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Income Distribution and Crisis in a Marxian Schema of the Monetary Circuit

Abstract: This paper aims to provide an interpretation of economic crises by superimposing Marxian and institutional issues on the theoretical framework of the monetary theory of production. The dynamics of wages are considered, along with investment and conspicuous consumption on the part of rentiers, in order to show that the current economic crisis ultimately results from the combination of declining wage shares, increasing financial rents, and reduced investment.

Key words: economic crises, income distribution, Marx

This paper aims to provide an interpretation of the economic crises by superimposing Marxian and institutional issues on the theoretical framework of the monetary circuit approach (MCA). To do so, a rational reconstruction approach is used, in which philological aspects associated with the interpretation of Marx’s thought are shown to be secondary, while the primary focus is on using Marxian categories for interpreting current macroeconomic dynamics (see, e.g., Bellofiore and Fineschi 2009). Therefore, on the methodological plane, some Marxian theses are isolated, with particular reference to those expounded in Capital, in particular, volume 3. This exercise appears to be further justified on the grounds that Marx’s works should not be conceived as closed and definite and that Capital does not provide a systematic theoretical framework (see Dussel 2001).

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Three main Marxian themes are considered: (1) the formulation of a macroeconomic schema in which the money supply is endogenous and demand-driven; (2) the profitably to be gained by capitalists through competition, which is achieved not only through an increase in the technical composition of capital but also by direct wage cutting; (3) the increasing weight of the unproductive sectors (with particular reference to the consumption of luxury goods) in capitalist dynamics, resulting in a decline of investment.

Marx and the Monetary Circuit

The MCA describes the functioning of a sequential economy, which involves three macro-agents: banks, firms, and workers. The banking system creates money *ex nihilo*, in accordance with the idea that loans make deposits; firms pay wages and produce commodities; and workers supply labor power. The circular process of a monetary economy starts with bargaining in the money market between banks and firms. Banks supply firms with the initial financing they need to buy labor power and start production. Firms use bank financing to purchase labor power, paying workers the previously negotiated wages. After the production process has taken place, the price level is set, so real wages are known ex-post. The MCA emphasizes that income distribution is determined primarily by firms’ decisions on the scale and composition of output. This means that in the MCA, income distribution among banks, firms, and workers depends on the relative market and sociopolitical power of the agents. The monetary circuit closes with the repayment of the initial financing to banks (see Graziani 2003; Lavoie 1992).

The basic schema of the MCA can be formalized as follows. Assuming that workers have a unitary propensity to consume, it is shown that firms as a whole recoup an amount of money exactly equal to their cost of production at whatever price level, which at the aggregate level equals the wage bill (see Graziani 2003). This conclusion can be algebraically shown as follows. \( N \) = the volume of employment, \( F \) = so-called initial finance, \( p \) = unitary price, \( C \) = acquired consumption goods, \( R \) = firms’ revenues, and \( \Pi \) = aggregate profits. Initial finance is:

\[
F = wN
\]

while revenue \((R)\) for firms as a whole is

\[
R = pC = wN
\]

Because, at the aggregate level, firms pay only the wage bill (changes in the firm sector giving rise to a zero-sum game), profits for firms as a whole are:

\[
\Pi = pC - wN = 0
\]

In this schema, firms can recoup only the total amount of the initial finance, which gives rise to the so-called paradox of profits: How can they can make sufficient revenue not only to pay interest\(^1\) but also to make profits? The traditional
solution to this problem consists of assuming that firms as a whole reimburse their
debt in real terms, by giving banks part of the investment goods that they have
produced (Graziani 2003).²

The failure to realize a monetary surplus should not be seen as a purely logical
puzzle.³ It is worth noting that the focus is on a key problem of the capitalist sys-
tem, namely, the problem of the realization of a monetary surplus. One can argue
that capitalism solves the problem in different ways depending on historical and
social conditions, and that these ways are not mere outside factors used as an ad
hoc assumption in circuitist models but are social devices serving to reproduce the
system. In this sense, the MCA provides an open model, in which the closure of the
circuit depends on outside factors that are historically, institutionally, and socially
determined, as well as empirically/factually significant. It should be added that, by
its very nature, the problem of realizing a monetary surplus is a macroeconomic
one, a notion that is in line with Kalecki’s view that capitalist reproduction needs
low wages with high consumption (Kalecki 1971).⁴

It is worth noting that, in this schema, the manipulation of the interest rate is not
a purely technical issue concerning only the control of inflationary pressures, since
the interest rate is a distributive variable, and its value establishes the distribution
of the social product between banks, firms, and workers.⁵

In Capital, Marx points out that: “interest is merely a part of profit paid . . .
by the industrial capitalist to the money-capitalist, the maximum limit of interest
is the profit itself, in which case the portion pocketed by the productive capitalist
would = 0” (1981: 480). Therefore, the interest rate is a deduction from profits. The
problem of realizing a monetary surplus is clearly addressed in Capital: “Where
does the additional money come from with which to realise the additional surplus-
value now contained in the form of commodities?” (1909: 397). Smithin, among
others, has emphasized that the MCA, and the consequent paradox of profits, re-
proposes the Marxian sequence M-C-M´, which is “fundamental to the operation
of a profit-making capitalist economy” (2009: 127).⁶ Accordingly, it can be argued
that Marx sees the problem, although he does not provide a definite solution (see

It is important to stress that the basic issues of the MCA are explicitly formulated
in Capital. In particular, Marx addresses the question in this way:

1. “Advanced in the form of money, the capital again returns to the industrial
capitalist through the circular process in the form of money” (1981: 469);⁷

2. “The time of return depends on the progress of the process of reproduction”
(1981: 470);⁸

3. “In order to flow back as capital, the sum of value advanced must not only have
maintained itself in the movement, but valorized itself; it must have increased its
value so as to return with a surplus-value as M + ΔM where this ΔM is interest, or
that part of the average profit which does not remain in the hands of the functioning
capitalist, but falls rather to the money capitalist” (1981: 472);

As Graziani (1997a; 1997b [1983]) points out, Marx attributes a pivotal role to banks’ money creation in enabling capitalist reproduction, as well as in generating crises. Suzanne De Brunhoff (1973) observes that, although Marx considered money (namely gold, since the historical conditions of production that he looked at were based on this monetary institution) *prima facie* as a good, he recognized that, at a higher level of abstraction, one can consider that the process of money creation by the banking system occurs in a context in which money is a pure symbol. De Brunhoff insists that, for Marx, the process of money creation is strictly linked to social and political power by the central bank (and the entire banking system) and, above all, should be regarded as one of the main causes of economic crises, via monetary hoarding, by both financial or industrial capitalists and the state.

The Subsistence Wage

In fact, the existence of a subsistence wage is a theoretical problem in the monetary circuit approach. In a theoretical context in which real wages are advanced, one can admit that they are set by firms at a level corresponding to the wage’s subsistence level. But in a credit economy in which firms advance wages, the price level is set at the end of the circuit, which means equality between the subsistence wage and the actual real wage can occur only by chance. The argument runs as follows. Let us assume that both workers and firms know the subsistence level of wages due to the prevailing social norms. In this sense, the subsistence wage is conceived as a customary level of wages. If wages are paid in money terms, competition among firms is likely to determine a price level that can set the actual real wage below (or above) its subsistence level. Moreover, a policy of low wages is profitable for the individual firm (as well as for firms as a whole) insofar as it increases its competitiveness via the increase in surplus value. Otherwise, under normal circumstances, union action can affect wages but not the price level.

Seccareccia (2003: 187 ff.) considers competition among firms in a two-sector model (sector 1 produced consumer goods, and sector 2 produces investment goods). Following his line of thought, the market price of consumer goods is calculated by equalizing aggregate supply and aggregate demand:

\[ P Q_1 = C + G, \]  

where \( p \) is the unitary price, \( Q_1 \) is the quantity of consumer goods produced, \( C \) is the amount that workers consume (their propensity to consume being equal to 1) and \( G \) is public expenditure. As a result:

\[ p = \frac{C + G}{a N_1} = \frac{w N_1 + w N_2}{a N_1} + \frac{G}{a N_1} = \frac{w}{a} + \frac{w N_2}{a N_1} + \frac{G}{a N_1}, \]  

which establishes that the higher the public expenditure (\( G \)), the higher the market price of consumer goods and, given the wage (\( w \)) and labor productivity (\( a \)), the lower the number of workers employed in the sector producing con-
sumer goods \( (N_j) \). Other things being equal, this result establishes that prices crucially depend on the distribution of employment between the two sectors. In this context, money profits derive from public expenditure, so that the market money profit rate is

\[
r = \frac{G + wN_2 - iF}{wN_1}
\]

where \( iF \) is the cost of finance. The average real wage becomes:

\[
\frac{w}{p} = \frac{a}{[1 + (G + wN_2 - iF) / wN_1]}
\]  

Because capitalists do not have direct control over either the amount of public expenditure or the interest rate, they cannot set the current wage at its subsistence level, even if they find this to their advantage.

In approaching Marx’s theory of wages, Bellofiore, Forges Davanzati, and Realfonzo (2000) consider that Marx regarded equality between workers’ expectations as to their future wages and firms’ decision on the scale and composition of output as the “general case.” This consideration can be justified on two grounds. First, Marx wanted to describe capitalist reproduction in its pure form, avoiding the explicit treatment of cases in which capitalists violate, as it were, the existing moral codes, being fully aware that wage cutting is the norm in the praxis of capitalists’ wage policies. Second, capitalists may find it convenient to respect this rule if they face or expect social conflict and the consequent loss of productivity. A different solution is considered here. By starting from the Marxian view that the subsistence wage is a historically determined value, it is argued that, at the beginning of the current production process, it is a fact reflecting workers’ “memory” of their past successes in the class struggle. The more frequent such successes have been, the higher the subsistence wage \( (C_{t-1}) \). Moreover, by taking into account increasing labor “flexibility,” the reduction of the welfare state, and the decreasing relevance of social conflict, the condition \( C_{t-1} > Ct \) (where \( C_t \) is current consumption) is satisfied. Accordingly, \( C_{t-1} \) is a customary level of consumption and it becomes a target level of consumption in the current period. If the existence of the underground economy is excluded and the length of the working day is considered as given, with an accommodating banking system, this gap is filled via private indebtedness \( (D) \):

\[
D_t = C_{t-1} - C_t
\] 

Equation (7) shows that the increase of the difference between “memorized” and current consumption generates an increase in workers’ demand for private indebtedness. The consumption target incorporates class memory resulting from its history (as well as the individual background), and particularly the frequency of successes/failures of past class struggle. While it is clear that one cannot impute to Marx a theory of economic crises based on increasing consumer credit, it must be noticed that Marx also takes this phenomenon into account. In *Capital*, he defines
it as “secondary exploitation, which runs parallel to the primary exploitation taking place in the production process itself” (1981: 745). With reference to the dynamics of contemporary capitalism and the massive increase of private indebtedness, Bellofiore and Halevi emphasize that new forms of exploitation are in operation, by means of the “real subsumption [sic] of labor to finance” (2008: 15). In a similar vein, Lapavistas (2009) refers to financial expropriation, meaning that exploitation is exercised directly by finance over labor, not only in the production process but also in the circulation sphere (see also Dutt 2006). Note that in this theoretical framework, the inverse relationship between the wage rate and the profit rate is indirect, in the sense that as the wage rate increases, so does firms’ indebtedness to the banking system, thus reducing their profit. Otherwise, as shown below, the reduction of wages increases profits via the increase of worker indebtedness.

The Dynamics of the Crisis

The effects of income distribution changes on profits and output are analyzed below on the basis of the historically determined subsistence wage and private indebtedness, and making the following assumptions.

1. The economy is formed by two sectors: one producing wage goods (sector 1), the other producing luxury goods (sector 2). Workers (N) consume only wage goods, while both type-1 and type-2 capitalists (capitalists producing luxury goods) consume only luxury goods.

2. The level of worker indebtedness (D) is proportional to the difference between subsistence consumption and the consumption allowed by the current wage. The subsistence wage, in turn, is the real wage obtained in \( t - 1 \) and is assumed to be a customary wage.

3. The employment level is set on the basis of a fixed coefficient, so that \( N = \frac{K}{\lambda} \), where \( N \) is the level of employment, \( K \) is the stock of fixed capital and \( \lambda \) is the technical coefficient, and, at the beginning of the circuit, it is assumed that capital is fully utilized. Moreover, it is assumed that \( K \) depreciates entirely in one period, and that unemployment exists (\( N_s > N \), where \( N_s \) is labor supply). For the sake of simplicity, it is assumed that workers repay their debt in a period \( t + m \), which is outside the current production period. The banking system reacts to the increase in prices by raising the interest rate.

4. Investments are decided by capitalists at the end of the circuit and they are financed via their savings and via financing from the banking system. Capitalists’ savings, in turn, are a share of current profits and it is assumed that their propensity to consume (ck) is higher than zero, and grows as profits grow. The money interest rate is assumed to be equal for all sectors, as well as for firms and indebted households.

The following preliminary considerations are in order:

(a) As regards worker indebtedness, based on evidence, it is established here that current consumption allowed by the current wage is lower than the subsistence
consumption "memorized" by workers. This depends on a number of phenomena, in particular the increase in firms’ bargaining power in the labor market due to labor-market flexibility,\textsuperscript{13} the reduction of public transfers to workers, increased capital mobility, and the so-called capital strike linked to it (see Bowles and Gintis 1986).\textsuperscript{14} This contributes to the direct cutting of wages by capitalists. As Marx emphasizes:

All the capitalist cares for, is to reduce the laborer’s individual consumption as far as possible to what is strictly necessary, and he is far away from imitating those brutal South Americans, who force their laborers to take the more substantial, rather than the less substantial, kind of food. (1906: 627)

(b) The assumption related to banks’ behavior is based on the dominant view that fiscal policy is ineffective, or even counterproductive, for the purpose of controlling macroeconomic variables (the so-called new consensus approach).\textsuperscript{15} This approach excludes the fact that, as seen above, the interest rate is a distributive variable, whose value affects the distribution of social product between banks, firms and workers, and that monetary policy is also a means of reaching distributional objectives (see, e.g., Setterfield 2009). Following this line of thought, it can be argued that the banking system increases the interest rate when the profit rate increases.\textsuperscript{16} As Marx clarifies: “the variations in commercial interest—the interest charged by money-lenders for discounting and loans within the world of trade—also show a phase in the course of the industrial cycle in which the rate of interest rises above its minimum and reaches the average medium level (which it then later exceeds), this movement being the result of a rise in profits” (1981: 644).\textsuperscript{17}

(c) The rationale for assumptions (3) and (4) concerning the existence of a given stock of capital goods at the beginning of the circuit lies in the fact that the economy described here is a capitalist economy in the classical sense: at the beginning of the circuit, capitalists own the means of production. As a result, they do not need to demand credit to acquire capital goods. The demand for credit to finance investments occurs when the capital stock is depreciated, that is, at the end of the current production process.

(d) Assumption (4) goes beyond the conventional description of the standard picture of classical political economy, where, at the extreme, capitalist consumption is assumed to be nil. Note that this conventional description is not proper to classical economists, if one consider Marx’s view that: “When a certain stage of development has been reached, a conventional degree of prodigality, which is also an exhibition of wealth and consequently a source of credit, becomes a business necessity to the ‘unfortunate’ capitalist. Luxury enters into capital’s expenses of representation.” And that “along with this growth, there is at the same time in his breast a Faustian conflict between the passion for accumulation, and the desire for enjoyment” (1906: 651).

In this sense, the rationale for assumption (4) can be traced to purely institutional factors, since the conflict is between accumulation and consumption. More arguments can be added in support of this view.
First, the existence of a “dynastic” motive which, following Michl (2009), may induce capitalists to abstain, at least partially, from accumulation, for the sake of transmitting (physical or monetary) resources to their households in order to reproduce their status in a long-run perspective. At the formal level, this can lead to an increase in the propensity to consume, assuming that goods are durable and transmissible, or an increase in unspent liquidity.

Second, a relevant cause of disinvestment, as shown empirically by Stockhammer (2009), is to be traced to the so-called financialization process. Moreover, financialization also contributes to increasing income inequality and wage stagnation (Hein 2009; Palley 2007). In Capital, Marx addresses the question in the following terms:

> With the growth of material wealth the class of money-capitalists grows; on the one hand, the number and the wealth of retiring capitalists, rentiers, increases; and on the other hand, the development of the credit system is promoted, thereby increasing the number of bankers, money-lenders, financiers, etc. (1981: 642–643)

This happens mainly because of the increase in the interest rate in the phases when the rate of profits increases (see below). Moreover, following Marxian thought, one can add that this phenomenon is accelerated by the following mechanisms:

(a) Contemporary capitalist firms are even more interested in the timing of the realization of money profits. Accordingly, firms compare the turnover of fixed capital with the turnover of money capital, and, for a given velocity of production of goods and services, the lower the money turnover, the more they find it profitable to try to make money by means of money, or by investing abroad (see Harvey 2006).

(b) As suggested by Bronars and Dreere (1991), financialization can be conceived of as a device for resisting workers’ growing claims in the expansionary phases of the cycle, when wages normally tend to grow. This argument implies that the processes of financialization are pro-cyclical, in line with the evidence reported, among others, by Nersisyan and Wray (2010). These authors also find that financialization is associated with increasing concentration in the financial markets. In the United States, by 2007 the top four banks accounted for over 40 percent of bank assets. Palley (2007) shows that the “rentier share” of GDP rose dramatically in the period between the 1970s and the 1990s, and that it generated increasing income inequality and a decline in the growth rate.

On empirical grounds, the following results must be considered. The Bureau of Economic Analysis reports that the real earned income per worker in the private sector in the United States fell from over $325 per week in 1972 to about $275 in 2009. Moreover, the Federal Reserve (the Fed) reduced its base interest rate from 6.5 percent in early 2001 to 1 percent by 2004. At the same time, the federal funds rate fell from 5.25 percent in the fall of 2007 to 2 percent by the spring of 2008. As regards investments, the Fed reports that the index of industrial production (IP) in the United States showed moderate
increases from 2004 through 2007 but declined sharply in 2008. Relative to earlier estimates, measured from fourth quarter to fourth quarter, total IP is now reported to have increased by 0.3 of a percentage point more slowly in 2007 and to have decreased by 0.5 of a percentage point more rapidly in 2008; and the index for February 2009 now stands at about 1 percent below its previously published level. Moreover, the Fed reports that the annual inflation rate rose from 2.2 percent in 1999 to 3.8 percent in 2008, with its lowest level for the decade in 2002 (1.6 percent).

The expansionary phase and the crisis will be analyzed on the basis of this scenario.

The Expansionary Phase

In view of assumption (3), total production in sector 1 is:

\[ Q_n = \sum_{i=1}^{n} a(K/\lambda)_i \tag{8} \]

which rises in proportion to labor productivity and the volume of employment. \( N \) indicates the number of existing firms, so that for a given degree of competition, \( Q \) increases as \( n \) increases.

In view of assumption (1), private indebtedness for workers as a whole is:

\[ D_t = \overline{C}_{t-1}(Z_{t-1}) - C_t(Z_t) \tag{9} \]

where \( Z \) indicates workers’ bargaining power. Equation (9) shows that private indebtedness increases as (i) the subsistence wage increases, or, for a given subsistence wage, the current wage decreases; (ii) workers’ bargaining power decreases; and (iii) unemployment increases, insofar as unemployment reduces workers’ bargaining power.\(^{21}\)

At time \( t \), type-1 firms’ profits are therefore:

\[ \Pi_t = C_t + D - wn_1 - iF_1 \tag{10} \]

such that \( \Pi_t = wn_2 + D - iF; \)\(^{22}\) This result confirms what Delaplace and Nell (1996) define as the “Marxian principle”: the wages of the sector producing nonbasic goods determine the profits of the consumer goods sector. In view of equation (10), money profits increase as the difference between customary subsistence consumption and current consumption increases (and, hence, as worker indebtedness increases) and the money interest rate decreases. Moreover, since current consumption depends on workers’ bargaining power and the unemployment rate, it follows that profits increase as workers’ bargaining power decreases, and when the unemployment rate increases.

Two comments are worth making.

Money profits increase as the gap between the subsistence and the current wage increases, since it is this gap that drives private indebtedness. Accordingly, equation
(10) defines the distributive conflict between capitalists and workers. In addition, equation (10) accounts for the inter-capitalist conflict involving the banking sector and industrial capital. In fact, any reductions of the wage bill involve a consequent reduction of banks’ money revenues \((iF)\), so it is in the interest of banks as a whole for firms (or the government) to give workers a higher wage.\(^{23}\)

Given assumptions (1) and (4), profits in sector 2 are:

\[
\Pi_2 = c(k\pi_1)\pi_1 - wN_2 - iF_2
\]  

The Hurun Report 2010 shows that luxury consumption significantly increased on a global scale (but especially in the United States) in the past decades (from about 80 billion euros in 1995 to 160 billion euros in 2005), producing a price hike in that sector of about 5 percent more than the inflation rate calculated on the basis on the consumer price index.\(^{24}\)

The Recessionary Phase

In view of assumption (4), investments are:

\[
I_{t+1} = sk(\bar{\Pi}_1)\Pi_1
\]

where \(sk\) is capitalists’ propensity to save, based on the simplifying assumption that type-2 firms do not invest.\(^{25}\) Assuming capitalists’ propensity to save falls as profits increase, the growth of profits in the expansionary phase of the cycle leads to a gradual decline of profits which, in turn, has a negative effect on investments. Notice also that, if one assumes that type-2 firms do not invest and plants are fully utilized at the beginning of the circuit, the increased demand for a given supply luxury goods leads to higher prices in that sector, which, in turn, due to the operation of the “Veblen effect” (the increase in price stimulates an increase in demand) generates further increases in demand (see Forges Davanzati and Pacella 2010). As emphasized by many scholars (see, e.g., Hein, in Hein et al. 2008: 94), the current paradigm of capitalist reproduction is characterized by profits without investment. The mechanisms described here indicate that this happens because economic growth modifies class composition, independently of interest-rate variation, leading capitalists to identify (at least partially) with rentiers (see, e.g., Cordonnier, 2006). The growth in capitalist consumption during the expansionary phase of the cycle generates the following long-run effects:

1. The stock of capital in \(t + 1\) drops and, given \(\lambda\), employment also falls;
2. The reduction of employment, insofar as it reduces workers’ bargaining power, entails a reduction of the unitary wage and, hence, of the money wage bill. This, in turn, has a negative effect on the demand for consumer goods and money profits in that sector, for three reasons. First, it is reasonable to consider that although the unemployed can benefit from consumer credit, they receive a lower amount of money from the banking system than that obtained by employed workers. Sec-
ond, in a long-term perspective, due to the continuous reduction of real wages, the subsistence wage is also likely to fall, thus generating a decline in the demand for private indebtedness. Third, even if the subsistence wage remains unchanged, the fall of the real wage and the expectation that it will further decline can discourage workers from contracting debt, insofar as they foresee they will be unable to repay it (see Maki 2000; Palley 1994).

3. A decline in investments reduces the growth rate. The reduction of the growth rate is proportional to (i) the increase of $ck$, for a given amount of money profits; and (ii) the decline of workers’ bargaining power and, hence, in money wages. Workers’ bargaining power, in turn, is reduced due to the rising unemployment that follows the slowdown in investment.

Two points are worth emphasizing:

(a) The reimbursement of debt on the part of workers becomes progressively more difficult because of the fall in real wages and the increase in unemployment consequent to the decline of investment. If it is admitted that the subsistence level tends to be reduced as the current wage falls for a sufficient time, then the demand for consumer credit would tend to decline over time (see Charpe et al. 2009). Moreover, it can be shown that, in this theoretical context, private indebtedness reduces real wages (see Forges Davanzati and Pacella 2010): Equation (5) indicates that in an institutional context where, in the extreme, $G = 0$ while $D > 0$, the unitary real wage (workers’ purchasing power) is:

$$\frac{w}{p_{t+1}} = \frac{a}{1+(D-iF)/wN_1}$$

Equation (13) shows that, given the unitary money wage and labor productivity, the unitary real wage declines as private indebtedness increases, so the more debt workers as a class contract, the smaller their share of the social product is in real terms. Obviously, this is a macroeconomic result. At the microeconomic level, workers perceive their debt (at least in the short run) as an increase in their net wealth, necessary to fill the gap between the “memorized” subsistence wage and the consumption allowed by the current wage.

(b) With regard to monetary policy, equation (13) establishes that, for a given interest rate, real wages increase as the initial financing increases. This produces a two outcomes. First, the higher interest rate makes it more difficult for workers to repay their debt (see BIS 2009; Seccareccia 2003). Second, insofar as this strategy has a negative effect on firms’ money profits, domestic investments are likely to fall, and investing abroad may increase.

On the basis of this schema, a crisis emerges as a result of a double distributive conflict. First, the conflict between capital and labor, which manifests itself in wage cutting and gives rise to increased worker indebtedness and inflation, a consequent reduction of real wages, and reduced worker indebtedness (which is also due to the higher interest rate). This, in turn, reduces money profits and investments. Second, the conflict between financial and industrial capitalists, which manifests in interest
rates that increase as the profit rate rises. This directly reduces aggregate money profits and indirectly damages firms due to the decline of consumer credit and, hence, to the consequent fall in demand for consumer goods and money profits in that sector. These phenomena are amplified by the breakdown of the “fraternity” among capitalists that, according to Marx, governs their relations in the “normal” course of events.

As a general result, one can establish that the crisis results from the fall in aggregate demand, due to: (i) the decrease in investment imputed to the increase in the interest rate in the expansionary phases of the cycle, as well as to capitalists’ propensity to devote increasing parts of their profits to the “unproductive sector” (or investing abroad); and (ii) the decrease of both monetary and real consumption, due to firms’ increasing bargaining power in both the labor market and the socio-political arena (which generates wage cutting), and to the inflationary pressures generated by private indebtedness.

Concluding Remarks

This paper has put forward an interpretation of the current crisis based on two main theses proposed by Marx, in the theoretical framework of the MCA, which he explicitly adopted (especially in Capital, vol. 3). In this theoretical framework, the banking system is in the position to create credit money on the basis of the demand from firms. Money wages are advanced and firms are able to recoup only an amount of money equal (at best) to that advanced. This is the so-called paradox of profits. Assuming workers aim at a target level of consumption set on the basis of their “memory” and hence derived from the historically determined subsistence wage, the fall in wages pushes workers to contract debts with the banking system. As a result, demand increases and so do money profits. At the same time, since capitalists’ propensity to invest is inversely proportional to their accumulated profits (because their propensity to consume is higher in the expansionary phase of the cycle), the growth of profits leads to stagnation in investment. Moreover, due to the decrease in the real wage and the fall in aggregate demand resulting from an increasingly unequal income distribution, and independently of external interventions, a crisis emerges.

Notes

1. It is worth noting that, in this schema, the interest rate is a tax on profits. Moreover, inflation is not a monetary phenomenon: it is not caused by excess money supply, but mainly by conflict over income distribution.

2. This solution does not contemplate the view that, as emphasized, in particular, by Seccareccia (2003) and by Messori and Zazzaro (2005), capitalism is a decentralized system where the decisions of production, in particular, are taken in a context of competition among firms. In this context, it is the bankruptcy of the smaller (or less efficient) firms that allows the larger (or more efficient) firms to obtain money profits.
3. Note that the paradox of profits, as shown among others by Chapman and Keen (2006), emerges only in the case where the monetary circuit is treated in single-period analysis, where no “multiplicators” (of either bank deposits or investments) exist, and the velocity of money circulation is equal to 1. Just for the sake of simplicity, this is the case approached here.

4. In this theoretical context, capitalist reproduction requires, at the same time, low (or declining) wages and high (or increasing) total demand. This occurs because while it is profitable, on the microeconomic plane, for firms to cut wages and to oppose public intervention, high total demand enables firms as a whole to realize money profits (see Kalecki 1971).


6. On this line of thought, Trigg (2004) suggests inserting the multiplicative effects into the Marxian schemas of reproduction, making it possible for aggregate money profits to be positive even without further injection of money. The same result applies in the event of a speed of money circulation higher than 1 (see Trigg 2006).

7. At first glance, Marx addresses the question as follows: “Additional gold must be produced, or, what amounts to the same, a part of the additional product exchanged, directly or indirectly, for gold—the product of countries in which precious metals are mined” (1906: 398–399). This solution can be considered valid only in the very special case where money is gold (which is excluded by Marx himself when addressing the more general case of fiat money) and mines are available. Of course, this argument reflects the historical conditions when Marx wrote, and cannot be used in the current institutional context.

8. See also Graziani (1997a).

9. As Marx points out: “In every country in which the capitalist mode of production reigns, it is the custom not to pay for labor power before it has been exercised for the period fixed by the contract. . . . In all cases, therefore, the use-value of the labor power is advanced to the capitalists” (1906: 193).

10. Of course, this happens when firms do not act as a consolidated sector. If this is the case, as in the situation where there is only one firm, it may be convenient for firms to pay wages at their subsistence level.

11. It should also be considered that pricing in the MCA is a very controversial issue, especially if one approaches the issue in Marxian terms. The problem arises from the fact that, in the basic schema of the MCA, the price level crucially depends on an external influx of money, such as public expenditure. There is abundant literature on this issue, which is outside the scope of this paper. For the main elements of the debate, see, among others, the seminal works of Bellofiore (1997), Dumenil (1980), Foley (1982), and Moseley (2000).

12. Note that social conflict manifests itself mainly in the form of “deviance” (crimes, in particular), thus generating an increase in the number of workers employed to prevent or repress it. Bowles and Jayadev (2007) find that about 20 percent of the American workforce is employed in unproductive activities related to crime prevention/repression.

13. Labor market deregulation reduces wages for two main reasons. First, by increasing workers’ uncertainty regarding their future income, it reduces the current propensity to consume, hence aggregate demand and employment, thus reducing workers’ bargaining power (see Forges Davanzati and Realfonzo 2004). Second, by discouraging innovations, it reduces the growth rate, thus leading to a reduction in employment and wages. These results are confirmed by the latest OECD reports, where it is empirically shown that in most cases, the labor share is higher in countries with strong employment protection legislation (EPL), that is, where the labor market is more rigid and firing is more difficult. See http://stats.oecd.org/Index.aspx?DataSetCode=EPL_CD/.

14. This argument runs as follows. It is assumed that (i) firms are mobile in the international arena; (ii) every single government is interested in electoral consensus; and (iii) consensus for the existing government increases as domestic investments increase. As a
result, the credible threat of investing abroad or of postponing investments (the capital
strike) is sufficient to force the government to implement pro-firm policies. Moreover, the
higher the unemployment rate, the more likely it is that social conflict will occur. Note
that, as found by Iakova (2009), wage cutting is not necessarily linked to the existence
of an industrial reserve army; the high degree of international mobility of capital is sufficient
for this purpose. In this sense, therefore, the Phillips curve tended to become flat during the
first decade of the 2000s.

15. Several important criticisms to this approach are found in the papers included in the
special issue of the Journal of Post Keynesian Economics 31, no. 4 (2009). See, in particular,
Angeriz and Arestis (2009).

16. This happens also because, other things being equal, a rise in the profit rate is a source
of inflation, thus reducing the real interest rate at the expense of banks.

17. The general movement of the interest rate is described by Marx in the following terms:
“a rise in interest comes between prosperity and its collapse, while maximum interest up to
extreme usury corresponds to a period of crisis” (1981: 482).

18. The dominant view reduces the financialization process to the alteration of agents’
preferences. This idea is highly questionable because it does not explain why individual
preferences should change in the course of the business cycle (see Graziani 2003: 158).

19. Our elaboration rests on NIPA (National Income and Product Accounts) tables (tables
2.1 and 6.16D). See www.bea.gov/national/nipaweb/SelectTable.asp?Selected=Y/.


21. Equation (9) expresses a static relation that can vary over time, if one considers that
continuous wage reductions are associated with reductions of the customary subsistence
wage. Accordingly, \( C_{t-1} \) is no longer a fact, but a function of \( C_t \). I thank Giorgio Colacchio
for raising this point. On the dynamics of workers’ memory and its effect on wage bargain-
ing, see Colacchio, Sparro and Tebaldi (2007).

22. Note also that, even if on a purely formal plane, indebtedness on the part of the state
and on the part of households gives rise to the same result as regards the magnitude of ag-
gregate money profits, two basic differences should be emphasized. First, the increase in
\( G \) produces an increase in employment, not only due to the standard Keynesian multiplier
mechanism, but also because the state can act as employer of last resort, while the increase
in \( D \) may increase employment only in the event private firms react to the expansion of
demand by increasing production, or, as stated here, if they work with unused capital
(see Forges Davanzati, Pacella and Realfanzo 2009). Second, as shown below, a mode of
capitalist reproduction based on private indebtedness proves intrinsically unsustainable in
a long-run perspective, while, as shown by Pasinetti (1998), there are no definite limits to
the increase in public debt.

23. At the end of the circuit, banks obtain money profits given by: \( \Pi_b = iF - C_b \), where
\( C_b \) equals banks’ costs of production, including the payment of wages to their employees.
Remember that it is assumed that workers plan to reimburse their debt in a period \( t+m \),
which is outside the current period. Therefore, expected bank profits are:

\[
\Pi_b = \sum_{i=0}^{m} i F_i + D - \sum_{i=0}^{m} C_i
\]

Accordingly, the higher the money interest rate and, given their costs of production, the
higher the demand for credit expressed by firms, then the more profits the banks will make.
Moreover, banks’ money profits increase in the money interest rate or, for a given interest
rate, in the amount of initial financing. In the long run, when workers repay their debt, the
higher the interest rate and private indebtedness are, the more profits banks will make.
Notice also that, since private indebtedness grows as the gap between the subsistence wage
and the current wage increases, then the lower the money wage bill is, the higher the banks’
(expected) money profits will be, thus defining the distributive conflict between finance and
labor. However, since it is assumed that workers repay their debt in a future period, banks’ current money profits increase when the money wage bill increases, since, for a given money interest rate, if increases. For a more detailed treatment of the operation of the banking system in a model of the MCA, see Bossone (in Rochon and Rossi 2003).

24. It is interesting to note that in 2009, for the first time in recent decades, the consumption of luxury goods in China was higher than in the United States.

25. The rationale for this assumption lies in the fact that firms operating in the luxury goods sectors (such as artisan production) tend to use an insignificant amount of fixed capital.

References


