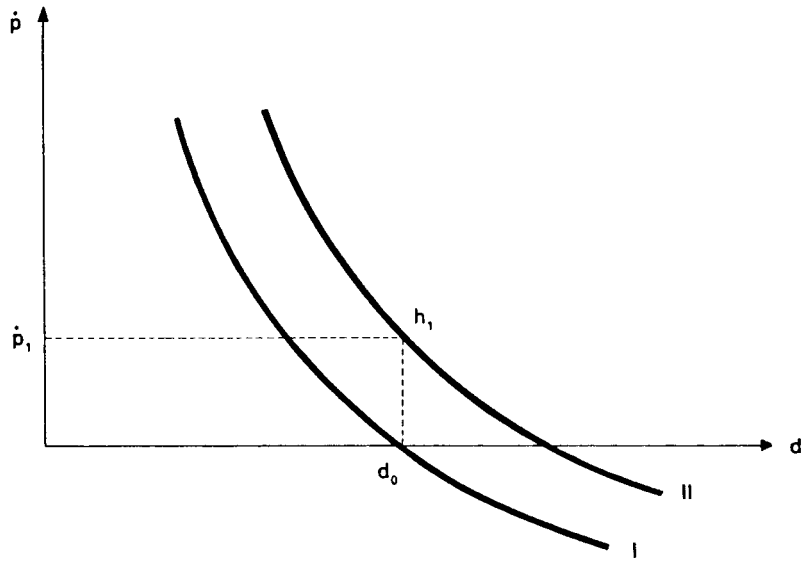
$$\dot{p} = \frac{A}{M} \cdot \dot{p} - 1 + \frac{B}{M} \cdot d^{-1} + \frac{H}{M} \qquad 5.1$$

In this equation A/M is the inertial or indexation coefficient. When A/M is equal to 1, past inflation, $\dot{p}_{-1}$, is reproduced wholly in the present. The second component represents the Phillips curve, with B/M being the coefficient that measures the relation between the inflation rate and the unemployment rate, d^{-1}. Last, H/M represents the impact of all of the possible kinds of supply shocks: increases in profit margins, autonomous increases of real wages above productivity, corrective inflation, imported inflation, and real (above inflation) exchange rate devaluations. Let us first take an economy in equilibrium at point d_0, where $\dot{p} = 0$, and assume that a supply shock raises the rate of price increases above the Phillips curve to the level $\dot{p}_1$ (Figure 5.1). Inflation would only be maintained at this new level if, given the existance of full indexation (A/M = 1), inflation were inertial, and if the Phillips curve moves upward to point h_1. If there are no new shocks, there will be no new upward movements of the Phillips curve. The constant unemployment rate would have no effect on wages and, thus, on prices. This case, illustrated by Figure 5.1, shows that a supply shock in a model with full indexation leads to a permanent increase in the trend rate of inflation.

2

Now let us consider a second case in which a demand shock provokes a reduction in unemployment from d_0 to d_1 as illustrated in Figure 5.2. The inflation rate then moves along the Phillips curve to the point that

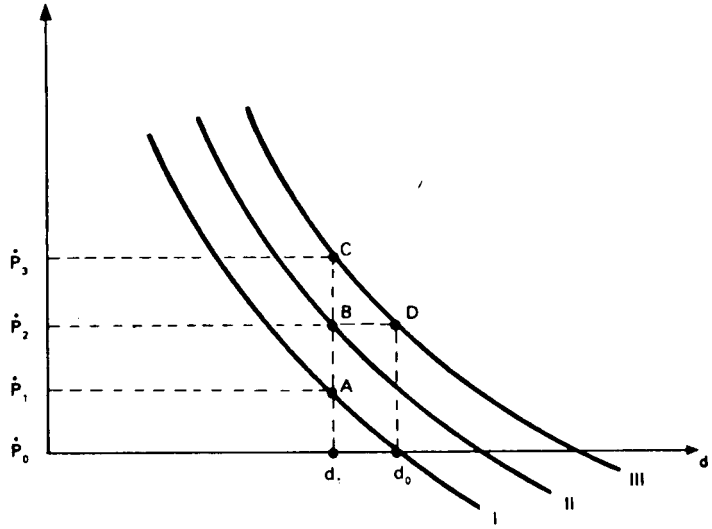
Figure 5.1 Effect of a Supply Shock with Full Indexation



corresponds to $\dot{p}_1$. If, at that point, all economic agents are fully indexing their prices, the Phillips curve would move upward by the same value as the distance of $\dot{p}_0 - \dot{p}_1$, reaching inflation rate $\dot{p}_2$. Meanwhile, as pressures from demand continue and because the upward movement of the curve has already incorporated the accelerating effects provoked by the initial demand shock, inflation will accelerate again, corresponding to the distance $\dot{p}_0 - \dot{p}_1$, and, therefore, a new upward movement in the curve will take place. Thus the combination of excess demand with inertial inflation will provoke an inflationary spiral, causing the inflation rate to move to points A, B, C, and so on successively. This acceleration will stop only when the level of unemployment returns to d_0.

The elimination of excess demand would provoke a single reduction in the inflation rate through the movement of this rate along the Phillips curve to the $\dot{p}_2$ on the vertical axis, corresponding to d_0 on the horizontal axis. In Figure 5.2, beginning with inflation rate $\dot{p}_3$, corresponding to point C, inflation would fall to $\dot{p}_2$, corresponding to point D. At this point, inflation would remain inertial. If we want to bring the rate of inflation down to $\dot{p}_0$ by increasing unemployment, this increase would have to be very big, given the inertial character of inflation. In Figure 5.2, it is not enough to return to d_0. It would be necessary to reach very high levels of unemployment, which would be incompatible with a minimum of social

Figure 5.2 Effect of a Demand Shock with Full Indexation



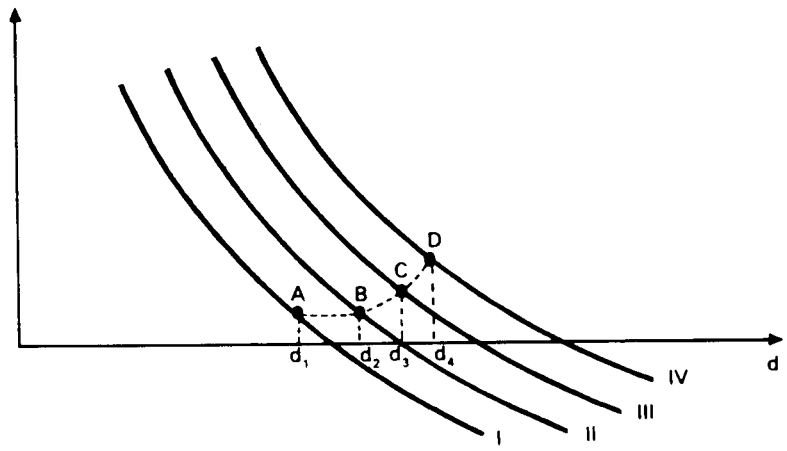
stability.

3

In this model of inflation, if there is an acceleration provoked by successive increases in the profit margins of the oligopolistic sectors aimed at neutralizing the increase in unemployment, we would have an apparent inflexion of the Phillips curve; this would result in successive upward movements of this curve. Increasing profit margins is a defense mechanism that the corporations use to protect their profit rates from recession or from a reduction in sales and the consequent increase in fixed unit costs.

In Figure 5.3, beyond the unemployment level d_1, the oligopolistic corporations would successively increase their profit margins in such a way that the Phillips curve would undergo successive dislocations. As the rate of unemployment increases from d_1 to d_2, d_3, and d_4, the Phillips curve would move upward and to the right from curve I to curves II, III, and IV. Instead of undergoing a reduction along the original curve I, the inflation rate would follow points A, B, C, and D, as if the Phillips curve were undergoing an inflexion, as represented by the dotted line. In this case, one can perceive that the inflation rate would undergo an acceleration with the increase in unemployment (idle capacity). It should become clear

Figure 5.3 Effect of Profit Margin Increases



that orthodox policies for controlling inflation through recession can have adverse effects, generating stagflation.

4

This analysis could be expressed by a more disaggregated but simplified mathematical model than that represented by Equation 5.1. We will explain how the values of A, B, H, and M are determined. For this, we will make use of an equation, derived from the markup theory of prices, which represents the rate of the variation in prices, $\dot{p}$, as determined by the variation in direct costs (wages and raw materials) and the rate of the variation of the profit margin itself, $\dot{m}$.

$$\dot{p} = \dot{m} + \alpha (\dot{w} - \dot{q}) + (1 - \alpha) (\dot{v} + \dot{e} + \dot{x}) \qquad 5.2$$

In this equation, $\dot{w}$ is the wage rate, $\dot{q}$ the rate of productivity, $\dot{v}$ the price of raw material in foreign currency, $\dot{e}$ the exchange rate, and $\dot{x}$ the amount of raw material per unit produced and is the wage cost share in the total cost. The points above the letters indicate the rate of variation.

In order to make the model more complete, we can add the effect of the interest rate and of indirect taxes to the above equation. The effect of the interest rate can be represented in a simplified form if we assume that the corporations depend on loans to finance their working capital (wages and raw materials), and pass their financial costs on to prices. Given these two assumptions, the effect of the variation in the interest rate can be represented by ($\beta\dot{r}$) where $\dot{r}$ is the variation in the nominal interest rate and β is a factor of proportionality indicating the importance of loans in relation to total working capital. In the case of the indirect taxes (t), the effect of their variation is direct and is passed on entirely to prices. Thus, Equation 5.2 takes on the following form:

$$\dot{p} = \dot{m} + \alpha (\dot{w} - \dot{q}) + (1 - \alpha) (\dot{v} + \dot{e} + \dot{x}) + \beta\dot{r} + \dot{t} \qquad 5.2'$$

The mechanism of direct or indirect indexation affects this equation in three ways. First of all, if the profit margins are administered by the oligopolistic corporations, any increase in costs resulting from this administration of prices is passed on to final prices. In this way, prices are indexed to direct costs. In normal conditions of operation, the corporations keep their margins constant, but, in cases of an accentuated fall in demand, profit margins can be raised in order to protect the profitability of the corporations or to make up for the lack of demand.

The second way in which indexation affects Equation 5.2 refers to the fact that readjustments of nominal wages are automatically tied to past inflation. When there is chronic inflation, trade unions fight to reestablish the peak of real wages, which means correcting nominal wages according to 100 percent of past inflation, and to eventually obtain real wage increases. This phenomenon was represented in a very simplified form in the previous chapters by the incorporation of a component of wage indexation, $c\dot{p}_{-1}$, and another of the autonomous real wage increase, $\dot{w}_a$, to the Phillips curve. Thus, the Phillips a curve took on the following form:

$$\dot{w} = a + b\, d^{-1} + c\dot{p}_{-1} + \dot{w}_a \qquad 5.3$$

In this, c is the coefficient of the indexation of wages, d the unemployment rate, and a and b the parameters of the Phillips curve.

The third way in which indexation affects our equation of the inflation rate is the mechanism of the indexation of the exchange rate. Showing the recent Brazilian experience, in which the exchange rate underwent instantaneous readjustments in relation to prices, we can express the variations in the exchange rate by:

$$\dot{e} = g\dot{p} + Max \qquad 5.4$$

In this, g represents the degree of indexation of the exchange rate in relation to current inflation and can vary according to the policy of exchange rate devaluation. "Max" represents an unexpected and real variation in the exchange rate due to a maxidevaluation.

Thus, substituting Equations 5.3 and 5.4 in Equation 5.2, and assuming that $a = \dot{q}$, we have:

$$\dot{p} = \frac{\alpha\, c}{1-(1-\alpha)\, g}\,\dot{p}^{-1} + \frac{\alpha\, b}{1-(1-\alpha)\, g}\,d^{-1} + \frac{\dot{m}+(1-\alpha)(\dot{v}+\dot{x})+(1-\alpha)\,Max+\beta\dot{r}+\dot{t}+\alpha\dot{w}^{a}}{1-(1-\alpha)\, g} \qquad 5.5$$

This equation shows explicitly the variables involved in equation 5.1, where the inflation rate is explained by three components:
I. The inertial component, represented by:

$$\frac{A}{M} = \frac{\alpha\, c}{1-(1-\alpha)\, g} \qquad 5.6$$

II. The demand component (Phillips curve), represented by:

$$\frac{B}{M} = \frac{\alpha\, b}{1-(1-\alpha)\, g} \qquad 5.7$$

III. The supply shocks component, represented by:

$$\frac{H}{M} = \frac{\dot{m}+(1-\alpha)(\dot{v}+\dot{x})+(1-\alpha)\,Max+\dot{r}+\dot{t}+\alpha\,\dot{w}^{a}}{1-(1-\alpha)\, g} \qquad 5.8$$

The inflationary multiplier (see Chapter 2, Section 3) is given by:

$$\frac{1}{M} = \frac{1}{1-(1-\alpha)\, g} \qquad 5.9$$

The inertial component defined by Equation 5.6 clearly shows that the inflation rate depends on the degree of indexation of wages, c, and of the exchange rate, g. When full indexation exists c = 1, and g = 1, and A/M = 1. In this case, keeping the other components neutral, the present inflation

rate, $\dot{p}$, is determined by the inflation rate of the previous period, $\dot{p}_{-1}$, and is stable. Obviously a reduction of the coefficients of indexation ($c<1$ and $g<1$) can contribute to a gradual reduction in the inflation rate.

The second component of Equation 5.5 represents the demand component of inflation and is effective when unemployment is reduced and approaches the level of full employment (full utilization of the productive capacity). According to the Keynesian models, based on the Phillips curve, the inflationary effects of this component are felt first in wage cost and then in the demand for goods. It assumes that the effects of an increase in wages because of a reduction in unemployment cause an increase in prices rather than the direct pressure of aggregate demand on prices in the market for goods and services.

The various supply shocks, such as an increase in profit margins, an increase in the price of raw materials, a maxidevaluation of the exchange rate, an increase in interest rates, and an increase in indirect taxes, are represented by the third component of Equation 5.5. Any upward change in these variables has inflationary effects, and its final impact on the inflation rate is defined by two factors: (1) the incidence of the shock in total direct costs, and (2) the inflationary multiplier. This last factor, represented by Equation 5.9 and determined by the mechanism of indexation, is inherent to inertial and structural inflation. It amplifies the primary impulse caused by the shocks of costs by its propagation to the other prices. In other words, the inflationary multiplier expresses the fact that a supply shock (which, in the absence of indexation, has localized effects) has the effect of universalizing an increase in prices by the continuous passing on of costs to prices, thus tending to maintain relative prices untouched. Through this mechanism, inflation accelerates or changes to a higher inertial level.

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