Economic cycles and crises

Luiz Carlos Bresser-Pereira

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Chapter 12
Long waves and economic cycles

The most general conclusion that I can reach based on the analysis that I have carried out so far is that the present crisis of capitalism, set off at the beginning of the 1960's, cannot be attributed to the falling tendency of the rate of profit. The extensive analysis of this law at the beginning of this book and the analysis of the phases of capitalist development in Part Three make it clear that there was no rise in the organic composition of capital that would lead to an international economic crisis. Thus, it becomes necessary to examine the process of capital accumulation from a point of view that I have deliberately avoided up to now. I am referring to the analysis of economic cycles.

The whole previous analysis, especially that of Part One, was based on a long-term examination of capitalist development. It was not possible from this perspective to find any law that would lead the capitalist system in to collapse. Capitalism is always changing and will eventually disappear, but nothing indicates that this will happen through a process of sudden crisis and collapse. I will not summarize the entire Marxist analysis of the final downfall of capitalism here (see Colletti, 1978). One of the most serious defects of orthodox Marxism is that it always needs a theory of capitalism's downfall, the most common being that which I have discussed extensively: the law of the falling tendency of the rate of profit.

Now I will look at the capitalist dynamic from the angle of economic cycles, where Marx's contribution is again fundamental and where the Marxists again continue to search for a theory of the final downfall of capitalism. Within the capitalist dynamic, I can distinguish the following time periods:

1) secular phases or long-term models of development;

2) long waves or long Kondratieff cycles; and

3) Juglar cycles or simply cycles.

The secular or long-term phases were the object of Part Two of this book. The secular phases or models of accumulation and of development must have not only certain common characteristics in relation to the fundamental economic variables (profit rate, accumulation rate, kind of technical progress, wage rate), but also common structural characteristics in respect to the nature of the dominant relations of production. While we analyse the capitalist social formations, the relations of production will predominantly be this way, but this does not mean that they will remain unchanged. The relations of production in the transition period of the capitalist revolution are one thing, in competitive capitalism another, in oligopolistic capitalism another, and finally in technobureaucratic capitalism another. Throughout these four phases, the relations of production remain basically capitalist, but they undergo significant changes, as the social formations are embryos of different modes of production.

On the strictly economic level, the basic instrument for understanding the phases of development is the law of the falling tendency of the rate of profit. Although it has not provoked the present crisis, its constant pressure on the development of the productive forces and directly on the relations of production provokes the appearance of counter-tendencies, transforming it into a factor that determines the historical process.

1

What is most important in the long cycles is the structural characteristics established in the process of accumulation. The long cycles generally correspond to a specific standard of accumulation. They are mainly defined according to sets of innovation and accumulation, in which technical progress is an important, but not the only, component. Beginning with the large waves of innovation, new industrial sectors are established or show exceptional development through the introduction of new products (technical progress of products). New methods of production that are more efficient are also introduced, involving an increase of the productivity of labour and/or of capital (technical progress of process), with new sources of raw materials put into action. New markets are open, new techniques of commercialization and of differentiation of products are implanted and new forms of market structure are defined, generally tending towards the oligopolization and cartelization of certain productive sectors and/or towards state intervention in these sectors.

The long cycles last about fifty to sixty years. Under some circumstances they could be confused with the secular phases. However, they can be distinguished from them because the criteria for determining each are different. The Kondratieff cycles, like the economic cycles, are economic fluctuations, while the phases of development are secular tendencies. The changes in the tendencies are marked more by permanent changes in the behaviour of the profit rate, of the rate of surplus value, of the organic composition of capital, of the kind of technical progress and by corresponding partial alterations in the relations of productions than by the rhythm of industrial fluctuations. The economic or Juglar cycle usually lasts from eight to ten years.

A long cycle, in turn, generally encompasses five or six Juglar cycles. A deeper crisis within a cycle will frequently be a signal of, as well as the result of, the closing of a long cycle and of its corresponding standard of accumulation. The long cycles are called Kondratieff cycles because, although previous authors had already noted the phenomenon, Nikolai Kondratieff detected in a classic article published in 1926. In this article, he verified the occurrence of three long waves, beginning with the end of the eighteenth century. When he wrote his article, the world economy was in phase b, a decline, of the third long wave, that lasted until 1940-45. The first long wave was from approximately 1790 to 1844-45, and the second from 1844-45 to 1890-96 (Kondratieff, 1951: 32). To prove his thesis, Kondratieff used an extensive statistic series of price and interest rate that showed that for 25 or 30 years an economy grows rapidly, those being the expansion phases of the longer normal cycles, with the deceleration being shorter. The inverse occurs in the following 25 or 30 years, during which the economy grows more slowly, causing a relative decline.

Various contemporary authors have discerned a fourth long cycle of industrial capitalism. In an article written in 1972 when Brazil was near the peak of a process of expansion, Ignacio Rangel predicted a world crisis based on Kondratieff's dynamic (1972). In a later book, Ernest Mandel also empirically verified the existence of long waves, showed how the theory of long cycles is perfectly consistent with Marxist economic theory, whose pioneers were Parvus, Kautsky, Gelderen and Trotsky, and recognized that at the end of the 1960's the world entered a declining phase of the fourth long wave (Mandel, 1980b).[1] In fact, it is not difficult to conclude that the third Kondratieff cycle ended around 1940. It was followed by 30 years of expansion, which then ended with the present crisis that could already be perceived at the end of the 1960's, but which became completely clear with the first oil shock in 1973.

Although there are still many economists who continue to look at the long cycles sceptically,[2] there is strong evidence for their historical validity. Economic cycles in general do not make much sense for neoclassical economists. They also did not make sense for a long time for the neo-Marxist and neo-Keynesian economists who graduated after World War II. Their confidence in planning and in economic policy, and in an economy that is going through a long phase of expansion of a Kondratieff long wave, led them to, bureaucratically, forget or diminish the importance of the cycles, especially of the long cycles.

The empirical research carried out by Kondratieff, however, was reasonably conclusive. Aside from this, he was able to establish a series of generalizations, such as the relation between long cycles and technical innovations.

> "During the recession of the long waves, an especially large number of important discoveries and inventions in the technique of production and communication are made, which, however, are usually applied on a large scale only at the beginning of the next long upswing". (1951: 34)

Nevertheless, although Kondratieff had already noticed that there was an intimate relation between the long cycles and technological development, he did not actually develop a theory to explain the long cycles. This was finally done by Schumpeter, who, faced with Kondratieff's work, used his theory of innovation that he had previously formulated in his classic work *The Theory of Economic Development* (1911) to develop a theory on the long cycles based on the idea of the waves of innovations. His first book was, on the one hand, a fundamental ideological instrument for capitalism, as he managed to portray the entrepreneur as the innovating hero of economic development. On the other hand, however, it was also a landmark in economic theory. Using at the same time neoclassical concepts and a view of the historical capitalist dynamic that owes much to Marx, Schumpeter developed a theory of innovations, of the monopolist advantages coming from this and finally of capitalist profit, that is essential for understanding capitalist development, especially in its oligopolistic phase.

However, Schumpeter later intended to use this theory to explain all the kinds of economic cycles. This analysis is found clearly formulated in his 1927 article "The Explanation of Economic Cycles," and is fully defined in his monumental work of 1939, *Business Cycles*. In this book, Schumpeter identifies three kinds of cycles: the Kondratieff cycles, lasting from 50 to 60 years; the Juglar cycles, lasting a little more than nine years, and the Kitchin cycles, lasting about 40 months. He claims that his theory of innovation explains these three kinds of cycles, that overlap. I understand that his theory clarifies the Kondratieff cycles and the corresponding standards of accumulation. We could eventually identify a standard of accumulation with a shorter period than a Kondratieff cycle, and still be able to explain it by the theory of innovations.

That is what happened in Brazil, where between 1930 and 1973 the accelerated importation of technology and import substitution made it possible for more than one standard of accumulation to occur within the same long cycle, which was thus relatively disfigured. However, it does not seem that the theory of innovations is adequate to explain the decade cycles, as during their duration there is not enough time for the innovations to mature and be exhausted. After all, the expansion phase of a normal cycle lasts at most five or six years. In fact, for Schumpeter it is clearly much easier to identify the Kondratieff cycles with the waves of innovation, as can be seen in the following passage:

> "Historically, the first Kondratieff covered by our material means the industrial revolution, including the protracted process of its absorption. We date it from the eighties of the eighteenth century to 1842. The second stretches over what has been called the age of the steam and steel. It runs its course between 1842 and 1897. And the third, the Kondratieff of electricity, chemistry, and motors, we date from 1898 on". (1939: 170)

We see here how Schumpeter clearly links each standard of accumulation to a long wave of innovation. When he examines the Juglar cycles, he is much less successful in this. Although the theory of innovations aids us in understanding the Juglar cycles, as they coincide and are included within the long cycles, it does not actually explain them. In fact, the decade cycles begin with an acceleration of the process of accumulation. During the phase of prosperity, each cycle is characterized by a wave of investments. Therefore, several small waves of investment interlaced with periods of crisis can take place within the same long wave of innovations. While the nature of the innovations does not change substantially, the structural characteristics of the process of accumulation remains unaltered, and the same sector or set of innovating industrial sectors continues to lead development, even though in an unstable way, the different normal cycles continue to be part of the same long wave. On the other hand, the exhaustion of a long cycle coincides with a crisis phase of a normal economic cycle. But in the endogenous dynamic of the normal economic cycles, the theory of innovations is only subsidiary.

Schumpeter, discussing Juglar cycles to whom "the only cause of a depression is prosperity," concluded that "we will have explained the cycle when we have explained the peaks," and added, "the peaks consist of the introduction of innovations in the industrial and commercial organism" (1939: 32). This statement is only true at a very high level of abstraction. It is a kind of reasoning like "all that is born must die someday." To have a theory of cycles, instead of trying to discover the causes of the economic peaks, we need to know exactly why, at certain moments, prosperity ends and crisis begins. The theory of the exhaustion of innovations is very limited for explaining this in the normal cycle, as it is not reasonable to imagine that in five or six years a wave of innovations would mature and be exhausted. This could and should take place over a period of 25 to 30 years, which is the length of a Kondratieff expansion cycle. Schumpeter then adds a second variable: the entrepreneurs' need to pay their debts contracted at the beginning of a cycle. But there is little evidence that an increase in the debts of the corporations constitutes a decisive limit for the continuity of a process of expansion. While the profit rate is above the interest rate, the entrepreneurs have no difficulties to pay or even renew their debts.

As with the theory of innovations, the theory of the tendency of the profit rate to decline is inadequate for explaining the decade economic cycles, because five or six years is not enough time to exhaust a wave of innovations or to raise the organic composition of capital. In a longer period of 25 or 30 years, however, both phenomena would tend to occur. We have already extensively seen that one cannot secularly confirm that there is a tendency towards the rise of the organic composition of capital. It is perfectly possible to imagine that this rise takes place in the expansion period of a long wave. It would be necessary to find an empirical base for this statement.

However, there is no doubt that capitalist development tends to take place through a process of over-accumulation in constant capital. This even happens because, in the process of expansion itself, investments in fixed capital become obsolete from the technological point of view, which leads the corporations to make new investments before the previous ones have been amortized. It is therefore reasonable to suppose that at the end of a long wave of investments the organic composition of capital has tended to grow, pressuring the profit rate to decline. The problem will only be resolved with a crisis and a resulting capital destroying process, that will allow for the introduction of capital-saving technology. It is even reasonable to suppose that when Marx used the theory of the falling tendency of the rate of profit to explain the cycles, he was especially thinking about the long cycles, even though he did not distinguish them clearly from the normal or decade economic cycles.

2

The basic contribution for analysing Jugular's economic cycle was made by Marx. Its essence is in the emphasis given to the problem of the overproduction of capital. However, we will see that he did not completely develop his thinking in this area.

The classical and neoclassical economists, beginning from Say's law and their ideological prejudices in respect to the automatic control of the market, were unable to explain the cycles. Although Marx examined the cycles from various angles, he never gave the problem systematic treatment. In one chapter of *Capital* in which he examined the internal contradictions of the law of the falling tendency of the rate of profit (Book III, Chapter XV), Marx lingered a little more on this problem. In this chapter, there are two theories that are complementary, but that are generally considered to be antagonistic to explaining the crises: the falling tendency of the rate of profit, and an insufficiency of demand or an overproduction of capital and commodity exchange.

For Marx, as for most economists, the cyclical downturn, or the beginning of a crisis, is related to the fall in the rate of accumulation. This, in turn, is directly related to the profit rate: "The rate of profit is the motive power of capitalist production. Things are produced only so long as they can be produced with a profit" (Marx, 1869: 259). It is also important to know why the profit rate falls in the short run, that is, during an expansion of about five years provoking a cyclical downturn. We can find three concomitant (although generally considered alternative) theories in Marx on the cycle:

1) the theory of the falling tendency of the rate of profit or of the tendency of the organic composition of capital to rise;

2) the underconsumption theory, one aspect of which is the theory of disproportion; and

3) the theory of profit squeeze due to the exhaustion of the industrial reserve army at the peak of the cycle.

I have already discussed the theory of the falling tendency of the rate of profit. More than a theory of cycles, it is a secular tendency of the capitalist system, a tendency that in the end is not carried out in practice, but which, due to the action of counter-tendencies, serves as the engine of capitalist development.

The underconsumption theory, understood here as merely a short-term cyclical theory and not as a long-term theory of the downfall of the capitalist system, is related to the Keynesian ideas of the insufficiency of demand. Although the capitalist produces for the goal of profit and accumulation and not of consumption, in the end aggregate demand depends on the effective ability of the workers to consume. In almost all periods of expansion of the cycle, this capacity tends to decrease because, although the wages of the workers are growing, they grow at a lower proportion than the capitalists' profits. Thus, the corporations accelerate their investments, causing a greater increase in the capacity to produce consumer goods than the increase in the capacity to consume. In this way, there is a point at which the sales of the corporations are unable to accompany the increase in production. The expectations for profits and then corporate profits themselves decline, and these thus reduce their investments, provoking a cyclical downturn.

The theory of disproportion is strictly a sub classification of the underconsumption theory. This theory is frequently attributed to Tugan-Baranovski. Strictly speaking, there is no disproportion in Tugan. His concern was to show that it was theoretically possible for there to be an unlimited, broadened reproduction of capital, but that in practice this is impossible because the market mechanisms don't guarantee that the three departments of the economy grow in a proportional or balanced way (Tugan-Baranovski, 1978a). Tugan is correct in this general statement, but then he does not go on to develop a theory to explain how the disproportion would tend to occur, limiting himself to radically denying the theories of underconsumption, that at his time were very much in vogue among the Marxist economists.

Ironically, however, the theory of disproportion only acquires consistency for explaining the cyclical movement in the context of the underconsumption theory. All we need for this is to imagine an economy divided into two sectors: Department I, producing capital goods; and Department II, producing consumer goods. In the expansion phase, Department I, which was almost paralyzed during the declining phase, tends to grow more rapidly than Department II. The more moderate growth of this department is related to the more stable nature of the demand for consumer goods. It is also caused by wages growing more slowly than profits in the first phase of expansion, and thus, of an insufficient growth of the demand for consumer goods by the workers. After the repressed demand for the goods of Department I is taken care of, its continuance of growth at a faster pace than that of Department II will provoke overproduction and then the halt of investment in Department I, setting off a cyclical downturn.

It is clear that both in the simple underconsumption theory as well as in the theory of disproportion it is always possible to think, as the orthodox Marxists and Tugan wanted to, that the relative fall in the demand for wage goods can be compensated for, thus avoiding the cyclical downturn, by the increase in demand for luxury consumer goods or else by greater production of capital-capital goods, that is, of capital goods that produce other capital goods, instead of the production of capital-consumer goods, of capital goods destined for the production of consumer goods. But it is obvious that although both phenomena are possible as long as there is a strong process of increase of the rate of surplus value, they have very clear limits for expansion. Not only are there political and economic limits for a concentration of income that would allow for basing accumulation on the production of luxury consumer goods, but it is also impossible to plan a capitalist economy in the short period of a cyclical expansion so that it would primarily produce capital-capital goods or luxury consumer goods indefinitely. As was observed by Roger Alcaly, who with Thomas Weisskopf and Howard Shermann are among the North American Marxist economist who, after Paul Sweezy, have better studied the economic cycle:

> "If capitalists invest all the unconsumed surplus at the best available rate of return, then underconsumption is not possible because investment will compensate for reduced consumption spending. But while this view is a reasonable approximation of long-run behaviour at a very high level of abstraction, it seems less appropriate for more concrete discussion of short-run behaviour. In such instances, investment may well depend on the expected rate of profit, rather than on the absolute amount of profits available for accumulation. This would make underconsumption a real possibility". (1978: 19).

The third Marxist theory of cycles is the theory of the exhaustion of the industrial reserve army at the peak of the cycle and of the consequent rise of real wages above the increase in labour productivity, squeezing the profit rate. This theory was already clearly found in Marx, but it became important recently thanks to the work of Boddy and Crotty (1975).

These authors showed that in the last cycles of the North American economy, when expansion was coming close to its peak real wages tended to grow faster than productivity. The latter even underwent a relative reduction due to the greater resistance of the workers to the discipline of work in the corporations when the economy was reaching full employment. Thus, the profit rate went down and produced a cyclical downturn.

Just as with the theory of the exhaustion of the industrial reserve army, the underconsumption theory recently received empirical proof. By studying the cycles of the post-war North American economy, Howard Shermann and Robert Hahnel not only pointed that the profit squeeze at the peak of the cycle due to the reduction of labour productivity is due to the slow increase in the utilized capacity in the second phase of expansion (in comparison to the rapid increase in the index of utilization of capacity in the first phase of expansion), but they also verified the increase of wages at a lower rate than that of profits in the first phase of expansion, reducing the propensity to consume.

The conclusion of these two authors, after presenting their empirical evidence, is very clear in this respect:

> "In the early expansion, the profit rate rises rapidly, partly because (1) the profit share is rising (since hourly wages change little, while productivity rapidly increases); but mainly because (2) the utilization of capacity is rapidly rising (due to rising demand for output). These factors ensure a rapid rise in the profit rate, which causes a rapid rise in investment.

In late expansion, the profit rate falls mainly because (1) the profit share is falling -- mostly due to falling or stagnant labour productivity; but also, in part, because (2) the utilization of capacity is changing very little and eventually even falling -- due to the previous fall in the propensity to consume, caused by the previous fall in the wage share". (1982: 193).

However, in Shermann's work, as in that of Weisskopf (1978) which Shermann used as a theoretical base, the possibility of using all three theories concomitantly instead of alternately is clear, especially the last two on underconsumption and the constriction of profits. If Z is the potential productive capacity, the profit rate, R/K can be broken down in the following way:

$$\frac{R}{K} = \frac{R}{Y}\frac{Y}{Z}\frac{Z}{K}$$

Comentado [MCB1]: essas fórmulas que estão como figura precisam ser transformadas in texto?

We can see by this equation that the profit rate depends on R/Y, that is, on the participation of profits (and of salaries) in income. It therefore depends on the relations established in the theory of profit squeeze by the exhaustion of the industrial reserve army. Secondly, the profit rate depends on Y/Z, that is, on the ratio between effective demand and potential production. Here we are in the field of underconsumption theory. Lastly, the profit rate depends on the long-term productivity of capital, Z/K, that is, on the output-capital ratio, that is directly related to the organic composition of capital, and therefore, to the theory of the falling tendency of the rate of profit due to the rise of the organic composition of capital or to the reduction of the output-capital ratio.

We therefore see that the profit rate, whose movement is essential for the cyclical downturn, can be related to the three theories. In a classic work written in the 1930's, Maurice Dobb had already made this possibility clear. For him, the rise of the organic composition of capital could take place in the short term of a cycle, simply because a disproportion between Department I and Department II could be verified during expansion. In this process, consumption would decline in relation to accumulation, and at the same time the organic composition of capital would increase. This whole process would result in the decline of the profit rate and a crisis, made even more serious by the elevation of wages at the peak of the cycle. With this analysis, Dobb transformed the theory of disproportion into a short-term cause of the theory of the rise of the organic composition of capital. As we have already seen that disproportion -- the excessive growth of Department I in relation to Department II -- is due to underconsumption, that is, to the growth of wages at a slower pace than that of profits during the first phase of expansion, the theory of cycles then is subordinated, in the final analysis, to the underconsumption theory.

It was very clear for Dobb that insufficient consumption could be the cause of a crisis. However, he opposes vulgar underconsumption in that he does not accept Rosa Luxemburg's thesis that investment necessarily provokes overproduction if an external demand for consumption does not appear, and in that he rejects the simplistic idea that crises are always set off by insufficient consumption. However, in the cyclical movement he considered it essential to analyse the disproportion between the sectors, underconsumption, the exhaustion of the industrial reserve army and the rise of the organic composition of capital together (1937: 103, 114, and 118).

There is no reason, therefore, to think that the Marxist theories on the cycle are exclusive or alternatives. They are present in Marx's work exactly because they can be considered dialectically. We can consider them concomitantly, as long as we understand their relationship and establish a logic for their interconnection.

3

Before I try to establish this link, I should go back for a moment to Marx and to the debate with the fundamentalists that was sparked exclusively by the falling tendency of the rate of profit, although this theory is the least applicable to the analysis of the Juglar or normal cycles. Marx did not make a clear distinction between the long and short run. He dealt with crises when he was examining the falling tendency of the rate of profit as a secular tendency. Some analysts, such as Mattick (1974) and Cogoy, conclude from that that Marx's theory of cycles is based on the falling tendency of the rate of profit Cogoy (1974). If the profit rate falls below a certain level, given the growth of the organic composition of capital, accumulation would be halted and a crisis set off. This theory is not incorrect, both as an interpretation of Marx, and especially as an analysis of capitalist reality itself. In fact, Marx suggested this explanation for the setting off a cyclical crisis. However, as one accepts that this tendency exists, even though it takes place in the long run and is a secular tendency, it is obvious that it would cross the middle and short run. There is no fundamental distinction among the different time periods in which the economic laws of capitalist production can and should be examined. It is therefore obvious that a rise of the organic composition of capital could also influence the setting off from a crisis.

If we carefully examine that chapter in which Marx deals with the internal contradiction of the law, and interestingly, the crises at the same time, we will see that he did not concentrate on that law for explaining the crises. This law would help us to explain the most general contradiction of the capitalist mode of production. In his words:

> "The real barrier of capitalist production is capital itself. It is that capital and its self-expansion appear as the starting and the closing point, the motive and the purpose of production…... The means -- unconditional development of the productive forces of society -- comes continually into conflict with the limited purpose, the self-expansion of the existing capital". (1869: 250)

In other words, Marx believed in the possibility of unconditional development if it weren't for the falling tendency of the rate of profit. But Marx brought up a second great contradiction of capitalist production that is not directly related to the rise of the organic composition of capital but rather to underconsumption: surplus value is created when commodity is produced, but to realize it, it is necessary to sell the merchandise, that is, to have a demand for it. Demand has its own laws, that in the end are related to the buying power of society. Still in Marx's words:

> "The conditions of direct exploitation, and those of realizing it, are not identical. They diverge not only in place and time, but also logically. The first are only limited by the productive power

> of society, the latter by the proportional relation of the various branches of production and the consumer power of society. But this last-named is not determined either by the absolute productive power, or by the absolute consumer power, but by the consumer power based on antagonistic conditions of distribution, which reduce the consumption of the bulk of society to a minimum varying within more or less narrow limits". (1869: 244)

However, Marx made it clear that there is a second basic limit for capitalist expansion: the effective capacity of consumption of the workers. Aside from this, he disqualifies any attempt to explain realization and distribution based exclusively on the sphere of production. Say attempted to explain realization (and consumption, that is, part of the sphere of realization or of effective demand) based exclusively on production with his law of markets. Ricardo attempted to explain realization and distribution based exclusively on production. Both classical theses are inconsistent with Marx's thinking, for which the sphere of production is fundamental because value rules there, but the spheres of realization and distribution are also decisive and have their own laws. For Marx, the problem of crises is basically a problem of the overproduction of capital, and therefore, of overproduction or of temporary underconsumption. The crises occur as a means of restoring balance or else of re-establishing the profit rate, through the destruction of capital that has become excessive.

> “Over-production of capital is never anything more than over-production of means of production- of means of labour and necessities of life- which may serve as capital, i.e., may serve to exploit labour at a given degree of exploitation; a fall in the intensity of exploitation below a certain point, however, calls forth disturbances, and stoppages in the capitalist production process, crises, and destruction of capital". (1869: 255-6).

Overproduction occurs when the profit rate falls below a certain point. At this point a crisis is set off, whose basic characteristic is the destruction of capital. But this fall in the profit rate is not directly linked here to the long-term tendency of the composition of capital to rise, but rather to overproduction, or to the inability of the capitalists to realize their capital, to sell their commodities, to realize profit and to maintain the circulation of capital. Obviously, overproduction comes from the fact that, at a certain point in the process of accumulation, due to the inordinate growth of profits, capital and production become excessive in relation to the capacity of consumption, thus reducing the perspectives of the profits of the capitalists, and then of their investments. In Marx's words:

> "There are not too many means of production produced to employ the able-bodied portion of the population. On the other hand, too many means of labour and necessities of life are produced at times to permit of their serving as means for the exploitation of labourers at a certain rate of profit. Too many commodities are produced to permit of a realization and conversion into new capital of the value and surplus-value contained in them under the conditions of distribution and consumption peculiar to capitalist production, i.e., too many to permit of the consummation of this process without constantly recurring explosions". (1869: 257-58)

Therefore, the fall of the profit rate, overproduction and crisis are directly related to the "conditions of distribution," that is, to the way that income is distributed between profits and wages, and between accumulation and consumption, in the process of accumulation. The crises, therefore, can be attributed to overproduction or to underconsumption. But underconsumption is not a long-term tendency, as is the falling tendency of the rate of profit, by rather a short-term tendency. It does not make sense therefore, to transform the underconsumption theory into a long-term theory for the downfall of the capitalist system, as, for example, Rosa Luxemburg tried to do (1913: 415-58). The underconsumption theory is illogical as a long-term theory, as it can only be defended based on a theoretical mistake such as that committed by Rosa Luxemburg, for whom the extended reproduction of capital would be logically impossible if there is, outside of the capitalist system, a pre-capitalist sector that could be exploited. It has already been exhaustively shown, beginning with Tugan Baranovski's works that expanded reproduction of capital does not encounter any intrinsic or logical obstacle (1978a). However, there is no evidence that the propensity to consume has tended to diminish in the long run. On the contrary, the empirical proof indicates a secular stability for this rate. In the short run, however, the propensity to consume shows a tendency to decrease that is corrected in the process of a crisis. The decreasing tendency of the propensity to consume in the short run is naturally one of the bases for the underconsumption theory for explaining the economic cycle.

Based on this analysis, we can place a wedge in the mistaken debate between the neo-Keynesian or underconsumptionist Marxists, among whom Kalecki, Steindl, Joan Robinson, and especially Baran and Sweezy stand out, and the orthodox or fundamentalist Marxists, among whom are Mattick, Yaffe, Cogoy and Shaikh. The former denies the falling tendency of the rate of profit, based on the empirical fact that the organic composition of capital stopped showing a tendency to grow in this century. For Sweezy, in view of this, "the falling tendency of the rate of profit is no longer operative" (1987: 49) and can be thrown out. After citing one of the passages in which Marx examines the tendency of the development of productive forces and the strict base on which the conditions of consumption are supported, Sweezy concludes that the central theory for explaining the process of capitalist accumulation would be linked to the contradiction found there. In his words, "this contradiction - but not the falling tendency of the rate of profit - is in fact already implicit in the concept of capital as self-expanding value" (1987: 50).

It is clear that Sweezy, supported in an empirical positivist analysis, denies meaning for the law of the falling tendency of the rate of profit and claims to substitute it with the theory of the contradiction between productive forces and the capacity for consumption, not only to explain the cyclical crises but also the general process of accumulation itself. With this, Sweezy unduly eliminates a central part of the Marxist theory of accumulation -- the falling tendency of the rate of profit -- and at the same time confuses long and short term problems. In the short run, for the explanation of crises, we have already seen that the theory of the contradiction between the accelerated development of productive forces and the strict base for the conditions of consumption is basic, but it is not because of this that we can reject the theory of the falling tendency of the rate of profit, especially at the level of a long-term analysis, and secondarily in an analysis of the long Kondratieff cycle.

However, for Cogoy, Marx's whole theory of accumulation is subordinate to the law of the falling tendency of the rate of profit. Cogoy is explicit about this: "...the law of the tendency of the rate of profit to fall is the core of the Marxian theory of accumulation" (1987: 57). I would have no objection to this statement if it had not lead its author to radicalize his positions, making them revolve around the law, and thus end up in a "fetishization of the falling tendency of the rate of profit " as Sweezy noted (1987: 41). In fact, the theory of the falling tendency of the rate of profit is central to the model of long-term development, that is, to Marx's model of accumulation and expanded reproduction. When I developed this model in the third part of this book, establishing the relations among the profit rate, technical progress, the wage rate, the rate of surplus value, the organic composition of capital and the accumulation rate, I saw that the central, strategic element is always the profit rate and its falling tendency, even if this does not eventually occur due to the action of the counter-tendencies.

There is no doubt that these are not empirical arguments that will invalidate this law, as it only makes sense when analysed together with its counter-tendencies, especially capital-saving technical progress, the tendency towards oligopolization and the tendency towards statism. However, Sweezy revealed that on this point he did not remain immune to the empiricist influence of the North American social scientists. As capitalism has shown itself to be more vigorous than ever since the 1940's, Sweezy first denied the tendency of the profit rate to decline based on the hypothesis that the rate of surplus value would be growing at least as fast as the organic composition of capital (1942). Next, after the publication of Joseph Gillman's empirical work, The Falling Rate of Profit (1958), Sweezy changed his argument and went on to deny the operationality of the law of the falling tendency of the rate of profit since the organic composition of capital, which had shown a tendency to grow in the United States up to 1919, had from this date on shown a falling tendency (1977: 56-57). Although Sweezy's second position was more correct, as the growing introduction of capital-saving techniques combined with the growth of the wage rate tends to stabilize the organic composition of capital, or even make it decline, this still does not make it sensible to cast aside the consequences of the law. It is through them that the theory of the declining tendency is effective.

However, Mattick and Cogoy claim, based on a stated fidelity to the theory of value and to the law of the falling tendency of the rate of profit, to explain the economic crises exclusively on these variables, that are at the level of the sphere of production. They ignore the sphere of circulation and the problems of realization found there, and only admit the sphere of distribution when they are talking in general terms about the rate of surplus value. In this perspective, the theories of underconsumption would be unacceptable mainly because they would be reformist. As one accepts that the crises are derived from the fact that in the first phase of expansion profits tend to grow at a more rapid pace than wages, thus resulting in the phenomenon of insufficient demand for consumer goods, the problem would be corrected simply by reforming the system, distributing income better. Through adequate administration of wages and profits, the capitalist system in could thus reproduce itself, making the final crisis and revolution inevitable. As this is unacceptable for the orthodox or fundamentalist Marxists, there is no other alternative than to attack the underconsumption theory in every way possible, even though the logic of the capitalist dynamic and the empirical data available sustain the validity of at least part of these theories.

In this ideological line of thinking, Paul Mattick's main concern is to deny any importance of the market, of competition, of consumption and of aggregate demand. All of these are identified as Keynesian, underconsumptionist or reformist. These attributes se in like accusations or insults to demoralize an adversary. Orthodox Marxism would be exclusively for those who subordinate all economic theory to the sphere of production, where the theory of value and the falling tendency of the rate of profit are found. Based on this ideological platform, Mattick states: "Marx is not worried about the demand and supply relations in the market, but about the effects of the 'social forces of production' on the social relations of production, that is, about the effects that the increasing labour productivity practices over the production of the value and of the surplus value" (1977: 99). Although Marx gave more emphasis, especially in Book I of Capital, to the structural problems of capitalism relative to the production of value and surplus value, it is definitely not true that he did not give importance to the market. Thus, I cannot accept Mattick’s view, as well as Cogoy's radical statement that consumption should be ignored when analyzing crises: "The starting point of the depression process is not, for Marx, on the side of consumption but on the side of the expansion of capital, which cannot take place because of the tendentious fall in the rate of profit" (1987: 19).

We have already seen that Marx was explicit about the need to consider consumption and the problems of realization, in keeping with an unequal sharing of the income, in analysing crises. While Sweezy falls into the error of empiricism when denying the significance of the falling tendency of the rate of profit and only gives importance to the contradiction between unlimited development of the productive forces and insufficient demand, Cogoy and Mattick fall into the opposite error of dogmatism, according to which everything derives from the production of value and surplus value. On the other hand, if we adopt a dialectical reasoning, as is appropriate for Marxist thinking, we will abandon the idea of a single cause. In the specific examination of the problem of the setting off from cyclical crises, the law of the falling tendency of the rate of profit cannot be ignored. It is also obvious that, when dealing with an essentially short term problem, the fundamental problem is in the tendency towards insufficient demand in relation to aggregate supply, and especially in the inability of the wages and consumption of the workers to keep pace with the profits and accumulation of the capitalists. This fact was clear for Marx, and it was in perceiving and explaining it that Keynes made himself the most influential economist of the first half of the twentieth century.[3] This analysis is enriched if we also consider the theory of the exhaustion of the industrial reserve army and, although secondarily, the law of the falling tendency of the rate of profit, to understand the crises. In these terms, contradictions are established not only on the level of aggregate supply and demand, but also at the level of the distribution of wealth and of the tendency of the organic composition of capital to rise. Insufficient demand is a specific, short term theory for explaining the crises, that is completed by the theory of the exhaustion of the industrial reserve army and the rise of wages at the peak of the cycle. The medium-term theory of the exhaustion of the waves of innovation and the long-term theory of the falling tendency of the rate of profit can and should also be considered dialectically, especially for the analysis of the long Kondratieff cycle, and secondarily for the normal cycle.

This position can be accused of being eclectic, as it takes advantage of the contribution of more than one theory for explaining economic fluctuations. Rather than eclectic, I hope to be dialectical, as it recognizes the profound complexity and contradictory nature of the phenomenon I am studying. For a fundamentalist like Anwar Shaikh, the theories on the reproduction of capitalism can be divided into three groups:

1) neoclassical theories, including Keynesian, for which capitalism "could last forever";

2) theories of underconsumption, for which capitalism will only survive based on "external demand" to the system in itself; and

3) theories of the "declining tendency" and of "the squeeze of the profit rate" due to the rise of wages at the peak of the cycle (1978a: 219-220).

This kind of single-minded, or fundamentalist, view not only leads to an absurd identification between neoclassicals and Keynesians and reduces the theories of underconsumption to Rosa Luxemburg's theory, it also finally reduces the truth to a single explanation, or more precisely, to two in the case of Shaikh, because he also accepts the theory of the constriction of profits due to the exhaustion of the industrial reserve army.

Naturally, to make sense, the theories of the cycle must always be internal to the system. There is no reason, however, to consider underconsumption and overaccumulation as phenomena that are external to capitalism. On the contrary, they are phenomenon that are intrinsic to capitalism, like the falling tendency of the rate of profit and the squeeze of profits by the rise of wages.

4

I am now in conditions to develop an analysis of the dynamics of the cycles more systematically, based fundamentally on the contributions of Marx and Keynes. The only important neoclassical contribution for an analysis of the industrial fluctuations is Schumpeter's theory of innovations. But in this field, Schumpeter is not an orthodox neoclassical. On the other hand, we have already seen that his theory, like the theory of the tendency of the profit rate, is more pertinent for explaining the long cycles than for the normal cycles. In general, the neoclassical economics do not have a theory of cycles, as they imagine that the market is perfectly capable of automatically regulating the economy. When they come close to the theory of the cycle, as in the case of Hayek (1951: 350-65), von Mises (1944: 571-86) and Lucas (1976), the cycle appears because of an exogenous variable that is upsetting the balance the system. For Hayek, for example, variations in the interest rates provoked by changes in credit determine the cycles. Lucas uses a more sophisticated argument that is consistent with the hypothesis of rational expectations to emphasize the movements in the prices of products to also conclude that monetary shocks are the central cause of the cycles. It is therefore difficult to justify a reasonably regular cyclical movement based on a variable that, by being exogenous to the system, can occur or not.

In order for us to understand the dynamic of the cycle, especially during cyclical downturn, I will now develop what could be called the "theory of three limits." We will see that the process of expansion, which lasts from five to six years,[4] will encounter its recessive limit:

1) in the disproportion between the growth of Departments I and II (the version of disproportion of the underconsumption theory); or

2) in the insufficient growth of demand in relation to the increase in the supply of consumer goods resulting from the growth of wages at a lower rate than that of profits in the first phase of expansion (the simple underconsumption theory); and lastly, in case neither of the two limits above are enough,

3) in the rise of real wages above the increase in productivity, due to the exhaustion of the industrial reserve army (the theory of profit squeeze) at the end of expansion. I will not touch on the theory of the tendency of the profit rate to decline and the theory of the exhaustion of

the wave of innovations because we have already seen that, although they can influence the cycle, they are more appropriate for analysing the long wave.

For the purpose of this analysis, a cycle can be divided into six phases: 1) the peak; 2) cyclical downturn; 3) deceleration; 4) the bottom of the recession; 5) the first phase of expansion or prosperity; and 6) the final phase of expansion. It is necessary to emphasize that these phases have various duration in a cycle, aside from the variations from cycle to cycle.

The cyclical downturn is like a point in the process, an extremely brief period; the bottom of the recession, the final phase of expansion and the peak are brief periods; and the first phase of expansion and the deceleration or decline are longer phases.

In the first phase of expansion, the profit rate and total profits grow strongly. Thus, the rate of capital accumulation and the mass of accumulated capital grow, which means even more profits, as these, in the short run, basically depend on investments. At the level of supply, the production of Department II, the producer of consumer goods, grows rapidly, but the production of capital goods grows even more quickly, given the strong demand of investments. The more rapid growth of Department I at the time of expansion is a fact that has already been established in economic literature. It is a counterpart of the established fact that the department that produces production goods is that which shows the greatest retraction when a crisis begins.

Profits and productivity in the first phase of expansion grow extremely rapidly. This is a period of super-profits facilitated by the utilization of the idle capacity created by at the bottom of the crisis. Keynes made this very clear in his work.

Through the multiplier effect, as the investments planned by the corporations increase, savings (and profits) will correspondingly increase until they equal the new level of investment. During the first phase of expansion the corporations put their idle capacity into action, before increasing their demand for capital goods. Thus, there is a reduction of the level of stocks, an increase in the profit margins and prices, and most importantly an increase in total profits. The increase in total profits is even greater than that of prices because the higher margins must be multiplied by the greater levels of production. The profit rate grows even more rapidly as the supply of capital in this period does not have time to be significantly broadened.

Wages also grow in the first phase of prosperity, although more slowly than profits. There is no contradiction between the fact that profits and wages grow at the same time. Although the sum of both are equal to total production, as production and productivity grow rapidly, it is natural that the total profits and total wages also grow together, even though profits grow more quickly. The delay of the growth of wages in relation to profits comes from the existence of an industrial reserve army. The mass of unemployed workers forces the wage rate down, preventing it from growing explosively. The wage rate obviously grows, because the dampening effect of the industrial reserve army is limited -- and will be even more limited as the workers are better organized into trade unions -- but this growth tends to be less than that of the growth of profits until it reaches the level of full employment. Full employment constitutes itself as an outer limit for the ascending phase of the cycle.

Based on the elements that we have just discussed, we can distinguish three successive limits for the phase of prosperity: a) the imbalance between the production of capital goods and the production of consumer goods; b) the tendency for consumption to grow more slowly than production; and c) the rise in wages coming from reaching full employment.

In the first and second cases, there is a crisis of realization that results in the profit rate falling and in a reduction in investments. In the third case, there is a direct reduction in the profit rate and subsequently a fall in the rate of accumulation. However, the last case generally takes place in conjunction with the first and second. The disproportion, or imbalance, between the production of capital goods and the production of consumer goods was especially emphasized by Harrod (1936) in a book published immediately after Keynes' *General Theory*. The reasoning is simple and strong. When the economy begins to recover after a crisis, the production of consumer goods and of capital goods begins to grow, but the latter will grow more rapidly because the demand for investment grows more rapidly than the demand for consumption. The demand for investment is greater because during the crisis investment had been strongly reduced, limiting the corporations to substituting worn out capital goods. Now, in the first phase of expansion, the corporations that produce consumer goods increase their orders for capital goods and their production grows rapidly to compensate for the period of halt. In the meantime, the consumer goods industry continues to grow, although at a slower rate. There is thus a disproportion established between the production of consumer goods and the production of capital goods, and therefore an overproduction of capital goods that cannot last long unless there is an improbable reduction of the output-capital ratio.

Assuming that this ratio is stable in the short run, the capital goods industry would soon overproduce. At this point, this industry, after a period of building up its stocks, would radically paralyze its production. The multiplier, that up to that moment had been stimulating the economy, making the greater investments lead to greater production so as to equalize profits and savings with the planned investments, now plays the opposite role. As the capital goods industry reduces production and paralyzes its investments, the process has repercussions in the whole economy.

In this first limit, the relative shrinkage of the consumer goods market is the basic element underlying the cyclical downturn, but the element that provokes it is the excessive growth of Department I. However, this argument is greatly reinforced if the disproportion between the production of capital goods and the production of consumer goods takes place at the same time as the insufficiency of demand for consumer goods (the second limit). This will tend to happen, in the first place, because not only the production of capital goods is moving more rapidly than the production of consumer goods in the first phase of expansion, but because at the same time profits are growing faster than wages. If investments, including those in the consumer goods industry, are growing more rapidly than wages, after a period in which consumers satisfy their demand that was repressed during the crisis, a process of overproduction will also take place in the consumer goods industry. If consumption is a function of wages and if the investments in the consumer goods industry depend on profits, when given that profits grow more rapidly than wages in this phase, it is obvious that there will be a crisis of realization coming now from temporary underconsumption. If in the first case the supplies of capital goods increase, in this one there is an increase in the supply of consumer goods. In both cases the profit rate falls, investments are paralyzed, and a crisis is set off.

Up to now, I have based my study on the very simplified assumption that the workers' consumption is based on their wages and the capitalists' investments are based on their profits. If we now add that capitalists and technobureaucrats consume luxury goods, the general situation does not change. It reinforces the underconsumption theory. In fact, while the marginal propensity of the workers to consume can be considered close to one, the marginal propensity of the capitalists and of the technobureaucrats to save is clearly lower than one the throughout the cycle. Thus, this would also cause a tendency towards an insufficient demand of consumer goods. It is this fact that leads the Keynesian economists, who generally don't distinguish capitalists from workers, nor take into account the middle bureaucratic class in the discussion of the function of consumption, to consider the marginal propensity for consumption as declining.

We should add another historically new fact that makes the production of consumer goods especially strategic in the twentieth century. Last century, when the most of the theories on the cycle were originally formulated, the production of luxury consumer goods, including durable consumer goods, was almost completely done by hand. Carriages, jewellery, furniture, fine clothing, and sophisticated food were all products that were produced outside of the specific conditions of the capitalist production. The industrial production of consumer goods was basically only for wage goods. Thus, the fluctuations in the demand for these consumer goods were relatively small. As they were essential for the reproduction of the labour force, they could only undergo very restricted fluctuations during the cycle.

Meanwhile, capital goods could undergo large fluctuations, making them into a strong strategic factor of the economic cycle in the nineteenth century. Although the production of durable consumer goods was also subject to strong fluctuations, this was not meaningful for the cycle as it was outside of the capitalist system in of production and circulation.

However, it is necessary to call attention to a new fact, which, beginning with the twentieth century, has changed this scenario. With mass production, the assembly line, automobiles, radios, refrigerators, air conditioners, televisions, stereo systems, sports equipment, furniture, and other articles for personal and home use, durable consumer goods began to be produced in capitalist conditions by large industrial corporations.

Many of these articles were no longer considered as luxuries as they became mass produced. The durable consumer goods, however, just as the luxury goods, can have their consumption easily delayed. The fluctuations in the demand and production of consumer goods thus became much more important. Now the setting from a crisis can result both in an initial reduction of investments as well as of consumption. The second alternative is increasingly more probable as the corporations tend to produce up to the limit of demand, that is, up to the moment when they can realize profits in the market. However, the low-income consumers -- the wage earners -- will consume in keeping with their wages, that do not rise at the same pace as profits in the phase of prosperity (only in the final phase of expansion can this situation be inverted). The technobureaucrats and capitalists, who receive salaries and profits, will tend to present sea marginal propensity for consumption lower than one in the phase of prosperity.

When a crisis originates from a fall in investments, it is a signal that there is an overproduction of capital goods in relation to the demand for investment, which did not grow as rapidly because the consumption and production of consumer goods did not follow the production of capital goods. When it originates from a fall in the consumption of durable goods, this means that there is initially an overproduction in the consumer goods industry. But in both cases, overproduction would be followed by a crisis destined to destroy the surplus capital accumulated in stocks.[5] Therefore, crisis can be set off either by the overproduction of capital goods (a crisis of disproportion), or of consumer goods (even though the needs of the consumers are very far from being satisfied). It is most likely that the beginning of the crisis could happen through the concomitant functioning of the two mechanisms, as the process of setting off a crisis does not take place at one single moment, but rather over a period during which many phenomena are taking place at the same time. As the two mechanisms described above tend to originate from a single global economic process -- disproportion and underconsumption generating overproduction -- it is perfectly reasonable to imagine that they could take place at more or less the same time.

However, if the crisis is not set off by any of these motives, there will be a third limit: full employment. When the economy begins to enter the level of full employment in the final phase of expansion, the industrial reserve army is exhausted and wages begin to rise above the increase in productivity, provoking a constriction of profits and a reduction in investments. If we imagine the perfectly probable fact that this phenomenon tends to occur at the same time as a crisis of underconsumption, a cyclical downturn will be even more strongly set off. If the mechanism of underconsumption doesn't succeed in provoking a cyclical downturn, the exhaustion of the industrial reserve army and consequently the squeeze of profits will undertake to produce this result. In relation to this last case, we can even assume a slight variation: if a process of overproduction of capital goods and/or of consumer goods has already begun, the wage rate could still grow for a while through a kind of inertial effect, while the profit rate is already falling. This could happen because some capital goods were ordered previously, and employment could not be reduced from one moment to the next. In this case, there would be a perfect synchronization between the first two limits of expansion, related to the underconsumption theory, and the third limit provoked by the exhaustion of the industrial reserve army.

This rise of wages just before the cycle reaches its peak has been empirically proven. In the cyclical movements that took place in the post-war United States, it has been consistently verified that the wage rate grows and profits fall in the phase just before the peak of the economic cycle. However, it is not necessary to reach full employment for this to happen, partly because the concept of full employment is necessarily imprecise. There is a level of full employment at which there are still unemployed workers, but they are becoming scarce. However, at this level the bargaining power of the workers increases as their ability not only to organize strikes and demand higher wages, but also to reduce the rhythm of work, increases greatly. In other words, the class struggle is incited, provoking an increase in the wage rate, a reduction in the profit rate and then the beginning of the crisis. The class struggle thus becomes a fundamental factor for analysing the economic cycle.[6]

Before closing this analysis of the cycle, let us briefly consider the role of interest rates. It tends to grow in the phase of prosperity and fall in that of depression, signalling the profitability of capital during the economic cycle. Thus, if it has an inverse relation with investments, it will tend to have a stabilizing effect on the cycle. However, we know that investments are not very sensitive to the interest rate. During prosperity interest rises, but profits also rise, so that a comfortable distance between the profit rate and the interest rate remains for the corporations, guaranteeing the continuity of their investments. During recession profits and interest fall, but accepting Keynes' classical analysis, the trap of profitability prevents interest from continuing to fall, so that in this case the interest rate also has little dampening effect on the crisis.[7] It is the state that can have a decisive dampening effect on the crisis, although without being able to completely overcome it, after Keynes proposed the measures for an ant cyclical economic policy. The state nevertheless is unable to stabilize the economy, eliminating its fluctuations. In the process of stabilization, it ends up being a factor that sets off crises itself.

As Kalecki (1942)[8] showed, when prosperity threatens capitalists with an uncontrolled rise in wages and an increase in the inflation rate, the state is called on to intervene. Its intervention is realized in the name of combating inflation. This motivation is partly real. But the fundamental cause of the intervention of the state is in its concern, as it mainly represents the dominant capitalist class, to not allow wages to grow excessively. On these occasions the capitalists of the industrialized countries prefer a temporary reduction of profits due to a recession provoked by a reduction in the public expenditures and by a policy of containment, than a reduction -- that could be more long-term -- of its profits provoked by a rise of the wage rate.[9]

5

The analysis that I have carried out up to here of the economic cycle has at no point emphasized the increase of the money supply and of credit, or, thus, inflation, as a cause of cyclical downturn. Just as we have not identified the economic crisis that is set off after a cyclical downturn with a financial crisis, that is, with a series of bankruptcies of business enterprises followed by banks. The attempt to relate cyclical downturn with an expansion of the currency-credit is found in neo-classical literature. The increase in banking credit and in the money supply are seen as exogenous elements to the economic system, fruit of the desire of the banks for profit and on the inability of the state to control its expenses. Thus, demand inflation follows that is accentuated when the economy approaches the cyclical peak. On the other hand, the interest rate increases, restraining profits. At this point the state intervenes to re-establish the equilibrium of the economy, reducing its expenses, controlling credit and the money supply. Thus, arises a cyclical downturn aggravated by the rise of the interest rate. Relating the cyclical downturn with an increase of money-credit does not make sense because the monetary expansion itself or the inflation that may accompany it cannot be the cause of cyclical downturn, as they do not put pressure on the profit rate. Only a rise of the interest rate could have this effect, but during expansion, although the interest rate increases, there is no reason for it to grow more than the profit rate. Therefore, it could not be the cause of the strangulation of profits in the final phase of expansion. State intervention to restrict its expenditures and the money supply only takes place when, in the final phase of expansion, the rise of wages is already strangling profits. It is to avoid not only the disorganization of the market that is provoked by inflation, but also the more prolonged and more dangerous reduction of profits -- because it comes from the class struggle -- that the state intervenes with a recession economic policy. Before this, however, the increase in the expenditures of the state and the loosening of the controls of the monetary supply that took place mainly in the final phase of expansion had been a way through which the state had tried to prolong the cyclical expansion, avoiding underconsumption and overaccumulation. When the Keynesian macroeconomic policies are used very vigorously, they are inflationary exactly because they try to prolong the cyclical expansion. For example, when the cyclical dynamic became endogenous in Brazil, as it set up a broad industrial complex, this phenomenon was very clear. Both the cyclical downturn of 1962 and that of 1974 had a process of state intervention that, through the inflation, put off the moment for reaching the bottom of the recession. Then the state is forced to invert the sign of its economic policy, proceeding to a recessive stabilization policy, and one is left with the impression that it was the state that provoked the cyclical downturn.

When the crisis is set off at the real level of the economy, it can result in a financial crisis, resulting in a series of banks going bankrupt. This kind of crisis became less frequent and less serious after the creation of central banks, that can partially control the liquidity of the economic system.

Now, on a world level, there is this threat again due to the process of indebtedness on an international scale that escaped the control of the central banks. However, it is important to note that the financial crisis should not be confused with the real crisis, much less be considered its cause. The financial crisis is a result of the economic crisis. It is after the productive corporations begin to go bankrupt due to the halt of investments and to the retraction of consumption, after the capital destroying process occurs on the real level, that a crisis and panic can be set off on the financial level.

The Marxist economists in general have a reasonably clear notion of this fact. They contend among the theories of underconsumption, of the falling tendency of the rate of profit and of the exhaustion of the industrial reserve army, but they do not confuse the real crisis with the financial crisis. Michel Aglietta does not completely escape from this danger however, as he recently developed an original theory on the new historical character of the national banking currency as one of the regulating institutions of the economic system. In capitalism in this century the wage worker has become absolutely generalized, and the national banking currency, with a forced direction guaranteed by the state, takes on the basic role of allowing the payment of wages and in this way assuring the reproduction of labour. This link of currency with the wage worker and the production of commodity in which abstract labour is consubstantiated results in the buying power of the national banking currency.

Perhaps, however, impressed with his own theory on currency, Aglietta then gave excessive emphasis to financial crises. Although he also tries to distinguish financial crises from real crises, he often ends up confusing them (Aglietta, 1976: 186, 301, 321). In fact, as the currency is the most important regulating institution of the capitalist economy, the monetary imbalances are in fact not neutral in relation to the real imbalance. The neoclassical economists' attempt to separate the real level and the monetary level was one of the bases of the criticism of Keynes. However, there is no doubt that inflation and the financial crises can, through an interactive process, aggravate the crises of realization and overaccumulation. However, in this dialectical relation, it is necessary for it to be clear which factors are the basic causes of the crisis. These certainly are not found on the monetary level. The hoarding that accompanies the crises of realization, for example, is a monetary phenomenon, but as with the subsequent financial crises, it is a result of the crisis that took place on the level of the production of commodity. The existence of a monetary economy and the possibility of hoarding money are one cause of the cyclical downturn, but they are not the cause of the crisis.

6

Thus, we see the mechanism of the economic cycle is basically short term phenomenon, while the long Kondratieff cycles are medium term fluctuations and the phases of development are long-term processes. The economic cycle depends basically on the balance between aggregate supply and demand and the class struggle in the final phase of expansion, while the long cycles are basically explained by the Schumpeterian waves of innovation, and the phases of development by the falling tendency of the rate of profit and by the nature of the relation of production. However, these processes are not airtight. On the contrary, they cross paths dialectically. The long cycle generally embraces five or six cycles, and a phase of development can be defined in principle as embracing more than one long cycle, although here it would be necessary to make an exception. While the normal long cycles are two kinds of industrial fluctuations, the phases of development do not necessarily correspond to fluctuation, even though they can coincide with them. One phase of development or a secular tendency is defined by long-term tendencies of the profit rate, of the organic composition of capital, of the rate of surplus value, of the kind of technical progress or of the development of productive forces and by the social and political changes that accompany the economic transformations. The secular phases, therefore, interpolate and are confused with the global historical process more completely than the long cycles. The end of a Kondratieff cycle is necessarily marked by a cyclical crisis. Although the end of a phase of development also can be marked by the exhaustion of a wave of innovation and consequently by a cyclical crisis, it will be defined by changes in the secular economic tendencies and by changes in the social base, that have repercussions in significant political changes.

In this chapter I have tried to present a multi-causal analysis of the economic cycle, in which apparently alternative theories found in Marx on the process of cyclical downturn are integrated. Of course, more emphasis was given to the underconsumption theory, or, more broadly, to insufficient demand. The theory of disproportion was not seen as an alternative but rather as a particular case of underconsumption. The theory of the exhaustion of the industrial reserve army was used to explain the downturn in terms of an outside limit for the expansion, in case underconsumption does not set off a cyclical downturn. The theory of the falling tendency of the rate of profit was understood as a long-term phenomenon. In the short run, however, during a cycle, a rise of the organic composition of capital tends to take place, as, in expansion, Department I tend to grow more rapidly than Department II. This fact, however, is compensated by the concomitant rise of profits at a higher rate than wages, so that an increase in the rate of surplus value occurs.

In these terms, the rise of the organic composition of capital in the phase of expansion does not imply a reduction in the profit rate. This will decline, in terms of expectations, mainly because wages always increase more slowly than profits in the first phase of expansion.

In conclusion, the crisis is always a phenomenon of the overproduction of commodities, set off when the corporations perceive that effective demand is or will be insufficient to find an outlet for its production. This process can be postponed for some time, through the production of capital goods that produce capital goods, but in the end the production of consumer goods ends up being excessive, the expectations for profits fall, investments are reduced and a cyclical downturn takes place. As Mandel noted, insufficient sales can begin in the sector of production goods or in that of consumer goods, but "it can be empirically proven that it begins more frequently in the latter (consumer goods)" (1980: 232).

It is therefore essential to understand that with this I am not trying to state that the crisis only occurs in the sphere of realization. It is first situated in the sphere of production, since the process of the expanded reproduction of capital is intrinsically unstable as the market is unable to automatically control it; on the other hand, as the tendency towards the rise of the organic composition of capital, although it has not yet taken place, constantly threatens the capitalist system in of production. The process of the reproduction of capital is not exhausted absolutely in the sphere of production and of the technological and social processes inherent to it. The sphere of aggregate demand is an integral part of this process, and it is strictly dependent on the system in of the distribution of wealth.

Therefore, trying to understand the expanded reproduction of capital, the process of capitalist accumulation and its cyclical movements without taking into account wages and profits (distribution) and consumption and investment (realization), amounts to losing sight of the total economic process.

Chapter 13
Accumulation and cycles in oligopolistic capitalism

In the first and second parts of this book I examined the subject of capitalist accumulation and the distribution between profits and wages from a long-term perspective. In the whole analysis, however, the fundamental concern was to not lose a historical perspective, to not separate theory from the practice of capitalist accumulation, as the terms of reference were always the capitalist mode of production. In this final chapter the aim is to try to understand the long-term changes, particularly the cyclical dynamics of capitalism in the second half of the twentieth century.

The variables that continue to interest us are the basic parameters of accumulation and of capitalist distribution: the rate of the increase of labour productivity and the growth rate of the product; the rate of profit and of wages; the rate of surplus value and the organic composition of capital; and the rate of accumulation. But, in the context of bureaucratic or oligopolistic capitalism -- the name that I have given to the mixed social formation, still basically capitalist but increasingly oligopolistic and statist, that has become dominant in the second half of the twentieth century -- it is necessary to consider some other variables. On the one hand, it will now be necessary to consider among the structural variables not only the wage rate, but also the salary rate of the bureaucratic middle class.

Given the enormous increase in state intervention in production and economic regulation, it becomes necessary to examine the Keynesian problems related to the imbalance between aggregate supply and demand, and, thus, the problems of unemployment, inflation, and external imbalance. In the first and second parts of this book I assumed a market-controlled economy with full employment. This assumption was explicitly relinquished when I examined economic cycles. Now it is necessary to try to understand that in the capitalist dynamic of today, not only the market, but also the state, through its economic policy, are agents that both balance and distorts the system in at the same time.

This chapter will be divided into six sections. The first will briefly examine the new historical facts that in the second half of this century have come to define technobureaucratic capitalism. The second section will study the alterations that have taken place in the cycles in keeping with these new facts. The third and fourth sections will discuss the influence of the technological and institutional changes that marked the emergence of oligopolistic capitalism on the long cycles and on the normal economic cycles. The fifth section will analyse the weakening and inversion of signals that has taken place in the automatic mechanisms of the market regarding the regulation of the economy. In the sixth section, the deep financial crisis which the capitalist economies were entering because of the inversion of the signals of some of the more important automatic mechanisms of the market will be examined. It will end with a brief mention of the debate between conservative and progressive economists on the causes of the crisis and on the role of state intervention. This will refer to the policy limits imposed by the law of value as well as by the laws of the cyclical dynamic and of long-term capitalist accumulation, which, together with the laws of capitalist distribution between profits and wages, were the main objects of this book.

1

In terms of long-term capitalist accumulation, the basic structural changes that have taken place are related to the new historical facts that appeared in the second half of the twentieth century. These resulted in a mixed social formation that we can call "oligopolistic capitalism". The capitalist mode of production is still dominant in this formation, but there are strong traces of the bureaucratic or statist mode of production.

We can stress six new historical facts:

1) a strong growth of state intervention in the economy;

2) the growth of large national and multinational private corporations and the consequent oligopolization and cartelization of various markets;

3) the growth in the power of the trade unions, not only for factory workers but also for the lower levels of the technobureaucracy;

4) the appearance of a new class -- aside from the capitalist class or bourgeoisie, and the working class or proletariat -- that I propose to call the technobureaucracy or bureaucratic middle class;

5) the vertiginous acceleration of technical progress with much less emphasis on mechanization, that is, on the mere substitution of labour for machines, and much more on the substitution of more expensive or less efficient machines by cheaper or more productive machines; and

6) the enormous growth of the production of durable consumer goods.

The effects of these new historical facts on the long-term process of accumulation of the capitalist system in are contradictory. However, it is possible to imagine that, in general, and notwithstanding crises, they would tend to accelerate the process of accumulation, despite some losses for the profit rate. In general, the increase in state intervention accelerated the process of accumulation. This is either because the state takes over the less profitable activities and thus subsidizes the private sector, because it makes social expenditures that make the cost of labour cheaper for the private sector, or lastly because as the regulating activity of the state corrects some distortions in the market, it permits more efficient macroeconomic use and allocation of resources.

The debate among conservative and progressive economists on this last issue is of long standing. The conservatives would always state that the regulating intervention of the state is inefficient, provoking more distortions than reconciling those that already exist. They would even claim that the state corporations are intrinsically less efficient than the private ones.

In this case, state intervention would only be justified from the point of view of the distribution of wealth, as in the sphere of production it would bring more losses than benefits. Even in the sphere of distribution, for the more extreme conservatives, the distributive effects of state action would still be debatable.

The only scientific argument against this kind of discussion deeply marked by ideological factors would be the very tendency of the economies to move in the direction of statism. This tendency occurs not only in progressive or social-democratic governments, but also in conservative governments. This is a sure indication, therefore, that notwithstanding the distortions that it provokes, the growing state intervention in the economy is functional for capitalist accumulation. The existence of inefficient state corporations and of incorrect economic policies that lead to the distortion in the process of regulating the state corporations does not prevent that, in general, the effect of the growing state intervention is that of maintaining the profit rate and accelerating the process of capital accumulation in the oligopolistic capitalist economies.

The growing domination of the large corporations and the oligopolization of the markets also have contradictory effects on the process of accumulation and are also the subject of ideological discord. In this case however, the divergence is not between the conservatives and progressives, but between, on the one hand, the free-market conservatives and romantic progressives, defenders of the small businesses, and, on the other hand, developmental conservatives and progressives. The divergence between the latter is only in whether they advocate more or less regulation for the oligopolistic corporations. Both recognize the obvious fact that the growth of the corporations is not a mere distortion of the market, but are related to the effective economies of scale in production, or to the advantages in large scale commercialization, or lastly, to the greater efficiency in the allocation of resources resulting from financial centralization.

The concrete fact is that the large corporations, notwithstanding the unfavourable effects that they certainly have on the distribution of wealth and on inflation, show, in some sectors, a combination of advantages over the small corporations that have allowed for the maintenance of the profit rate and of the rate of accumulation. The unending research of the specialists in industrial organization on this subject will probably never reach a conclusive result. It is difficult, however, to not recognize that the development of techniques for administration and control, especially after the advent of computers and of the model of decentralized functional organization, permitted much greater efficiency for the large corporations.

The third new historical event of the second half of the twentieth century -- the large growth of trade unions -- also has contradictory effects on the profit rate and the rate of accumulation. The immediate effect is negative as, mainly beginning in the middle of the 1960's, the workers began to achieve wage increase that were clearly above the rate of the increase of labour productivity. [10] However, the workers' demands always function as a way of sustaining aggregate demand, as, by preventing an excessive concentration of wealth, they stimulate the demand for durable consumer goods. But the negative effects on the rate of accumulation and on the profit rate probably surpass the positive ones. This is the classical conflict between growth and wealth distribution.

The fourth new historical event -- the appearance of the technobureaucracy as a new social class -- also had a contradictory effect on the rate of accumulation although, in the final analysis, it should have had positive effects. The emergence of the technobureaucracy is intimately related to the growth of the large producing and regulating state and with the development of the large oligopolistic corporations. To manage and coordinate these large corporations and this large state in a reasonably efficient way, there was no other alternative than the appearance of a new middle class of civil servants and managers who, instead of carrying out productive labour as the workers do, carry out coordinating or administrative tasks.

It is worthwhile to note, however, that while the technobureaucracy has a positive effect of the rate of accumulation, as it manages the producing and regulating state and the large corporations, it also tends to reduce the profits of the corporations. This takes place as a portion of these profits is appropriated for this technobureaucracy in advance at the same time in which it is taking over the control of the large corporations and changing their stock holders into mere investors. This contradiction between the reduction of the profit rate and the maintenance of the rate of accumulation is possible as it is no longer the capitalists that make investment decisions. This power is little by little being transferred to the technobureaucrats, who are willing to live with the profits after paying their salaries that are relatively lower.

The fifth new historical event of the second half of the twentieth century -- the acceleration of technical progress, especially capital-saving technical progress -- has a positive effect on the profit rate and on the process of accumulation. As we have seen extensively in the first part of this book, as capital-saving technical progress increases the productivity of labour, it is accompanied by an increase in the output-capital ratio. This was a decisive factor in preventing the falling tendency of the rate of profit from taking place. Aside from this, it was a large safety valve that allowed oligopolistic capitalism to make increases in wages and salaries that were higher than the increase in productivity consistent with a relative maintenance of the profit rate.

The sixth and last new event -- the extraordinary growth of the production of durable consumer goods -- was one way of expanding capitalist relations of production, through the launching of an unending series of new consumer goods. The notion of consumerism is directly related to this economic fact. Until the beginning of the twentieth century, durable consumer goods were almost exclusively handmade. They were limited to furniture and to some kinds of vehicles pulled by animals. This situation changed radically with the automobile industry, then with the home appliance industry and finally with the electronics industry. Durable consumer goods have become an important part of capitalist production, generating relative surplus value and incorporating permanent technical progress.

On the other hand, the great, new importance of the durable consumer goods industry, especially of the automobile industry, made aggregate demand dependent not only on the decision of investors, as economic theory, including the Keynesian one, states, but also of the consumers. While the consumers only make decisions on the purchase of immediate consumer goods, these decisions were not very significant, as the consumers had little freedom of choice. However, when they became the owners of durable consumer goods, and they began to have the choice of putting off or being in a hurry for their purchase and replacement, the decision of the consumers became much more strategic in determining the fluctuations of effective demand.

Because of these new events, a new duality was established in the advanced capitalist economies. Instead of a duality between a feudal, peasant economy on the one hand, and a capitalist economy on the other, there is a confrontation between the market system in or competitive capitalism, and the oligopolistic capitalism. John Kenneth Galbraith made a pioneer study of this new duality, which leads to a systematic revision of economic theory, as it is forced to deal with new realities.

Although the new facts that we have just examined have contradictory effects, they do not lead to the conclusion that the profit rate and the rate of capitalist accumulation necessarily tend to enter a crisis. The process of accumulation underwent and will continue to undergo deep changes, but nothing justifies a theory of stagnation in the context of oligopolistic capitalism.

2

If there is no reason to predict the stagnation of bureaucratic or oligopolistic capitalism, this does not imply that it is not subject to crises. The long Kondratieff cycles and the normal Juglar economic cycles continue to function, even though they could have been partially minimized, and even though this dynamic has undergone changes. There are some wide spread ideas in respect to the changes that have occurred in the dynamic of the cycle after the Keynesian economic policies were put into practice.

The first idea is that the Keynesian economic policies of the administration of aggregate demand would have resulted in a reduction of the degree of fluctuation of the economic cycles, in such a way that the peaks of prosperity and the depressions would be less accentuated. There are even some authors who believe that the economic cycles would no longer exist after the state begins to control aggregate demand through fiscal and monetary policies. Although this last position is clearly the fruit of a bureaucratic illusion, by claiming to deny the cyclical dynamic of capitalist accumulation itself, it was clearly possible to minimized the cyclical fluctuations through state intervention.

This intervention takes place when the economy is approaching a peak and when the cyclical downturn takes place and sets off a recession. In the first case, as was noted by Kalecki (1942), the cycle takes on a political nature. In the final phase of expansion, when the economy is reaching full employment, the exhaustion of the industrial reserve army leads to an increase in wages greater than that of labour productivity. The predictions on profits added to inflationary expectations lead the state to adopt stabilization policies, whose main justification is the need to combat inflation. The need of the capitalist class to contain the growth of wages and to reduce the ability of the workers' organizations, however, is probably the decisive factor in the adoption of the fiscal and monetary policies of stabilization, that provoke an early cyclical downturn.

On the other hand, after the cyclical downturn has taken place and set off a recession, the economic policy of sustaining demand prevents the crisis from deepening. The Keynesian state thus completely takes on its role as the protector of the capitalist economic system, through expansive fiscal and monetary policies. As Thomas Weisskopf (1981: 18), notes,

> "the Keynesian policies helped to keep high levels of the employment and of the capital utilization, and to avoid wastes resulting of the strong crises which in the earlier phases of the capitalism reduced its long run rate of the growth"

Therefore, to obstruct the rise of the wage rate and the inflationary pressures, the government decelerated the economy when it was near a peak, and inversely, stimulated demand when the cycles is near the bottom of a decline. These are the two obvious ways by which the state promoted the relative stabilization of the cycle in the post-war period. The result was a "stop and go" policy, that is, successive accelerations and decelerations of the economy, that resulted in a certain reduction of the average duration of the economic cycles. This happened in the United States in the 1950's, when there were successive recessions in 1949-50, 1953-54, 1957-58 and 1960-61. [11]

The recessions were extremely mild, and the economy continued to grow. It also happened in England in the whole post-war period. The policies of acceleration and deceleration followed each other, reducing the duration of the cycle and the seriousness of its fluctuations.

However, there is another type of Keynesian intervention that is not as obvious, but perhaps more important. Instead of thinking about this intervention as a process of prematurely cutting expansion and reducing the duration of the cycle, we can see the Keynesian policies as a way of avoiding a cyclical downturn and prolonging the expansion period. It always tries to avoid the paroxysm of the peak, while at the same time tries to extend the period of the controlled expansion, avoiding a cyclical downturn. This was typical of what took place in the United States in the 1960's and beginning of the 1970's, and, in general, it is what happens in underdeveloped countries. In Latin America, and especially in Brazil in the 1970's, there was clearly a process of prolonging the expansion that began in 1974, when the movement of the cycle clearly pointed in the direction of a recession.

By policy artificially prolonging the expansion phase, the state lengthens rather than shortens the duration of the cycle in its expansive phase. In compensation, the experience at the end of the 1970's and the beginning of the 1980's seems to show that the state is then forced to carry out a much more severe recessive policy, thus accentuating rather than lessening the crisis.

In fact, deep distortions are produced in the economy when it is maintained in expansion. In this case, there is a generalized process of borrowing by the corporations and especially by the state that accumulates public deficits; and, as the corporations and workers feel protected by the state, they do not try to accelerate the increase of productivity or to carry out institutional reforms needed to correct the existing distortions.

These distortions finally have the consequence of a rise of the inflation rate, as the result of the real wage increases above productivity in the sectors with an organized labour force, and of the increase of the profit margins in the oligopolistic sectors of the economy. The oligopolistic corporations' increases in margins in this phase of artificial prolongation of expansion are mainly aimed at maintaining their profit rate, which is threatened by the rise of real wages above labour productivity and by a precariously sustained demand. However, the average profit rate of the capitalist system in tends to fall, as the competitive sector of the economy cannot even manage to maintain its profit margins. Thus, a process of squeezing profits is observed not only in the short period of the second phase of expansion of a normal cycle (about two years), but also another that lasts longer and can only be understood considering an artificial prolongation of the cyclical expansion.

In fact, in the United States between 1965 and 1973, when the real wage rate after state taxes grew 3.4% a year, the net profit rate decreased to an annual rate of 0.6% (Campen and Mac Ewan, 1982: 5). Thus, there was a long-lasting squeezing of profits at the same time in which the Keynesian economic policies were trying to sustain aggregate demand. In 1974-75 there was finally a new recession in the United States, but the economy began to grow again thanks to an expansionist fiscal economic policy. However, the distortions in the economy continue to deepen, directed by the increase in the inflation rate.

The dissatisfaction of the capitalist class with the Keynesian policies grows, the monetarist conservative economic techniques or the supply-side economy is strengthened and, lastly, the state is led to introduce deep recessive, long lasting economic policies, as was the case in the United States between 1979 and 1982, or a little earlier in England. Instead of mild decelerations and accelerations (stop and go), there was an artificial prolongation of expansion and then a long, strong containment of the economy.

After the systematic intervention of the state in the economic aggregates, that began to take place in post-war oligopolistic capitalism, there were two alternative changes in the behaviour of the economic cycle. The cycle is either shortened and its fluctuations are reduced in keeping with a policy of acceleration and deceleration, or else it is prolonged due to the prolongation of expansion, but in compensation the fluctuation is accentuated due to the severity of the subsequent containment. In any case, there is an exogenous factor -- the monetary and fiscal policy of the state -- that begins to interfere in the cycle. Notwithstanding this interference, while the economic cycle is an essential element of the dynamic of capitalist accumulation, it continues to have its own laws. The idea of overcoming it continues to be a bureaucratic illusion, shared not only by Keynesian economists but also by monetarists, an idea that the capitalist class tenderly feeds.

3

Aside from the changes in the cycle caused by the interference of the state, it is also necessary to consider the internal changes in the cyclical dynamic itself that took place as a result of the technological and institutional transformations that marked the emergence of oligopolistic capitalism. In the long or Kondratieff cycle, there are basically two alternative or complementary explanations for cyclical downturn: the exhaustion of a wave of innovations, and/or the rise of the organic composition of capital.

Given the extraordinary technological development of a growing capital-saving nature, everything points to the first explanation, related to Schumpeter's theory of the exhaustion of waves of innovation, as being stronger. As the substitution of less efficient machines and processes by more efficient machines and processes takes place, instead of the substitution of the labour force by machines, technical progress becomes capital-saving and the organic composition of capital does not grow.

On the other hand, the acceleration of technical progress makes the waves of innovation an increasingly strategic factor. The theory of long cycles of Kondratieff and Schumpeter, which was elaborated in the 1920's, was clearly confirmed in the 1960's when the deceleration phase of a long cycle (the fourth Kondratieff) began. It thus closed the period of extraordinary development that began during World War II, that had the following basic driving forces:

1) the second revolution of the automobile industry and of highway construction;

2) the aerospace industry;

3) the electronic industry, including computers, televisions and stereo equipment; and lastly;

4) the petrochemical industry.

Petroleum was a relatively cheap energy source that served a base for this whole revolution. Because of this, when the price of petroleum quadrupled in 1973, the expansion phase of the third long cycle definitely ended. However, everything indicates that since the end of the 1960's the long expansion cycle was exhausting its efficacy, maintaining itself in the meantime through the Keynesian policies of sustaining demand.

In 1972, Ignacio Rangel had already predicted a world economic crisis based on Kondratieff's theory of cycles. He understood that the expansive phase of a long cycle has exhausted itself when the mass of accumulated capital corresponding to certain technologies that made that cycle viable becomes obsolete. Thus, it became necessary to scrap them. The cost of this scrapping, however, is immense and the accumulated, crystallized capital transformed itself into an impediment to the introduction of new techniques, at the same time in which the market did not expand at the rate necessary for absorbing the current production. In these terms, according to Rangel:

> "the 'b' phases of the long cycles thus find their final expression in the accumulation of non-depreciated capital (including human). At a certain point, right after a period of intense renovation of fixed capital, the preponderant powers begin to ponder about the preservation of the recently-created capital and the established capacity finds its limits in the market. The newest technique tends to not be used and the economy plunges into a cone of shadow." (1972: 21).

Thus, in the first long cycles, the law of the falling tendency of the rate of profit in keeping with the rise of the organic composition of capital could be a relatively relevant factor for the exhaustion of a cycle, when technical progress was not mainly capital-saving. The exhaustion of the waves of innovation, however, become clearly more important when the technological progress that has taken place in the second half of the twentieth century became a strategic factor in the process of capitalist accumulation. At this point, the introduction of new products and of new techniques become essential for broadening the markets and for increasing labour productivity, guaranteeing the profit rate of the system. The capital that is accumulated and is already obsolete becomes an obstacle to the introduction of new products and new techniques, which are then only adopted in a generalized way after the crisis is set off.

4

In the previous chapter, we saw that on the level of the normal economic cycles, the three theories that could be used as an alternative for explaining the cyclical downturn were: 1) the theory of the rise of the organic composition of capital; 2) the theory of the exhaustion of the industrial reserve army; and 3) the underconsumption theory or of the crisis of realization that has the theory of disproportion as one of its vertices. We saw that the first theory is not very useful for explaining the ten-year cycles, as the brief period of expansion does not allow for an effective rise of the organic composition of capital. Although the more rapid growth of the capital goods industry in relation to the consumer goods industry, which characterizes the expansion phase of the economic cycle, could imply a certain rise of the organic composition of capital, it does not adjust itself to this theory. It first needs to be discussed in the context of the underconsumption theory and of disproportion, and more specifically, in the context of the Keynesian theory of the multiplier-accelerator dynamic.

On the other hand, the underconsumption theory and the theory of profit squeeze due to the exhaustion of the industrial reserve army clearly became stronger after World War II. However, this is not the place to make an evaluation of the recessions that occurred after the war, either in the central countries or in Brazil.

In the nineteenth century, cyclical downturns could take place because the wages, in the expansion phase, grew slower than the productivity, which generated the underconsumption phenomenon. But as they dealt with goods for immediate consumption, the power of decision or the freedom of the consumers was limited. If the consumers relatively reduced their consumption during the expansion phase of the cycle, this was basically due to the gap between the growth of wages and of profits. Now, with the durable consumer goods industry, this gap continues to be fundamental, but it is necessary to add the consumers' perspectives for the future, as they now have the possibility to postpone their purchases without many difficulties. Before, the expectations of the businessmen in terms of their chances for profit were the only ones that were important, because investments were decided based on these expectations.

Now, the expectations of the consumers about their wages, and more precisely about their future income, are also important because their decisions about the consumption of durable goods is added, in terms of creating demand, to the investment decisions of the corporations. But if the underconsumption theory becomes explicitly stronger, the theory of the exhaustion of the industrial reserve army becomes even stronger. This was especially true in the 1960's and the beginning of the 1970's, when the power of the trade unions did not stop growing in keeping with the long wave of the cyclical expansion and with the Keynesian economic policies of sustaining demand. In this context, Boddy and Crotty's article (1975) becomes a milestone in the economic literature on cycles in the 1960's.

However, probably beginning at the point in 1973 when the world economy entered the deceleration phase of the fourth long cycle, the strength of the theory of profit squeeze due to the exhaustion of the industrial reserve army to explain the situation had diminished. The unemployment rate in the central countries, which up to 1973 had been reduced to very low levels, even requiring the importation of labour, began to grow to levels of around 10% of the labour force. Thus, the power of the unions decreased and reduced the ability of the organized workers to increase their wages above the rate of growth of labour productivity when the economy was approaching a cyclical peak.

During the large expansive long wave after the second war, the trade unions for production workers but also for those who work in the service sector gave a qualitative leap. In these terms, even though they have lost strength due to the increase in the unemployment rate in the deceleration phase of the fourth long cycle, the trade unions continue to be powerful and to be able to pressure the wages upwards in the last phase of expansions of the normal economic cycles that make up a long cycle.

5

In the first half of the twenty century, the cyclical process and, therefore, the dynamic of capitalist accumulation itself demonstrated that the automatic mechanisms of the market don't control the capitalist economy with the efficiency and precision that the neoclassical economists assumed in the models of perfect competition. It is necessary to admit, however, that these mechanisms were decisive while competitive capitalism prevailed. They did not guarantee full employment, and certainly did not lead to a more just wealth distribution, but they at least worked as an imperfect regulator of the economy.

With his theory of the chronic insufficiency of demand, and more specifically with his theory on the low flexibility of the interest rate due to the tendency for interest rates to be defined by agreements, Keynes showed that capitalism did not have automatic mechanisms that could ensure full employment. On the other hand, Oscar Lange (1938: 99-100) noted that capitalism is intrinsically incapable of distributing wealth in a way that would attain maximum social welfare, as "the distribution of incomes is determined by the distribution of ownership of the ultimate productive resources. This distribution is a historical datum which originates independently of the requirements of the maximization of social welfare". Although both Keynes and Lange were critical of neoclassical economic theory, neither of them could have imagined that some of the most important automatic mechanisms of the market would not only tend to be weaker in the oligopolistic capitalism of the second half of the twentieth century, but would also actually have their signs inverted.

I will emphasize only two of these signs and their behaviour in the cyclical recession: prices and the interest rate. In accordance with all economic theories, from the classics to Marx and Keynes, during a cyclical deceleration prices would tend to fall, and therefore deflation would take place. However, in contemporary capitalism, at least since the 1970's, the opposite is taking place. Deflation is a word that no longer has practical application. Prices no longer fall during recession. If the recession is very severe and prolonged, as happened in the United States and England between 1979 and 1982, the inflation rate can fall, but it continues to be positive. Meanwhile, if the recession does not last so long or is less severe, the level of inflation remains unchanged or will even grow, with the phenomenon of stagflation, that has already been widely studied, is occurring.

Very briefly, stagflation has two causes. First, given a certain level of inflation and an ability of the economic agents (businessmen and workers) to conserve their wealth share, prices tend to stay at that level. In the process of the distributive struggle, each economic agent succeeds in passing their costs on to prices, preventing the general level of prices from falling. This is the inertial component of inflation. Secondly, the monopolist power of the trade unions and of the oligopolistic corporation organized into cartels causes, even in recession, wages to be increased more than productivity and, mainly, the oligopolistic corporations to increase their profit margins to compensate for their losses of sales. Increases of profit margins over sales and an increase in wages above productivity are factors that accelerate inflation. They only occur during the expansive phase of the cycle, when demand is greater than supply. The margins of the oligopolistic corporations mainly behave this way at exactly the opposite moment, when the economy is entering a recession (Bresser Pereira and Nakano, 1984).

The behaviour of the interest rate also shows opposite signs during recession: instead of decreasing, it increases. This is what happened in the central capitalist economies between 1979 and 1982, when the real interest rate more than doubled in the middle of a deep recession. It also happened in Brazil between 1981 and 1983, in the middle of the stagnation of the Brazilian economy. This perverse behaviour of the interest rate during cyclical deceleration is not due to the behaviour of the corporations and the monopolistic trade unions, as is the case during stagflation, but rather to the economic policy of the government. These recessions are provoked by the economic policy of the government, that tries to promote the adjustment of the economy -- that is, a reduction of the inflation rate and the foreign balance of trade.

To reach these goals, the easiest and most simple economic and political strategy is to promote a reduction in the real money supply, to promote an increase in the interest rate and thus to discourage investments. Thus, high interest rates and recession begin to occur at the same time, making impossible the automatic recovery of the economy after a necessary destroying capital process that the crises provoke. As the recession was artificially provoked by the measures of economic policy, the economic recovery depends on new measures of economic policy, that can be taken late or prematurely in relation to the need of scrapping the technologically obsolete capital.

6

What actually happens is the partial substitution of the state for the market in the function of coordinating the economy. The regulating state begins to increasingly intervene in the economy, not only to control the basic macroeconomic aggregates -- investment, consumption, imports, exports and money supply -- but also directly intervening in the prices of a growing number of goods, in the exchange rate, in the wage rate and in the interest rate. This intervention is aimed at overcoming the weaknesses of the "invisible" regulation of the market. It is carried out through a system in of successive approaches, of trial and error.

In this process of intervention, the state aims at correcting the distortions provoked by the poor functioning of the market; but by intervening, it creates new distortions that must in turn be corrected. In the case of the combination of high interest rates with recession, a very serious consequence is the increase in the levels of debt, which then threaten the whole structure of the economic system. The existence of debtors and creditors in capitalist economy is perfectly normal as long as the interest rate, that is structurally part of the surplus value that the active capitalists cede to the rentiers in exchange for the loan of their capital, is lower than the profit rate. In a capitalist economy that is not regulated by the state, this relation is generally maintained. When the profit rate falls during a cyclical deceleration, the interest rate also falls, at least to the level of the fall in profitability. In these terms, the growth rate of the levels of debt decreases, while conditions for the recovery of the economy are being established. Conversely, if the interest rate rises during a recession while the profit rate falls, not only do the conditions for economic recovery disappear, but also corporate indebtedness begins to grow explosively in real terms, opening an increasingly larger gap between debtors and creditors. Also, when the public debt reaches extremely high levels and is burdened with much higher real interest rates, it increasingly becomes the cause rather than the consequence of the public deficit, as the interest paid begins to be a fundamental component of this deficit. The increase of the public deficit is thus no longer a sign of the increase of the current aggregate demand, becoming the mere consequence of the interest provoked by past debts.

A structural financial crisis is thus outlined, based on high indices of public and private debts, on high interest rates, low profit rate and on growing public deficits. The beneficiaries of this process are the rentiers and the financial intermediaries, and the losers are productive capital and the workers.

If we broaden this analysis to the international level, we can see a division in the world between creditor and debtor nations. The latter pay high interest at the same time in which the international creditors force them to carry out recessive internal economic policies that lower the return on the investments of the local companies, thus aggravating their situation even more. The creditor nations in turn remain in recession or present very weak rates of economic recovery. Thus, the debtor nations do not manage to adequately increase their exportations to the creditor nations. Thus, just as on the internal level, the gap between the creditors and the debtors on the international level only tends to deepen.

In this context, the capitalism found in the central countries was transformed into rentier capitalism. Given the enormous size of the debt of the Third World, there is no other alternative for the creditor countries than to merely stabilize this debt. Otherwise they will show large deficits in their commercial balances with the debtor countries, compensated by surpluses in their balances of interest and dividends. Thus, to stabilize the debt, they would have to limit their internal production and import goods from the debtor countries, transforming themselves into rentier countries, for whom the high interest rates are finally functional. When these high interest rates are added to the high level of the debts of the countries in the Third World, they consubstantiate a structural financial crisis, that in the 1980's put the process of the broadened accumulation of capital at a total risk. This crisis naturally has a real face: the exhaustion of the post-war wave of innovations and the beginning of the phase of decelerations of the fourth long cycle.

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In the diagnosis of the conservative economists, this crisis is attributed to the excess intervention of the state in the economy. Although it has some foundation in reality, given the distortions that this intervention necessarily provokes, this diagnosis is basically false because it ignores the structural insufficiencies of regulation through the market in the context of oligopolistic capitalism; because it claims to return to a competitive economy of small and medium-sized companies that is no longer technologically viable; because it does not take into consideration the real basis of the crisis, that is of a technological and distributive nature; and lastly because their own proposals for economic policy, although apparently free-market, are actually also strongly interventionist. For example, for the monetarists to succeed in the firm control of the money supply that they talk about, they are forced to a degree of intervention in the economy that, at least in the underdeveloped countries, is only consistent with a high degree of political authoritarianism.

On the other hand, Keynesian and neo-Marxist economists claim to resolve the crisis through greater and more correct state intervention. Through a continual process of trial and error, the state would go on correcting not only the distortions of the market, but also the distortions caused by its own intervention. This position is more consistent with the reality of oligopolistic capitalism. However, it is necessary to note that although the intervention of the regulating state is indispensable and inevitable, it is also clearly limited. By intervening in a process of accumulation in which the basic variables -- the rate of surplus value, the profit rate, the interest rate, the wage rate, the exchange rate, the price level, the technical and organic compositions of capital, the output-capital ratio and the productivity of labour, the accumulation rate and the growth rate of the economy -- are all built in and subject to the law of value, it is easy to understand that the limits of the governmental economic policy are very narrow. When the law of value demands that commodities be traded in keeping with production prices, it imposes very definite limits on the system in of incentives and subsidies on the one hand, and of taxes and surcharges on the other, that constitute the heart of any economic policy.

If the intervention tends to lead to the gap between market prices and production prices (that, in turn, are rigorously dependent on the value of the commodity) becoming wider rather than narrower, this intervention will tend to provoke more distortions than to correct them. Thus, economic policy -- and therefore, the intervention of the state in the economy -- is a central question of contemporary economic theory. The debate between neo-5Marxists, classical Keynesians, monetarists and supply-side economists is basically a debate on economic policy. But it is also a debate on the theory of value and on the dynamic of accumulation and of the wealth distribution between wages and profits. It is impossible to discuss economic policy without making an assumption about the theory of value and mainly on the laws that govern the production and distribution of goods. In the long-term, this means giving due consideration to the cyclical dynamics of capitalist accumulation and the wealth distribution between profits, wages, and salaries. It was on these last themes that this book was written.

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[1] See also Maddison, 1977. Mandel himself previously dealt with this theme (1975). See also David Gordon, 1978.

[2] A competent criticism of this theme was done by Klas Eklund (1980).

[3] Keynes's contribution is clearly limited to the short term. Long-term structural problems, related to the sphere of production, did not show any progress with Keynes. His contribution in the sphere of circulation for short-term analysis and, therefore, for analysing the cycle, is nevertheless decisive. As he was examining short-term problems, he concentrated on aggregate demand, and, concomitantly with Kalecki, opened new and decisive fields for economic theory.

[4] Note that after World War II the average duration of the cycles diminished due to the Keynesian economic policies of "stop and go." In our whole analysis of the cycle, however, _we will continue, in the name of simplification, to not consider state intervention. In any case, the statement that the cycles last from eight to ten years is a simplification.

[5] It is simplifying to note that in the United States, where an accounting of the net worth of families has already been _regularly done, this estimate totalled, in the last quarter of 1982, $10,241,000,000. The variations in this amount directly affect consumption (The Morgan Guarantee Survey, 1983:1-4).

[6] Based on conclusive data collected by them and other authors cited in their article, Boddy and Crotty state: "Throughout the post-World War II, Post-Keynesian period, the profit share of income, indeed the absolute level of _profits, has fallen in the latter half of every expansion.

[7] The low sensitivity of investment to the interest rate has been verified in many empirical studies. For a wide bibliography on this, see Dale Jorgenson, 1971.

[8] It is interesting to note that in the underdeveloped _countries, which are not being discussed in this analysis – the ability of the state to carry out an anti-inflationary monetary and fiscal policy is much more reduced because, given the existence of surplus labour in the form of disguised unemployment, wages do not tend to grow strongly during a period of prosperity. Not having this threat over their profits, the capitalists also do not accept a recessive policy and immediately begin to pressure the government for it to abandon the recessive policy. This is not abandoned only if there is very strong pressure from the international creditors, in the case of a situation of external imbalance.

[9] Antonio Barros de Castro points out "the critical phase which capitalism enters around 1966. It therefore becomes, in the period in question, a relaxation of the social discipline of capitalism. The workers negotiate the conditions of their subordination to capital it in by item."

[10] Paul Singer correctly noted these facts in his pioneer article on Brazil, "Ciclos de Conjuntura em Economias _Subdesenvolvidas" (1986).

[11] On the United States, see mainly the theoretical and empirical works of Howard Shermann, Robin Hahnel and Thomas Weisskopf, already cited.