CHAPTER III

KALECKI’S THEORY OF INCOME DISTRIBUTION:

THE PROFIT SHARE AND THE “DEGREE OF MONOPOLY”

"According to [my] first theory the absolute level of profits is determined by capitalist consumption and investment.

According to [my] second theory the relative share of profits in national income is determined by the degree of monopoly” (Kalecki 1991, p. 121, emphasis in original).

I. Introduction

We have shown that income distribution plays a key role in Kalecki’s theory of effective demand. In chapter I we argued that in the author’s theory output and employment depend on capitalist expenditure, and on the share of profits in national income. We will now present Kalecki’s theory of income distribution. This is closely tied with his theory of price determination, and the latter is related with his view that modern capitalism is characterized by market imperfections, both on the labor market and on the product market. By focusing on these imperfections, Kalecki took into account two important differences between perfect and imperfect competition. We have already anticipated Kalecki’s perspective on this subject; however, to refresh the reader’s mind, we briefly take up the issue again.

The first difference is that under perfect competition, for any particular firm production is not limited by demand, but by costs and prices. Since individual firms face a horizontal demand curve, they are cost constrained, in that by slightly lowering
their price they can sell whatever quantity they want as long as marginal cost is below the market price. In contrast, in the case of imperfect competition firms are demand-constrained, because they would willingly produce more if only they could sell at the prevailing or a slightly lower price; but they cannot (or think they cannot) because their supply has an impact on the price. In consequence, while change in the level of aggregate demand cause price variation when competition is perfect, it entails also, or only, a quantity variation when competition is imperfect.

The second (and related) difference is that firms in perfect competition operate necessarily in the increasing part of their marginal cost curves. In contrast, the theory of imperfect competition predicts excess capacity as a long-term feature. An important aspect of this proposition is that firms can now operate in the constant part of their marginal constant cost curves.

Together both propositions mean, first, that prices remain relatively constant in the face of variation in demand. On the other hand, as regards income distribution, they imply that when demand changes this need not involve a change in income shares, as long as the degree of market imperfection does not change. This led Kalecki to posit that the distribution of income is determined by the price/unit cost ratio, or degree of monopoly, a term summarizing a variety of oligopolistic and monopolistic factors.

It is worth emphasizing that Kalecki’s model does not involve price rigidity. In a situation of perfect competition, price inflexibility arises generally as an approximation to incomplete price adjustment. In contrast, under imperfect competition prices are assumed to adjust as speedily as required; producers supply whatever is demanded at the price which they have set in their best interests. Assuming that price adjustment are incomplete is thus not the same as assuming firms are ready to meet
the demand forthcoming at any price set. This remark can help understanding the basic distinction made by Kalecki between price whose changes, in perfect competitive market, are largely determined by changes in the costs of productions and those prices whose changes, in imperfect competitive market, are determined largely by changes in demand, revealing especially this distinction is not based on difference on speed of price adjustment but on differences in industrial structure and in costs condition. Kalecki (1954 [1991]:209) posited: “Generally speaking, changes in the prices of finished goods are ‘cost-determined’, while changes in the prices of raw materials inclusive of primary foodstuffs are ‘demand-determined’”.

With his theory of income distribution, Kalecki further developed his theory of effective demand. He had already shown that, for a given distribution of income between profits and wages (our coefficient e from chapter I), changes in profits would bring about changes in the same direction of output and employment. Now he added that for a given level of capitalist expenditure— and therefore for a given level of profits— income redistribution between workers and capitalists, will provoke a change in aggregate demand and with it in the level of output and employment. The underlying reason is the different propensity to consume between workers and capitalists.

There is a strong complementarily between income distribution and income determination, which found expression in the idea that even though the profit share depends on the degree of monopoly, the profit level remains uniquely determined by the level of capitalist expenditure. This proposition is crucial. On the one hand, it emphasizes that variations in the degree of monopoly affect output and employment only by affecting effective demand through workers’ expenditure. On the other hand, it shows that if wages fall (rise), profits will not get higher (go down) because they are
entirely determined by capitalist investment and consumption, which are unlikely to change either in the current period or in the following simply because wages (or the wage share) changed.

We want to emphasize, however, that Kalecki’s decisive proposition on the causes of unemployment under capitalism does not require this theory of income distribution. However, the latter should be taken into account because it is realistic under contemporary capitalism, even as it completes and strengthens Kalecki’s theory of effective demand.

Finally, Kalecki’s theory of income distribution allows defining a new analysis of the wages-employment relationship, first in reconsidering the relationship between real wages and output by centering on imperfections on the product markets, and second in reconsidering the relationship between money wages and employment by centering on both imperfections on the labor and product market.

In this chapter we proceed in the following way. In the first section we expound Kalecki’s theory of income distribution. In the second section we present Kalecki’s theory of price determination, in the final version given by this author. This is followed by a section where we consider the relationship between wages and employment, by dealing in particular with the debate on the wages-prices-employment nexus after the General Theory. Finally we compare Kalecki’s with two other non-orthodox theories of distribution.

II. Kalecki’s theory of income distribution

To grasp the gist of Kalecki’s theory of income distribution, let us consider the case of a vertically integrated industry. To simplify the analysis we assume that all workers are productive workers and that the productivity of labor is given and is constant. Also, we define gross profits as the difference between the total value of
production and total prime costs, which are exclusively made up of wages in this simplified case. It can be easily seen that income distribution in an industry is entirely determined by the ability of firms to fix their prices in relation to prime unit costs. More concretely, the higher (lower) the price/unit-costs ratio, the higher (lower) the share of profits in respect to gross value added will be.

The intuition behind the previous reasoning is the following. Let us suppose that in the industry under consideration the wage rate and productivity per worker are given. Then, if firms raise prices, the price-cost ratio, and the unit profit margin will rise. But now workers will be able to buy a smaller share of the output (or the value added) of the industry than before, while capitalists will be able to buy a higher share of the value added. In other words, income distribution will change, against wages and in favor of profits.

Moreover, we may accept that in any given industry, the higher the monopolistic control of firms on the market, the higher their capacity to fix high prices (in relation to their costs). Therefore, the higher the monopolistic power of firms, and the higher the relative share of profits in income in the industry tends to be. This is probably the reason why Kalecki named “degree of monopoly” the price-cost ratio of the industry. Indeed, the latter is likely to be influenced by the intensity of the monopolization prevailing in the industry. But the “degree of monopoly” is a different and very specific term in Kalecki’s theory, since it refers solely to the price-cost ratio, and is determined by several factors. One, but only one of these factors is the intensity of the monopolization of the market1.

1 Abba Lerner proposed in 1934, the concept “degree of monopoly”, which can be expressed as the difference between price and marginal cost, divided by price.
We will now consider the more complex case of an industry that is not vertically integrated, that is to say, which buys to other firms some of the raw materials it uses. We maintain our assumption that the only labor costs are those of directly productive workers, and we suppose that there are no general costs (other than depreciation).

Let us denote by $k$ the ratio between unit price and unit prime cost (in this case, made up of unit wage cost, and unit material input cost); i.e. $k$ is Kalecki’s “degree of monopoly”. If we assume that the prime costs are constant (within the limits of productive capacities), and that everything produced in one period will be sold in this period, then $k$ will also equal the relation between total sales (or total gross income) and total prime costs. We can therefore specify the following equation:

$$P = (k-1) (W + MP) \quad \text{(III.1)}$$

In which $MP$ is the total cost of materials.

From our previous assumptions it follows that domestic income equals the total of paid wages plus (gross) total profits ($Y = P + W$). We can now express the share of wages in aggregate value as follows:

$$\omega = \frac{W}{W + (k-1)(W + MP)} \quad , \quad \text{(III.2)}$$

Or, when dividing everything by $W$, we will get:

$$\omega = \frac{1}{1 + (k-1)(j+1)} , \quad k>1 \quad \text{(III.3)}$$

When the theory of monopolistic competition applies, given the equality between marginal cost and marginal revenue, which is the necessary condition for profit maximisation, the degree of monopoly is equal to the reciprocal of the elasticity of demand. We come back to this issue later on.
Here, $\omega$ is the relative share of wages in the value added (or output), so that (under our simplifying assumptions that all workers are productive workers, and that overheads are negligible) $1-\omega$ is the share of profits in output; what we labeled in chapter I the coefficient e. As said, k is the “degree of monopoly”, or the ratio of aggregate proceeds to aggregate prime costs, (which is also equal to the ratio of average prices to average prime costs). j is the ratio of aggregate cost of materials to the wage bill. A rise in k or in j or in both will bring about a fall in the relative share of wages in value added.

We can now say in words what the previous equations convey. In any given industry, the share of wages in aggregate value is entirely determined by the degree of monopoly, as well as by the relationship between prime material costs and wages. For example, let us assume that the costs of prime materials rise and wages do not rise. Then, if the degree of monopoly remains constant, $\omega$ will drop. The explanation is simple. On the one hand, a larger share of the industry’s value added will have to be used to buy the necessary prime materials. Also, capitalists can “protect” themselves from the increase in their material costs by increasing the prices (the degree of monopoly is constant, the increase in costs is entirely transferred to prices). Since what is left to distribute to the productive factors has fallen, it follows that the wage earners can now buy only a smaller part of the product they produced.

This theory can be extended to the private sector as a whole. But then we will have a third factor, besides the degree of monopoly and the ratio of aggregate cost of materials to the wage bill that will determine the distribution of income. This third factor is the structure of the industry. In effect, the share of wages in value added will rise, if the relative weight of the industries in which this share is above the average rises.
Thus, income distribution is the result of the fight and strength of the two opposite classes. To say it with the words the author used in the title of his last paper on the subject, the “Class Struggle [determines the] Distribution of National Income” (Kalecki 1971 [1991]). But the class struggle manifests itself both in the labor market and in the market for commodities in general. The degree of monopoly reflects the relative force of capitalists and workers in these two markets.

III. Prices and costs in Kalecki’s theory

Given the fundamental role played by the price-cost ratio in his theory of income distribution, and also in his theory of effective demand, Kalecki found it necessary to formulate a theory of price determination. As mentioned, he accepted that certain prices, and more precisely prices of raw materials and of agricultural goods, are demand-determined. However, prices of finished goods are cost-determined.

Regarding prices of finished products, we will start with Kalecki’s final specification; namely, the last theory he proposed. We will afterwards put forward a hypothesis of why, in our view, this was Kalecki’s preferred option. In the next chapter we will further discuss the different steps followed by the author to get to the final version of his theory.

In this final specification (Kalecki, 1954) the only factors influencing the pricing decisions are the firm’s average prime costs and the average price of the industry. On the one hand, “the firm must make sure that the price does not become too high in relation to prices of other firms, for this would drastically reduce sales”. On the other hand, the firm must make sure “that the price does not become too low in relation to its average prime cost, for this would drastically reduce the profit margin.”
Kalecki, 1954 [1991]: 210). This reasoning is formalized with the following pricing equation:

\[ p = mu + np \]  \hspace{1cm} \text{(III.4)}

Where \( p \) is the price charged by firm in question, \( u \) is unit prime costs, \( \bar{p} \) a weighted average of the prices charged by the firm belonging to the same industry and producing ‘similar’ products (weighted by the respective outputs and inclusive of the firm in question) and \( m \) and \( n \) are two positive coefficients representing the decisional parameters of the firm.

Summing over all firms in the industry, Kalecki thus deduces the following equation:

\[ \bar{p} = \frac{m}{1-n} \bar{u} \]  \hspace{1cm} \text{(III.5)}

Here, \( \bar{m}, \bar{n} \) and \( \bar{u} \) are weighted average of the respective variables appearing in the price equations of each of the \( i \)'s firms. From the characteristics of the price system, it ensues that prices in an industry depends on \( \bar{m} \) and \( \bar{n} \): an increase in \( \bar{m} \) and \( \bar{n} \) entailing a corresponding increase in \( \bar{p} \): “The coefficient \( m \) and \( n \) characterising the price fixing policy of the firm reflect what may be called the degree of monopoly of a firm’s position” (Kalecki 1954 [1991]: 211). Introducing a representative firm for which the coefficient \( m \) and \( n \) are equal to \( \bar{m} \) and \( \bar{n} \) for the industry and where degree of monopoly is equivalent to the average of the industry, the relationship between average price and average prime costs is rewritten as
\[ \bar{p} = k\bar{u}, \] where \( k = m/(1-n) \) determined what Kalecki called the degree of monopoly.²

As the reader may have noticed, the pricing policy of the firms, as encapsulated in this equation does not appear to be the outcome of an optimization procedure. Why did Kalecki choose precisely this equation?

The prevailing interpretation is that within the development of his thought, there was an early marginalist phase followed by a non-marginalist one. Having first linked his initial pricing theory to Robinson's and Chamberlin's theory of imperfect competition (Kalecki 1936, 1939, 1941, 1943) Kalecki would have subsequently abandoned it in his last formulation (Kalecki 1954, 1971). We will suggest here that there are two possible explanations for Kalecki's evolution of ideas, not necessarily contradictory among themselves. One is related to the methodological preference of the author. The second one is that this equation can be made compatible with an optimizing behaviour of firms under certain very specific assumptions. In this chapter we will deal with Kalecki's methodological approach; and we will discuss Kalecki's relationship to the marginalist school of thought in a different chapter.

Kalecki argued “In view of the uncertainties faced in the process of price-fixing, it will not be assumed that the firm attempt to maximize its profits in any

² Let us recall here a remark which is important for understanding the formula \( \bar{p} = k\bar{u} \). “The degree of monopoly may but need not necessarily, increase as a result in overheads in relation to prime costs. This and the emphasis on the influence of prices of other firms constitute the difference between the theory presented here and the so-called full-cost theory” (Kalecki, 1954 [1991]:216; emphasis in the original).
precise sort of manner” (Kalecki 1954 [1991]:210). Now, in an uncertain environment, firms lack the necessary information to optimize an objective function. Under these conditions, we may assume that they try to use as best as possible such information as they may have. The information they know with the greatest (though not absolute) precision is that on their own prime costs, on the price of competitors, and on how would any change in their own price affect the average price of the industry\(^3\). Thus, the supposition that the price of the firm will be a function of its prime cost and of the average price of the industry seems a natural one. Furthermore, if we assume that the firm will use a very simple and straightforward rule to make its decision, then the equation \( p = mu + n\bar{p} \), which is linear in its two arguments, seems also a very sensible and natural option.

Therefore, we may propose that with his pricing formula, Kalecki decided to make a radical departure with the extant price theory, and to give an altogether different microeconomic foundation to his macroeconomic analysis. As we already argued, this different microeconomic foundation is not based on an optimizing behavior, simply because under uncertain conditions firms do not have the requisite information to follow an optimizing procedure. With his microeconomic proposal, Kalecki also opened a new line of research for a non-

\(^3\) Hence his assumption that in setting their price, firms include their own output and price in the weighted average price \( \bar{p} \).
conventional microeconomics\textsuperscript{4}. Finally, note that it can be proved that this pricing equation is also an optimal one under conditions of uncertainty (Bhaduri and Falkinger, 1990).

\textbf{IV. Money wages flexibility, output and employment}

One important factor shaping the distribution of income is the level of money wages. But changes in money wages are also important because, by affecting distribution, they have an impact on other macroeconomic variables, and especially on output and employment. The reader may recall that all classical economists, included Marx, had argued that if money wages decline, profits, output and employment would increase. As we mentioned in the introduction to this book, money wage flexibility was, and still is, the basic mechanism through which, in conventional analysis (though not in Marx's), a capitalist economy is supposed to ensure full employment.

This idea links what happens in a private firm with what happens in the whole economy. Let us consider a firm in isolation. Since its (gross) profits are the surplus of total income, once wages are subtracted, the drop in wages would mean an increase in profits. This may then bring forth, with a certain time delay, an increase in the firm's output, employment and investment. Extending the argument to the whole economy, it would appear that lower nominal wages would bring about an increase in output and employment. But the following question should be asked: Can

\textsuperscript{4} Game theory is also an alternative approach to the one based on optimizing behavior of firms. However, to reach any meaningful result it too has to assume firms have an enormous amount of information.
we extend this analysis to the whole economy by simply adding up what happens to a particular firm?

Kalecki's rejected the view that you can reach macroeconomic results by simply adding up what is valid at the level of a particular firm. To start with, he acknowledged that firms operate in imperfect markets and possess a monopolistic power, due to the differentiation of their products, which allows them to fix their price by marking up prime unit costs. The existence of a markup implies that the marginal productivity of labor exceeds the real wage per worker, and that no univocal association (much less a negative one) exists between employment and wages. Let us therefore see how he envisaged the whole issue. In this chapter we will discuss the point considering a closed economy. In a different chapter we extend the analysis to an open economy.

First of all, let us assume, with Kalecki, that in any given short period, capitalist expenditure on investment and consumption is predetermined in real terms. That is to say, it has been decided in previous periods and will not change significantly; unless the economic situation changed drastically. This assumption was justified in chapter I and we need not rationalize it further here. Secondly, we assume that prime unit costs are constant (this assumption is not essential, but simplifies the reasoning).

Now, if money wages decrease, for example due to a lower bargaining power of workers because of high unemployment, two things can happen. One possibility is that prices are flexible and that they will decrease to the same extent as monetary wages. If this is the case, real wages will not change, because they are equal to money wages deflated by the price index. Total real profits will not change either,
since the real expenditure of the capitalists has not changed. We have assumed that this expenditure is constant in real terms on the short run\(^5\).

In other words, when we assume that the decrease in prices stands in proportion to the increase in wages, the real wage and income distribution (coefficient e) will be constant\(^6\). Since the profits from this period are not affected by the decrease in nominal wage, then they will also be constant. If capitalists do not immediately raise their consumption and investment after the fall in nominal wages, the benefits of firms will not rise either. But then, real income, which depends on profits and on the share of profits in output, will also remain unchanged.

We will now consider a second possibility; namely, that the decrease in money wages will not be completely transferred to prices because of imperfect competition. Kalecki argued about this possibility as follows: “there is a divergence between the prices and the marginal costs due to cartelization or imperfect competition. Moreover, the reduction of wages will tend to cause a rise in this divergence because most likely some prices will prove to be ‘rigid’ and thus will fail to decline in the same proportion as wages. Consequently the real purchasing power of the workers will decline…As a result, the demand for wage goods will fall and in consequence the employment in the corresponding department as well” (Kalecki, 1939 [1991]: 35-36).

Let us consider the chain of events in detail. In this case real capitalist expenditure will not change either. But workers consumption will. Then, as a result,

\(^5\) But money expenditure of capitalists falls.

\(^6\) To simplify, in this paragraph we assume that j, the ratio of aggregate cost of materials to the wage bill, does not change.
real profits will not change but effective demand, and therefore income, will change. That is to say, capitalists will now get a greater relative share of a lower total income. In fact, the decrease in real wages triggers a decrease in the consumption of wage earners, which – under our supposition that workers do not save – equals the decrease in wages. In other words, when the demand directed to the sector producing wage-goods decreases, then production and employment will decrease too.

From another angle, the constancy of real profits can easily be deduced from their definition as the difference between total sales and total prime costs. Upon a decrease in wages, total sales fall with an amount equal to the decrease in the consumption of wage earners (plus the decrease in sales of inputs, if we drop our assumption that firms are vertically integrated). Costs will drop with an amount equal to the decrease in wages (plus the decrease in costs of intermediary input). If wage earners do not save, the decrease in sales equals the decrease in costs, and gross profits remains constant (if workers do save, sales decrease less than costs and profits will rise). Profits do not only need to be produced, they also need to be realized. This will only occur when there is a similar amount of higher capitalist expenditure. If capitalist expenditure remains unchanged, profits will remain constant too.

But on the other hand, given the constancy of capitalist expenditure, the decrease in the consumption of wage earners triggers a decrease in effective demand and in total income. Or, looking at it from another angle, given capitalist expenditure (and therefore gross profits), the decrease in wages and the relative share of wages in gross value added leads to a decrease in income. This occurs because a change in income distribution negatively affected effective demand. This
can be easily seen if we look at the final specification of Kalecki’s theories of effective demand, and of income distribution:

\[ Y = \frac{P}{e} = \frac{I + Ck}{1 - \omega} \]

\[ \omega = \frac{1}{1 + (k - 1)(j + 1)} \]

The wage reduction brings about a fall in coefficients k, the price-cost ratio, and j, the ratio of ratio of aggregate cost of materials to the wage bill. Therefore, \( \omega \), the relative share of wages in value added, will drop. Since capitalist expenditure is given, demand and output \( Y \) will decline.

Clearly, the deflationary process derived from this type of income redistribution is accompanied by a decrease in employment. But it is also accompanied by a decrease in the wage-goods-sector’s utilization of the productive capacity, and by a change in the distribution of profits.

Simplifying, we suppose that prices do not decrease when wages drop. In those sectors producing investment goods (sector I) and consumer goods for capitalists (sector II) sales do not fall, but wages will decrease. Thus profits rise in

\[ Y = \frac{I}{s(\omega)}, s' < 0 \]

A fall in the share of wages (a rise in the share of profits) in income, reduces demand and output for a given level of investment, because the saving propensity rises.
both sectors. However, in the sector producing wage goods (sector III) sales decrease more than wages. In this sector profits decrease by the same amount as they rise in the other two sectors. In effect, given that the sales are constant and that wages decrease with an amount equal to (in an obvious notation) $\Delta W_1 + \Delta W_2$, profits in sectors I and II will rise with an amount equal to $\Delta W_1 + \Delta W_2$. In sector III, however, sales decrease with an amount equal to $\Delta W_1 + \Delta W_2 + \Delta W_3$. That is to say, with an amount equal to the total decrease in wages, whereas costs decrease with an amount equal to $\nabla W_3$. Therefore, the decrease in the profits of sector III, equal to $\Delta W_1 + \Delta W_2$ equals the increase in the profits of sectors I and II.

Kalecki summarized the whole process as follows: “A reduction in money wages is usually accompanied as a result of ‘price rigidity’ by an increase in ‘the degree of monopoly’, and consequently leads to a reduction in real wages as well. However, this decline is accompanied by a fall rather than a rise in employment. The slump of employment in question affects the wage good industries, while employment in industries producing investment and capitalist consumer goods remains unchanged. The real income of the capitalists does not rise, but the real income of the workers declines” (Kalecki, 1939 [1991]: 36).

V. Further comments on the relationship between wages and employment

An important feature of Kalecki’s first theoretical works was his view whereby there exists an inverse association between money and real wages; a view that he would later modify.

Kalecki’s original argument for this association had two strands. The first, concerning the labour market, was an explanation of the relation between money
wages and employment. The second, concerning the product market, was an explanation of the relation between real wages and output. Real wages should be decreasing, and money-wages increasing, when output or employment rise. The argument goes as follows. Money wages are supposed to decrease in the face of greater excess of labor supply; workers being readier, because of a decrease in their bargaining power, to accept wage-cuts when unemployment is rising. As for the second point, Kalecki’s argument was that, due to diminishing returns and the associated shape of the short run-run marginal product of labour, real wages have to increase when effective demand decreases. Then, at a short period equilibrium, we get a negative correlation between real and money wages. As is well know Keynes reached similar conclusions. Moreover, at the beginning of the *General Theory* he stated the following conjecture:

“It would be interesting to see the results of a statistical enquiry into the actual relationship between changes in money-wages and changes in real wage. [...] When money wages are rising, that is to say, it will be found that real wages are rising. This is because, in the short period, falling money wages and rising real wages are each, for independent reasons, likely to accompany decreasing employment; labour being readier to accept wage cuts when employment is falling off, yet real wages inevitably rising in the same circumstances on account of the increasing marginal return to a given capital equipment when output is diminished.” (Keynes 1936: 9-10)

In two articles, Dunlop (1938) and Tarshis (1939) rejected, on empirical grounds, Keynes’s conjecture. Dunlop, examining the question using the British data for the period 1860-1937, concluded “increase in wage rates have usual been associated with increased real wage rates, while decreases in wage rates have equally often been associated with a rise or fall in real wage rates.” (1938:432). In an
article based on US monthly data for the period 1932-1938, Tarshis concluded for his part that empirically there is a rather high direct or positive association between changes in money wages and changes in real wages.

Before Dunlop and Tarshis published their results questioning Keynes conjecture, Kalecki had tried to reconcile his theory of effective demand with statistical data.

When dealing with Kalecki’s employment model and his theory of income distribution, we saw that a crucial aspect of his message as regards unemployment, is that wages decreases are inefficient and probably also destabilizing.

At an early stage of the development of his theory, he had written: “We can say, therefore, that during a crisis...a reduction of wages causes a reduction of prices, but the interval between these events does not permit workers to benefit immediately, while further reductions of wages eliminate altogether the possibility of their being able to do so. As a result, the standard of living of the working class and its share in social income fall, but at the same time the increased share of the capitalists in the social income flows more and more into unsold stocks” (Kalecki, 1932 [1990]: 43-44).

The effects of a fall in money wages on employment suggested by Kalecki in 1935 can be summarized by the following development:

“Let us assume that wages have been in fact generally reduced, and likewise taxes as a counterpart of cut in civil servant salaries. Now the entrepreneurs, owing to the ‘improved’ price-wage relation, utilize their equipment up to capacity level and in consequence unemployment vanishes. Has depression thus been overcome? By no means, as the goods produced has still to be sold. Now, production has risen considerably and as a result of an increase in the price-wage relation the part of
production equivalent to profits (including depreciation) of the capitalists (entrepreneurs and renters) has grown even more. A precondition for an equilibrium at this new higher level is that this part of production which is not consumed by workers or by civil servants should be acquired by capitalists for their increased profits; in other words, the capitalists must spend immediately all their additional profits on consumption or investment. It, is however, most unlikely that this should in fact happen.

Capitalist consumption changes in general but little in the course of the business cycle. It is true that increased profitability stimulates investment but this stimulus will not work right away, since the entrepreneurs will temporize until they are convinced that the higher profitability is going to last; therefore the immediate effect of increased profits will be an accumulation of money reserves in the hands of entrepreneurs and in the banks. Then, however, the goods which are the equivalent of the increased profits will remain unsold. The accumulating stocks will sound the alarm for a new price reduction of goods which do not find any outlet. Thus the effect of the cost reduction will be cancelled. On balance only a price reduction will have occurred, offsetting the advantage of the cost reduction to the entrepreneurs, since unemployment going hand in hand with under-utilization of equipment will reappear."

(Kalecki 1935 (1990):188)

In fact, as we already discussed, one strand of Kalecki’s development on the effect of a fall in wages on the degree of monopoly, was to demonstrate that positive effects of wages adjustments, giving rise to the so-called Keynes’s and Pigou effects, may be neutralised. Moreover, he claimed that these adjustments can reduce employment and produce destabilizing effect, either by generating a crisis of confidence caused by the increase in the burden of debts of firms or by increasing
the degree of monopoly and redistributing income in disfavour of workers. This is the reason why Kalecki was greatly interested in formulating a theory relating money wages to employment. This theory should, on the one hand, take into account the observed pattern of wages behavior; namely, that wages react positively to fall in unemployment due to the increase in the bargaining power of workers. But besides, the theory should make it possible to study the dynamical effects of wages decreases (i.e., whether or not wages fall reduce employment).

In this context, Kalecki gave another, a novel and very important reason why a wage fall may fail to raise employment, and in fact may result in higher unemployment. Let us discuss this point in detail.

Centring his efforts on the relationship between real wages and employment, Kalecki resorts almost exclusively to imperfect competition on the product market to stick his theory with facts. Among all the reasons that can be set forth against the conjecture of a positive association between real and money wages, he thought from the beginning that the main one was the unrealistic character of the perfect competition assumption on the product markets. In that respect, imperfect competition allowed modifying two assumptions of his original reasoning. One modification is to assume firms can operate, due to excess capacity, in the horizontal part of their marginal cost. The other is to allow for the variability of the industrial structure along the cycle.

Looking at the problem from the point of view of costs, any attempt to explain the observed cyclical behaviour of real wages suggest rejecting the assumption of diminishing returns and the associated negative relationship between real wages and employment. Kalecki put this assumption into question by considering the possibility of excess capacity. Following Harrod (1936), he considered that the
marginal cost is constant and equal to average cost up to the point of full capacity utilization. After this point, marginal cost and average cost are no more equal and the divergence between both curves of marginal cost and average cost become increasing. On the basis of realism, Kalecki stresses that most firms are operate below the point of “normal use” of equipment. In order to do so, he invoked imperfect competition.

“Such a state of affairs is possible only with the existence of monopoly or imperfect competition. If free competition prevails […] enterprises must close down or maintain such a degree of employment that the marginal cost is higher than the average cost” (Kalecki 1938: 102-103).

Besides this discussion about the shape of marginal real cost curve, there is another line of reasoning related to imperfect competition concerned by the analysis of the determinants of the mark-up and its possible variability during the cycle.

Drawing on Chamberlin’s monopolistic competition framework, Harrod (1936) addressed for the first time the question of the causes for changes in the degree of monopoly during the business cycle. As we know, the necessary condition for profit maximisation is the equality between marginal cost and marginal revenue. Now, under imperfect competition, the difference between price and marginal cost, divided by price, is equal to the elasticity of demand. It may therefore be considered, according to what Lerner proposed in 1934, as a measure of the degree of monopoly. In the case of constant marginal costs, given that under perfect competition price equals marginal cost, the degree of monopoly measures the share of monopoly revenue (arising from the equality of price and marginal cost) in total receipts. Assuming that “as income rises the elasticity of demand becomes less” (Harrod 1936:86), Harrods arrived at the conclusion that the degree of market
imperfection decreases in the upswing and increases in downswing. Harrod rationalized this with the notion that the greater the income is, the lesser the expected value for searching for better opportunities among close substitutes will be. This is what was identified in Joan Robinson as Harrod’s “law of Diminishing Elasticity of Demand”: when income increases, the elasticity of demand decreases, so that the degree of monopoly increases. His reasoning led Harrod to conclude that markups are procyclical, a feature which according to him can “be taken for granted as established by wide observation” (Harrod 1936:84).

However, Harrod’s claim would entail that the counter cyclicality of the real wage would be reinforced; which was not supported by the available information. This is why Harrod’s conclusion was rejected, first by J. Robinson in her review of Harrod and then by Kalecki (1938) and Abramowitz (1938). As sharply put by Kalecki:

“Mr Harrod was rightly criticised in that there exist other factors which influence the degree of monopoly in the opposite direction” (Kalecki, 1938:111)

Among different factors that would invalidate Harrod’s conclusion, Robinson (1936) argued that, due to the variability of the number of active firms along the cycle, the tendency is just the opposite:

“The degree of monopoly does not depend only on the imperfection of the market for a commodity, but also on the number of separate units of control engaged in selling it” (Robinson 1936:59)

This argument can be developed under a Cournot-type model. It is related to oligopolistic factors showing how the creation and of firms over the business cycle and the influence of the number of firms can react on the degree of monopoly and hence countervail the influence of Harrod’s Law, and bring about counter cyclicality
of mark-ups. Drawing from another important argument from Joan Robinson\(^8\), Kalecki arrived at a similar conclusion. According to him, the counter cyclicality of the mark-up relies on the fact firms are reluctant to reduce prices for fear that competitors will be pushed to emulation.

“[…] there exit other factors which influence the degree of monopoly in the opposite direction. For instance, in the slump, cartels are created to save profits and this of course increases the degree of monopoly, while they are afterwards dissolved in the boom because of improving prospects of independent activity and the emergence of outsiders. It must be added that the fall in price of raw materials in the slump creates among the entrepreneurs a reluctance ‘to pass it on to the buyer’, and this too, of course, increases the degree of monopoly. And it can be stated, on the basis of data quoted above, that the influence of these factors in raising the degree of monopoly during the slump is stronger than that of the diminishing imperfection of the market.” (Kalecki 1938 (1990): 18)

Different authors have tried to represent such an oligopolistic coordination, which stimulates competitors to cooperate (reducing their incentives to compete), despite their partly divergent interests. It may be interesting to make a digression here and briefly consider some one the pioneering works on this subject. At the time Kalecki wrote, a line a though was developed whereby it was assumed that the oligopolist sets his price under the belief that their rivals would not follow his price increases, but would on the contrary match his price decreases. This behaviour

\(^8\) “Since the fear of loss is more powerful than the hope of gain, the tendency towards restrictive combinations is stronger in a slump than in a boom” (Robinson 1936; 59-60)
would result in a kink in each firm’s demand curve (the demand becoming inelastic for price reductions and elastic for price increases). Hall and Hitch (1939) are, together with Sweezy (1939), the founders of the kinked demand curve approach. The analysis of Sweezy (1939), based on the notion of an “imagined demand curve” (suggested by Kaldor), is probably the most interesting. It is based on the assumption that oligopolistic firms have asymmetric conjectures concerning the effects of their price choice on their rival's reactions. It is the demand perceived by the firm which is kinked at the current price:

“From the point of view of any particular producer this means simply that if he raises his price he must expect to lose business to his rivals (his demand curve tends to be elastic going up), while if he cuts his price he has no reason to believe he will succeed in taking business away from his rivals (his demand curve tends to be inelastic going down)” (Sweezy 1939:405)

Since the corresponding marginal revenue curve has a discontinuity at the quantity corresponding to the kink, and the marginal cost curve passes between the two segments of the marginal revenue curve, a movement of the former need not affect the short-run equilibrium price and output. From a macroeconomic point of view, it is important to analyse the effect, in such a model, of a shift in demand. Sweezy proposed:

“It may be suggested that an increase in demand leading to a fuller use of capacity, more difficulty in getting quick delivery, etc., will make the imagined demand curve less elastic for upwards movements in price. For downward movements in price the result is likely to be a more elastic curve, since it may be assumed that rivals are less worried about losses in business and hence less ready to retaliate against a price cut” (Sweezy 1939:407)
The opposite can be expected in case of a decrease in demand; thus, contrarily to what happens in the case of an increase, the gap between the two segments of the marginal revenue curve will widen. In Sweezy’s words:

“The result will be that the producer will be more anxious than ever to hold his price where it is. […] as far as the cyclical behaviour of oligopoly prices is concerned we might expect to find (1) that prices go up easily and openly in time of upswing; (2) that prices resist downward pressure in times of recession and depression; and (3) that list prices become less trustworthy guides to real prices the longer bad times last” (Sweezy 1939: 408)

Kalecki was surely familiar with such a type analysis, since he worked at the Oxford University Institute of Statistics with LEQUEL DES DEUX? Hall and Hitch. We will deal with the question of the links between this type of reasoning and Kalecki’s analysis of the pricing decisions of oligopolists in chapter 4, where we explore the genesis of Kalecki’s thought on imperfect competition.

Let us now return to Kalecki’s theory. Assuming that the influence of factors related to the imperfection of the market, represented by the elasticity of demand, are lesser than the factors related to collusive behaviour between firms, he proposed that the degree of monopoly evolves counter cyclically within the cycle. However, this does not imply the pro cyclicality of the real wages. As his formula of income distribution points it out, the relative share of labor in national income depends on both the degree of monopoly and the ratio between unit wage costs and prices of basic raw materials. If both factors are stable, the relative share of labor will also be necessary stable. It can also be stable if both factors offset each other. And it is this explanation Kalecki defends: “The apparent stability of relative shares in the cycle is in reality the effect of the opposite changes of $\mu$ (the degree of monopoly) and $T/Y$.
As we saw, factors determining the evolution of the degree of monopoly ought to be found in the various sources of price rigidities in the product market, and in the cooperative behavior among firms, which tends to protect profits during the business cycle by reinforcing their market power in the slump and reducing it in the boom. Factors relating to the shape of cost curves in raw material sectors act in the opposite direction, reducing the wage share during boom, and decrease it during slumps.

“This is due to the fact that marginal-cost curves in agriculture and mining, as distinct from other sectors of the economy, slope steeply upwards. In addition, wages in agriculture fluctuate much more strongly during the business cycle than in other branches of the economy. The rise (or fall) in the price of basic raw material relative to labour costs causes, as was shown above, an increase (or decrease) in value of $T/Y$. Thus the value of $T/Y$ must rise in the boom and fall in the slump.” (Kalecki 1938 (1990):18)

Keynes recognized the originality of Kalecki’s explanation of the considerable stability of the relative share of wages in national income. However, he did not consider it totally satisfactory.

“Kalecki makes, to the best of my understanding, no definite progress toward explaining why, when there is a change in the ratio of actual to capacity output, the corresponding changes in the degree of the imperfection of competition should so exactly offset other changes” (1939:49).

We think that Keynes missed the point, and in our opinion he also was asking too much form Kalecki. The latter never asserted that changes in the degree of use
of capacity should bring about changes in the imperfection of competition that exactly offset other changes. Anyway, years Kalecki gave was we consider an indirect answer to Keynes’s observation, stating:

“the interpretation of the movement of the ratio of proceeds to prime costs in terms of changes in the degree of monopoly is really the task of the economic historian, who can contribute to such a study a more thorough knowledge of changing in industrial conditions” (Kalecki, 1954 [1991]: 220).

5. Kalecki’s and non-orthodox theories of distribution. DRAFT

We will now compare Kalecki’s theory of distribution with two other non-orthodox theories.

a. The “Keynesian” theory of distribution.

Probably influenced by Kalecki, though very critical of his theory of income distribution, Kaldor (1956) proposed what he called a “Keynesian” theory of distribution. The story can be easily understood if we start from the conventional Keynesian equation:

\[ Y = \frac{I}{s_p} \]

Where \( I \) is (private) investment and \( s_p \) is the saving propensity out of profits (we assume workers do not save). (Kaldor 1956: 95) argued:

“The Keynesian hypothesis that investment…can be treated as an independent variable…together with the assumption of full employment, also implies that the level of prices in relation to the level of money wages is determined by demand: a rise in investment and thus in total demand, will raise prices and profit margins, whilst a fall in investment and thus in total demand, causes a fall in prices (relative to the wage level)...Assuming flexible prices (or rather flexible profit
margins) the system is thus stable at the level of full employment.” Kaldor did not imply that “there would be an inherent tendency of a smooth rate of growth in a capitalist economy” (Ibid, 97). However, the notion that the price-cost ratio, or degree of monopoly, depends on the state of demand, may lend itself to such an interpretation. In fact, this latter idea has been recently put forward by the so-called New Keynesian School, whereby it is lack of price flexibility that explains unemployment. The general notion is that firms keep a close look to their degree of utilization of capacities. When this is very low, that is to say that it is far below what is considered normal, they then reduce prices, and unit profit margins (or degree of monopoly) in order to increase sales and lift the utilization of their capacities.

Kalecki had recognized before the so-called Keynesian theory of distribution were proposed, that in capitalist economies firms facing high excess capacity might reduce profit margins. He suggested, however, that this process would not be without limit. He wrote (Kalecki, 1990 [1945], p. 381), "If...the degree of utilization of equipment falls [this] may result in a 'shift from profits' which will increase the propensity to consume.... There will, however, be a limit to this movement; for after all firms reach the position where they are working below their full capacity, a further fall in the degree of utilization is unlikely to cause any significant shift from profits...."

In fact, it was Kalecki's closest collaborator, Josef Steindl (1976 [1952]), who first put forward this "Keynesian theory of distribution"; and he also qualified its validity historically. Steindl argued that in capitalism's early stages margins could be reduced in times of recession, when there is a high degree of idleness in installed productive capacity. This would occur because if demand were depressed, the lowest-cost firms would endeavor to widen their markets by lowering prices and profit margins. In later stages of capitalism, however, this keen competition would decline. His argument was
that in capitalism’s early stages, small or "marginal" firms with higher costs, so easy to eliminate through a price war, represent an important share of the market in every industry. In later capitalism, characterized by monopolies, "marginal" firms have a smaller share of the market. A price or margin war could break out between big, powerful (and difficult-to-eliminate) firms, but such a war would be costly and its outcome doubtful.

Kalecki, as we explained before, argued that during upswings and downswings the degree of monopoly could vary, but he dismissed the idea that apart from short-term stickiness, it would so vary as to offset the effect of changes in investment on aggregate demand. More importantly perhaps, downward wage flexibility would make unemployment worse if prices would tend to fall less than money wages. The consequent shift to profits would bring about a proportional fall in demand and employment larger than the proportional fall in investment. Thus, when unemployment of labor exists, it is profit margins and the degree of monopoly that must be flexible downwards. In stark contrast with the Neo- and New Keynesian conclusion, real wages need to rise in order for increases in consumption to offset decreases in investment. Nominal wage stickiness, or a low degree of downward flexibility, is thus something to be commended, rather than disapproved.

b. Surplus-based theories of distribution (Sraffa).

We will now contrast Kalecki and Sraffa’s (and, by extension, the so-called neo-Ricardian) theories of distribution. Both rely –implicitly, in the case of Kalecki-- on the notion of surplus to explain profit. However they show clear differences as regards their main concerns and emphases. Kalecki developed his theory of income distribution with the main purpose of analysing the effects of changes in income shares on effective demand and on the macroeconomy. Sraffa’s main objective was
to put forward an alternative theory of distribution to the marginalistic one, and in this context showed the association between distribution and relative prices. Thus, while Kalecki assumed output as one of the variables of his system, Sraffa supposed that total output as well as its composition is given.

We shall not explain here Sraffa’s theory, but only refer to some of the main characteristics of his scheme. The first characteristic is the following: given one of the distributive variables, the wage rate or the rate of profit, it is possible to determine all relative prices, as well as the value of the other distributive variable. Given total output and its composition, we can obtain the total sum of the wages paid, the total amount of profits, as well as the relative shares of wages and of profits in national income.

Secondly, it can be shown that an inverse relationship exists between the distributive variables. That is, when wages fall, profits increase and vice versa.

Thirdly, it can be shown that when a fall (rise) in wages in a certain proportion occurs, the price of no commodity could fall (increase) in a higher proportion than that in which the wage has fallen (increased). It follows that there exists a direct (positive) and univocal relation between the rate of profit and the average price of all commodities produced, on one hand, and wages on the other. In other words, the higher the average price of commodities in relation to wages, the higher the rate of profit and vice versa.

Sraffa gives no indication as to which of the distributive variables should be considered as given in order to determine the system; except for his suggestion that the rate of profit is able to be determined from outside the system of production, especially by the level of interest rates (Sraffa, 1960). However, to see how the scheme works, let us suppose that in the system, the real wage obtained does not
correspond to the bargaining capacity that the workers have in this moment. The immediate cause of such a situation would naturally be given if a profit rate existed which was higher than what may be called the “normal” profit rate.

Faced with such a situation, workers can react by demanding higher nominal wages which also cause real wages to rise. Thus a mutual process of adjustment is produced in which businesses try to maintain their profit rates by transferring wage increases to prices, and in turn, wage earners fight for new pay raises. It is possible that permanent inflation ensues from such a process if neither party gives way. But it is also possible to reach a state of equilibrium. This would be reached if, and only if, the profit rate falls and the real wage increases until each one of the parties receive its "normal" level of income.

It can be seen that the distribution income between profits and wages is completely determined by whatever the firms’s capacities may be to fix and obtain prices above their production costs. Or, looking at it form another angle, the higher the workers' bargaining power, the higher wages will be, understanding bargaining power to be the workers' capacity to claim and obtain increases in nominal wages and to avoid their transference to prices.

The reader will have noticed that the main thrust of the argument in the proceeding paragraph is can be also developed on the basis of Kalecki's theory; especially the references made to price fixing based on the price policies of firma; as well as the consideration that income distribution is a result of such policies and the general class struggle. We thus clearly see that Kalecki and Sraffa’s theories are quite compatible. The relative share of wages in the value added of an industry is entirely determined by the rate of profit and by the relation between total costs of the raw materials and total wage costs of the industry in question. Or in Kalecki’s words
"...the relative share of wages in the value added is determined by the degree of monopoly and by the ratio of the materials bill to the wage bill (Kalecki; 1954).

However, an important difference exists between the two theories. In Sraffa’s scheme, on supposing that total output and its composition are given, the problem of realization does not arise, nor does that of different spending patterns between wage earners and capitalists. It can be demonstrated, even taking into account the "realization" problem, that the inverse relation between wages and profit margins (that is, sales minus costs in relation to costs) would be maintained. However, when the problem of realization (in a closed) economy is considered, this inverse relation between total wages and total profits is lost. Indeed, as Kalecki pointed out, an increase (fall) in wages would not necessarily provoke a fall (increase) in capitalist expenditures, by which their total realized profits (which are equal their expenditures) would not change. In fact, with his assumption that output is given Sraffa—and neo-Ricardians—left out of the picture one crucial aspect of capitalism.