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The Influence of the Interest Rate in Capitalist Competition: Capital Differentiation and Structural Change

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Abstract: We contribute to the Marxist discussion on the role of the interest rate in the investment and financing decisions of firms, a crucial dimension that has not received sufficient attention in the literature. The market rate of interest acts as a benchmark for the profit rate of each capital, allowing firms to decide how to allocate their funds between industrial accumulation and financial valorization. Once they resolve to invest, the interest rate also influences their choice on how to finance the investment between their own and borrowed capital. Considering capitalist competition as a process resulting in the differentiation between 'normal' capitals - that appropriate the general rate of profit - and 'small' capitals - that appropriate a lower-than-general rate of profit -, we show that changes in the interest rate have different consequences for these two types of capitals. 'Normal' capitals invest if the general rate of profit is higher than the interest rate and borrow capital to finance their investment, thereby appropriating a higher rate of profit of enterprise. Meanwhile, 'small' capitals are regulated by the interest rate. If the rate of interest increases, even if it remains below the general rate of profit, it could push them into bankruptcy and turn them into interest-bearing capital. Moreover, they face restrictions to access credit, further widening the gap between their rate of profit of enterprise and that of normal capitals. Finally, the paper presents some ideas to build a framework to analyze the consequences of different interest rate regimes for structural change in the context of capital differentiation, and argues for state direction of credit.

Keywords: Marx, interest rate, competition, investment, financing, structural change, credit policy.

JEL classification: B51, E43, L16, O23.

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INTRODUCTION

In the Marxist literature, the determination of the interest rate has not received much attention (Fine, 1985; Harris, 1976; Panico, 1988). This is partly due to some issues in Marx's writings. In a widely quoted passage of the preface to the third volume of Capital (Hall, 1992; Panico, 1980; Shaikh, 2016), Engels himself says that the section where Marx discusses the interest rate presented 'the greatest difficulty' since he only left 'a disorderly mass of notes, comments and extracts' (Marx, 1999: 6-7). Additionally, Hall (1992) argues that if Marx's work is incomplete in this regard, his followers have not gone much further. Marxist analyses have focused on 'real' factors, relegating 'monetary' ones to the background, as if they were not relevant in Marx's framework (Evans, 2004). However, recent contributions highlighted the importance of credit and interest in and for his theory (Crotty, 2017; Evans, 1997; Fine, 1985; Harvey, 2006; Itoh & Lapavitsas, 1999).

This article aims to contribute to the literature studying the influence of the interest rate in firms' decisions to invest in productive or financial valorization, and their decisions to advance their own or borrowed capital. This is a crucial dimension that, while recognized as important by several Marxist scholars has not been deeply analyzed (Harris, 1976; Hein, 2009; Iñigo Carrera, 2013; Itoh, 1988; Lapavitsas, 2017; Shaikh, 2016).

We show that the interest rate acts as a benchmark for the profit rate of each individual capital. If their profit rate is higher than the rate of interest, functioning capitalists will invest productively. Otherwise, they will destine funds to financial valorization. Once a decision to invest has been made, productive capitals will attempt to finance their investment with borrowed funds because, whenever the interest rate is lower than the profit rate, they can increase their rate of profit of enterprise by appropriating the difference between the profit and the interest rate on their borrowed capital. However, productive capitals cannot finance all the investment with borrowed funds due to the risks associated with leverage.

Our main contribution is to show the role of the interest rate in the context of capital differentiation, developing an idea suggested by Iñigo Carrera (2013), but without other precedents in the literature. We argue that the benchmark does not play the same role for every type of capital. In particular, 'small' capitals not only face restrictions to access to credit, but the interest rate regulates their valorization. As a result, increases in the benchmark could push them into bankruptcy and turn them into interest-bearing capital.

While at this point our contribution is mostly theoretical, it provides a framework to analyze the possibilities and limits of credit policy for structural

change. Recognizing the specific problems faced by small capitals, we argue that both a high as well as a low-interest rate policy might have important negative consequences. As a result, we suggest that public institutions should direct the flow of credit to small capitals with potential, combining credit and industrial policy.

The article is structured as follows. In the section following this introduction, we introduce the general determinations of the interest rate and its influence on capitalist decisions in general. In the third section, we focus on capital differentiation and the role of the interest rate in that context. The fourth section presents some ideas to build a framework to analyze the consequences of different interest rate regimes for structural change in the context of capital differentiation and argues for state direction of credit. The fifth section concludes and points to future lines of research.

THE DETERMINATION OF THE INTEREST RATE AND ITS ROLE IN CAPITALIST COMPETITION IN GENERAL

To understand how the interest rate influences firms' decisions, it is first necessary to briefly present the Marxian conceptualization of interest-bearing capital and the quantitative determination of the interest rate. We then move on to show how it appears to productive capitals affecting their decisions of investment and financing.

Interest-bearing capital and the rate of interest

Marx argues that in the turnover of capital there are sums that become temporarily idle. On their own, they are insufficient to be destined towards productive valorization, but they can be loaned as interest-bearing capital, thereby making them available for capital accumulation.[1] Hence, interest-bearing capital is not originated outside of industrial accumulation. Instead, it is generated internally in the capital cycle (Fine, 1985; Harvey, 2006; Itoh, 1988). Those funds may come from different sources: 1) reserve funds that capitalists keep for precautionary reasons to preserve the continuity of the productive process; 2) funds that money-capitalists deposit in banks; 3) surplus-value that is only progressively spent, such as the part of profit destined to capitalist consumption and ground rent; 4) surplus-value that is still insufficient to be reinvested; 5) the part of value saved for depreciation of constant capital and the circulating capital not yet reinvested; 6) forms of fictitious capital or parts of the money supply that can temporarily function as interest-bearing capital; 7) what Marx called 'special forms' of money-capital accumulation including the capital that is freed when the

price of supplies fall, the capital that is frozen when there is an interruption in the course of business, and money that becomes loanable capital due to the existence of capitalists that retire from the reproduction process; and 8) the part of wages that is only progressively consumed, and the part that is destined towards the consumption of durable goods (Lapavitsas, 2017; Marx, 1999).

All these idle funds are available to become interest-bearing capital, usually with the intermediation of financial institutions. The cycle of interest-bearing capital, unlike the well-known cycle of capital M-C-M', is:

$$M - M - C - M'(M + \Delta M) - M''(M + iM)$$

where M stands for money, C stands for commodity, M' stands for money plus surplus-value, ΔM stands for surplus-value, M'' stands for money plus interests, and iM stands for interest.

The first change of M is just a transfer from one capitalist to the other under the legal form of a loan. At the end of the cycle, money is repaid, and it flows back to the owner, ceasing to act as capital. The reflow has two steps: first, it returns to the functioning capitalist as $M'(M + \Delta M)$, and then it is transferred back to the capitalist who owns the money as $M''(M + iM)$. In this way, the cycle of interest-bearing capital presents itself as money that engenders money without the mediation of a valorization process.

The part of the profit that belongs to the lender is called interest. The valorization of interest-bearing capital is measured by comparing the amount of earned interest over the value of the loaned capital, yielding the rate of interest, which appears as the price that it is paid for money-capital.

As realized capital, the borrower has to pay the money back as value increased by surplus-value. Therefore, interest can only be a part of the profit realized by productive capital. Only a part, not all of it, because the use-value of interest-bearing capital for the borrower consists in its capacity to earn a profit out of its use. If the borrower were not to obtain a profit, s/he would not borrow it. However, the borrower cannot appropriate all the profit because, in this case, s/he would not pay anything for the alienation of the use-value, and would return the money as simple money, not as realized capital. But no lender would be willing to loan money if s/he were not to obtain a profit.

From this moment on, the functioning capitalist that borrows capital does not get all the profit, but only the part left after paying interests, which Marx calls profit of enterprise. It is worth pointing out that the proportion between own and borrowed capital does not alter the profit rate, but only

its ulterior distribution between the borrowing and lending capitalists (Iñigo Carrera, 2013). Hence, the payment of interests does not affect the price of production of commodities since it only influences the distribution of the profit already contained in it.

By understanding interest as a part of the surplus-value, we can see that the condition *sine qua non* for the valorization of interest-bearing capital is that it is effectively invested as productive capital. At an individual level, if the borrower invests it productively or not is her/his business. The lender lends it as capital, and as capital has to be paid back. If the borrower spends the money on an activity that does not create the basis for its repayment, s/he would have to find another way to settle the debt. But even in this case, the borrower pays the surplus value that, potentially, was carried in the money loaned. Because of this, the only way in which the reflow can take generally place for capital as a whole is when it is effectively invested as capital.[1]

However, if interest is a part of the profit, how is its proportion determined? In other words, how is the rate of interest determined? Following Marx, we can argue that the rate of interest is determined by the supply of and demand for loaned capital, without a law operating behind.

As a result, there is no 'natural' rate of interest: the coincidence between supply and demand does not reflect any subjacent determination. The determination of the interest rate is fortuitous, purely empiric, a mere quantitative relation between two flows. This recognition has led some authors to consider that, in Marx's view, the interest rate is a 'purely monetary' phenomenon (Baeza & Mendieta Muñoz, 2010; Evans, 2004; Lianos, 1987; Lucarelli, 2010).

However, Harvey (2006) argues that this does not mean that the determination of the interest rate is arbitrary or not subject to laws. Similarly, Harris (1976) claims that the interest rate is an accident only insofar as the law of value does not directly determine it, but this does not mean there are no hints to factors affecting it. Although in a non-systematic way, Marx (1999) points to some elements that allow us to make generalizations about the behavior of the interest rate.

In normal conditions, the upper limit of interest is the total profit when the part belonging to the functioning capitalist is zero. Meanwhile, the lower limit of interest is undetermined. In the next subsection we will show that there are forces that prevent it from either rising or falling indefinitely.

If the share of interest in profit is fixed, increases in the rate of profit also increase the rate of interest and the other way around. However, there

is no reason why the share has to be fixed. The market rate of interest fluctuates continuously depending on the supply of and demand for interest-bearing capital. In this case, assuming a given profit rate, if the interest rate increases, that means that the rate of profit of enterprise is falling, and vice versa. Finally, the profit rate can increase/decrease simultaneously with a change in the participation of interest in profit (Lapavitsas, 2013).

Up to this point, we referred generically to the demand for and supply of interest-bearing capital. Marx discusses them in more detail, although incompletely, including the characteristics and cyclical behavior of the demand for and supply of interest-bearing capital, and presents the role of commercial banks, the interbank money market, and the Bank of England in its quantitative determination (Evans, 1997; Harvey, 2006; Itoh and Lapavitsas, 1999; Vasudevan, 2018). The discussion of these elements falls beyond the scope of this article, insofar as they happen behind the back of functioning capitalists. For our purposes, it suffices to show how the interest rate appears to individual capitals and how it influences their decisions.

To them, the market rate of interest appears daily as a known and quantitatively determined magnitude that results from the interaction between demand for and supply of interest-bearing capital. On the contrary, the profit rate does not appear as a given and tangible magnitude. Because of this, the rate of profit presents itself in practice through the rate of interest, even if it is not a perfect proxy. As we argue in the next section, firms estimate profit rates using hurdle rates that result from the interest rate plus other company-specific factors. In any case, the fact that the interest rate is given allows productive capitals to use it as a basis for their calculations (Robles Báez & Escorcia Romo, 2016).

The influence of the interest rate in general

The interest rate affects the decisions of functioning capitalists in two key moments: 1) when deciding to invest, whether to increase or to keep the scale of production and; 2) once an investment decision has been made, in how to finance it between own and borrowed capital.

The influence on investment decisions

In the first instance, the interest rate influences investment decisions by functioning capitalists (Evans, 2004). Marx argued that:

> He [the individual capitalist] has the choice of making use of his capital by lending it out as interest-bearing capital, or of expanding its value on his own by using it as productive capital, regardless of

> whether it exists as money-capital from the very first, or whether it still has to be converted into money-capital. But to apply it to the total capital of society, as some vulgar economists do, and to go so far as to define it as the cause of profit, is, of course, preposterous. The idea of converting all the capital into money-capital, without there being people who buy and put to use means of production, which make up the total capital outside of a relatively small portion of it existing in money, is, of course, sheer nonsense… If an untowardly large section of capitalists were to convert their capital into money-capital, the result would be a frightful depreciation of money-capital and a frightful fall in the rate of interest; many would at once face the impossibility of living on their interest, and would hence be compelled to reconvert into industrial capitalists. (Marx, 1999: 256-257).

Productive capitals compare their own expected rate of profit with the market rate of interest.[1] In general, if their profit rate exceeds the rate of interest, functioning capitalists will allocate funds to productive valorization. The amount of the investment is decided by factors foreign to the rate of interest, such as the size of the market, the rate of capacity utilization, the technical scale of the new project, among others (Lapavitsas, 2013). If the capitalist decides not to invest it productively, all her/his idle capital will be destined towards the financial sector, regardless of the relation between the profit and the interest rate.

The inverse relationship between investment and interest rates has been criticized because it seems to be contrary to the empirical evidence (Petri, 1997). Attempts to explain the empirical results while keeping the theoretical relationship tend to use the idea of 'hurdle rate'. In corporate finance, the relevant interest rate for investment decisions is called 'hurdle rate', which is the discount rate (or opportunity cost of capital) firms use to compute the net present value of an investment project.[2] Different articles based on surveys to Chief Financial Officers (CFOs) show an empirical discrepancy between the market interest rate and hurdle rates, with the latter being systematically and significantly above the latter (Jagannathan et al., 2011; Lane and Rosewall, 2015; Meier and Tarhan, 2011; Sharpe and Suarez, 2014). Moreover, they show that the hurdle rate might remain constant even when interest rates are falling. Different reasons were put forth to explain the difference between hurdle and market rates. Among them, firms add a mark-up representing risk, firms have too much cash, interest rates might have been already too low before falling, and firms do

not know whether a change in the interest rate is permanent or not (Lane and Rosewall, 2015; Sharpe and Suarez, 2014).

Even if hurdle rates are adjusted downwards following a drop in the market rate of interest, the magnitude might be insufficient to make an investment project profitable. Moreover, firms might consider additional factors, such as risk and the irreversibility of fixed-assets investment compared to the reversibility of financial-assets (Demir, 2008; Lane and Rosewall, 2015). In any case, the relevant rates are firm-specific, so they do not immediately reflect the macroeconomic interest rate environment (Davis, 2018). Nonetheless, although firms calculate their own hurdle-rates, the market interest rate can be considered as their floor, thus constituting a major determinant of them.

From a Marxist perspective, Shaikh (2016) shows that the interest rate acts as a benchmark for the functioning capitalist. According to him, it is not the profit rate of the productive capital, but the excess of the profit rate over the interest rate that effectively regulates the growth of capital. Consequently, Argitis (2001) points out that the intra-capitalist distribution of surplus-value plays a crucial role in capital accumulation.

Following Iñigo Carrera (2013), we argue that productive capitals appropriate the general rate of profit (g) in proportion of their total capital (K_T), independently of how it is distributed between own (K_O) and borrowed funds (K_B). After the payment of interests (I), given by the interest rate times the mass of borrowed funds ($i * K_B$), functioning capitalists appropriate the profit of enterprise (G_E).

$$g = \frac{G}{K_T} = \frac{G_E + I}{K_O + K_B} = \frac{G_E + i * K_B}{K_O + K_B}$$

Once the profit of enterprise is determined as a remainder of the difference between total profit (G) and interest (I), the functioning capitalist can distinguish the part resulting from the advancement of own funds ($G_{E_{K_O}}$), and the part coming from the investment of borrowed funds ($G_{E_{K_B}}$). The former is the general rate of profit times the size of its own capital ($g * K_O$). The latter comes from the difference of the profit yielded by the borrowed capital minus what has been paid for its use, that is, the difference between the general rate of profit and the interest rate times the borrowed capital ($(g - i) * K_B$).

$$G_E = G_{E_{K_O}} + G_{E_{K_B}} = g * K_O + (g - i) * K_B$$

Then, the functioning capitalist computes her/his rate of profit of enterprise (g_E), which is the one that remains in her/his hands after the deduction of all the productive and financial costs.

$$g_E = \frac{G_E}{K_O} = \frac{G_{E_{K_O}} + G_{E_{K_B}}}{K_O}$$

We can now see that if the rate of interest is lower than the general rate of profit, the productive capital can not only appropriate the profit rate over her/his capital but also the difference between the profit rate and the interest rate over the borrowed capital (first row in Table 1). Therefore, the lower (higher) the interest rate, the better (worse) for the functioning capitalist, since s/he will appropriate a higher (lower) rate of profit of enterprise.

Following the line of reasoning, if the rate of interest is equal to the general rate of profit, the productive capital would simply valorize at the profit rate resulting from the advancement of her/his own capital (second row in Table 1). Finally, if the interest rate is higher than the general rate of profit, that active capitalist would be losing money for the use of borrowed capital, that is, her/his profit rate over the borrowed capital would be negative (third row in Table 1). However, as we will see, this possibility is mainly theoretical since, if this were the case, the functioning capitalist would decide not to invest productively and destine her/his funds to financial valorization.

Table 1. Influence of changes in the interest rate and the proportion of own and borrowed funds in the rate of profit of enterprise.

Capital			P_p	Rates		Composition of total profit			Composition of profit of enterprise		
K_O	K_B	K_T		g	i	G	G_E	I	$G_{E_{K_O}}$	$G_{E_{K_B}}$	g_E
50	50	100	110	0,1	0,05	10	7,5	2,5	5	2,5	0,15
50	50	100	110	0,1	0,1	10	5	5	5	0	0,1
50	50	100	110	0,1	0,15	10	2,5	7,5	5	-2,5	0,05
1	99	100	110	0,1	0,05	10	5,05	4,95	0,1	4,95	5,05
100	0	100	110	0,1	0,05	10	10	0	10	0	0,1

Source: Own elaboration. P_p stands for price of production.

The influence on borrowing decisions

Once the functioning capitalist decides to invest productively, the relationship between the interest rate and the profit rate intervenes again when defining how to finance the additional capital between own and borrowed funds.[1] In

this regard, Lapavitsas (2013) shows that leverage (in our notation, $\frac{K_B}{K_O}$) is not externally or technologically given but constitutes a decision of the functioning capitalist, something that Marx hinted at but did not fully develop.

As can be seen in Table 1, the rate of profit of enterprise grows with the investment of borrowed capital whenever the rate of interest is lower than the rate of profit. In other words, the greater the leverage, the higher the rate of profit of enterprise. A productive capital that uses almost exclusively borrowed funds will get a very high rate of profit of enterprise since it will earn a profit almost without advancing its own capital (fourth row in Table 1). Meanwhile, a productive capital that uses only its own funds will valorize simply at the general rate of profit (fifth row in Table 1).

According to Lapavitsas (2013), this recognition has far-reaching implications. First, while the opposition between productive and financial capitalists remains at one level ($G = G_E + I$), it is tempered because leverage increases the profit of enterprise. Therefore, the borrower both opposes and relies on the lender. Second, borrowers and lenders should not be merely regarded as two opposing factions, but as economic actors that develop complex and contradictory relations.

Nevertheless, it is likely that the functioning capitalist would not be able to fund her/his investment only with borrowed funds, so s/he will have to advance some capital of her/his own. Even in this case, if her/his idle funds exceed the amount required, s/he would destine the difference to financial valorization.[2] Additionally, leverage increases risk because it makes the rate of profit of enterprise more variable and raises the danger of bankruptcy by imposing a fixed, external obligation. Thus, while the use of borrowed funds increases the rate of profit of enterprise, it also increases the risk of bankruptcy. As a result, different elements appear in firms' decision of the level of leverage, without an *a priori* optimum (Lapavitsas, 2013). All things considered, productive investments are typically financed with a combination of own and borrowed funds and their shares are linked to the level of the interest rate (Davis, 2018).[3]

The relationship between productive and interest-bearing capital and changes in the interest rate

In general, increases in the interest rate, even if it remains below the profit rate, might end up in a higher proportion of funds destined towards financial valorization, something that the literature typically considers as the 'crowding out' hypothesis (Davis, 2018; Demir, 2008; Hein, 2009; Orhangazi, 2008).

In our framework, this would be the result of some projects becoming not achievable or because the new interest rate level surpasses the profit rate of some capitals, an idea which we will discuss in the next section. Therefore, they will devote their funds to financial valorization.[4] In this case, there will be a contraction in the demand for productive credit and an increase in the supply of interest-bearing capital that will end up pushing for a reduction in the interest rate.

A higher interest rate also increases financial payments (here considered as the cost of borrowing), thereby diminishing the rate of profit of enterprise. In this case, the portion of surplus appropriated by functioning capitalists falls vis-a-vis that of financial ones, likely increasing the supply of interest-bearing capital, reinforcing the downward pressure on the interest rates.[5]

In moments of crisis, the interest rate might temporarily rise above the rate of profit due to a sharp increase in the demand for means of payment, requiring repayment from other sources. In this scenario, functioning capitalists can earn a higher profit by loaning their capital instead of investing it productively. Additionally, some productive capitals will not be able to repay their commitments, so they will have to be liquidated and turned into interest-bearing capital. As a result, the supply of interest-bearing capital will increase and there will be downward pressure on the interest rate. In other words, some forces prevent the interest rate from being permanently above the profit rate.

Therefore, the general rate of profit is generally above the interest rate. Nevertheless, the reason why this happens is a matter of controversy within the Marxist literature. Harris (1976) claims that if perfect capital mobility is assumed between productive and interest-bearing capital, the profit and the interest rate should be equal. According to the author, Marx never assumed that arbitrage because there are barriers between productive and financial capitals that are inherent to the concept of fractions of class, which result from political and ideological, as well as economic determinations. Itoh (1988) argues that there is no perfect mobility, but not as a result of ideological differences, but because fixed capital cannot be easily or quickly converted into loanable capital. Hence, the interest rate has a certain autonomy concerning the profit rate. Lapavitsas (2017) shows that the principle of capital mobility operates differently between interest-bearing and productive capital than within the latter across branches or between industrial and commercial capital. This results from the fact that, to become interest-bearing capital, an industrial capital must abandon the

circuit of capital and stop producing surplus-value altogether, instead of simply redistributing itself from one sector to another. Symmetrically, to transform a sum of interest-bearing into productive capital, it must be actively put into the production of surplus-value. In other words, systematic differences between the profit and interest rate do not result from barriers to the movement between productive and financial capitals, but from the different positions that they have in the circuit of capital, which lead to the rate of interest being normally below the profit rate.

We can add to Lapavitsas' (2017) view that interest-bearing capital, in general, is composed of small sums of money that lack the volume required for productive valorization on its own. As we pointed out, interest-bearing capital is formed by funds that cannot appropriate a profit rate higher than the interest rate (for example, formerly small capitals that were liquidated), funds still insufficient to be reinvested (profits, the funds destined to the reposition of fixed and circulating capital, and others) or sums of money that come from sources of income of relatively low amounts (wages, for example). These funds become a lever for accumulation only when they are centralized in financial institutions, allowing them to jointly acquire a considerable size.[6]

In any case, the Marxian position is that there is not a qualitative identity nor a tendency towards quantitative equality between rate of profit and rate of interest, as stated by Neoclassical and Keynesian economics respectively (Fine, 1985; Itoh and Lapavitsas, 1999; Pivetti, 1991). On the contrary, in general, the rate of interest is lower than the rate of profit.

All things considered, the relationship between productive and interest-bearing capital changes as a result of the comparison between profit and interest rate, and the movements of capital derived from it. Because of this, it can be seen that the interest rate, ignoring other determinations that exert influence upon it, has a cyclical movement.

CAPITAL DIFFERENTIATION AND THE ROLE OF THE INTEREST RATE

In the previous subsection, we discussed the influence of the interest rate in the decisions of productive capitals in general. However, productive capital is characterized by its heterogeneity, which derives from the process of centralization and concentration. In this context, the interest rate plays an additional and crucial role. To understand it, we need to briefly discuss the characteristics of the capital differentiation process.

The general characteristics of the capital differentiation process

To survive competition, any individual capital must engage in a permanent search for cutting costs. The most powerful way to do so is to innovate and increase the productivity of the workforce. This could be achieved through transformations in the production process, automation-digitalization, a growing technical division or reorganization of the labor process, and using constant capital more efficiently (Iñigo Carrera, 2013; Marx, 1976; Shaikh, 2016). In any case, this is possible with a higher scale of production, allowing firms to divide costs into more units, thereby cheapening unit costs.

To sell a higher number of commodities, firms must reduce their price. However, if prices fall less than costs, individual capitals can appropriate an extraordinary profit per unit. When the other firms see their sales and/or margins reduced, they will attempt to follow the innovation path to recover their profit rate. Once improvements are generalized to all the capitals in a branch, the value of commodities falls and the extraordinary profit disappears, equalizing the profit rate between them and producing relative surplus-value.

However, this process crashes with the magnitude of the solvent demand or the size of the market. Even when productivity improvements lower the value of a commodity and increase the demand for it, the market might grow at a lower pace than the one required to absorb the higher level of production of all the firms at the same time. If this happens, total demand, at the new normal scale of production, would be insufficient for all the firms that competed initially (Graña, 2014).

In this way, the extension of the market presents itself as the condition of existence for capitals that cannot keep the pace of accumulation. For example, let's assume that the demand could originally absorb 100 units and four firms are producing 25 units each. In this context, one innovates and now produces 35 units. When the others copy the innovation, the total supply would be 140. Even if the market grows to, say, 105 units, there would be no longer space for the four firms, but only for three, so one would eventually have to exit the market. While this factor prevents all firms from concentrating, it also opens the possibility for the survival of smaller ones due to their lower scale. This is because nothing guarantees that the sum of the production of the firms that innovated would suffice to satisfy the whole market. If the residual demand is lower than the one required for a 'normal' capital, then 'small' capitals can, without facing direct competition with normal capitals, continue in production.[7] If the new demand in the previous example were 130 units instead of 105, there would

be space for the three innovating or normal capitals plus a laggard or small one. The latter appropriates a lower-than-general rate of profit since it must sell at the same price but faces higher unit costs.

Who innovates and who lags behind seems to result from a purely random process. However, once the differentiation process has been set in motion, some mechanisms guarantee that the 'innovating' firms will keep their privileged position (Rikap, 2019). As a result, there is a permanent and growing gap between firms. This is because small capitals appropriate both a decreasing rate of profit (so eventually they cannot even reproduce the invested capital) and a lower mass of profits. Their smaller capital might not even be enough to advance the minimum amount required to introduce specific improvements or production processes needed to survive in competition. Consequently, the absolute gap between the accumulation capacity of normal and small capitals grows (Caligaris, 2019; Graña, 2014; Iñigo Carrera, 2016; Starosta, 2010).

As can be seen, normal capitals put in motion the socially normal productivity of labor for each branch at each moment. Because of this, they are entitled to appropriate the general rate of profit. Small capitals, on the other hand, cannot appropriate the general rate of profit and are excluded from its formation, which results from the equalization of the profit rates only between normal capitals in the different branches of activity (Iñigo Carrera, 2016; Shaikh, 2016). The rate of profit of small capitals is determined by the difference between their cost price - higher than the one of normal capitals due to their lower productivity- and the price of production of normal capitals, which includes the general rate of profit.[8] Consequently, they survive appropriating a lower-than-normal profit rate.

At this point, it is worth asking which is the survival limit for these small capitals. As capitals losing in competition, they compare their own profit rate with the interest rate they would earn if they were liquidated. Since there are differences between the 'book value' and the value obtained from liquidation, in the comparison the interest rate is not applied to all of their capital, but only upon the value of liquidation of their constant capital (Caligaris, 2019; Iñigo Carrera, 2013; Starosta, 2010).[9]

The interest rate as the regulator of the valorization of small capitals

In this context, increases in the rate of interest not only affect the investment decisions of productive capitals but might lead small capitals into liquidation, forcing them to become interest-bearing capital. A growing interest rate - even if below the general profit rate- might surpass the specific valorization limit of small capitals pushing them to liquidate themselves (Caligaris, 2019). On the other side, a low-interest rate might allow small capitals that are

increasingly lagging behind to remain in production, even though they do not have any further role to play in the development of the productive forces.

In other words, when the interest rate is low, there is a relative abundance of interest-bearing capital, so there are incentives for functioning capitals to remain in production. On the contrary, an increase in the interest rate shows a relative scarcity of interest-bearing capital. This scarcity is compensated with the two mechanisms previously discussed (i.e., a change in composition between productive and financial capital, and between own and borrowed capital) and also by the transformation of functioning small capitals into interest-bearing capitals. Thus, the interest rate now plays an additional role, governing not only the investment cycle but the valorization of small capitals as a whole (Iñigo Carrera, 2016).

Additionally, the interest rate, through differential access to credit, has a direct influence on capital differentiation. Small capitals pay a higher rate of interest for the use of borrowed funds, get relatively smaller amounts, and for shorter repayment periods. As a result, their capacity to finance investments by borrowing is more limited (Davis, 2018; OECD, 2020). In this way, they lose access to an additional source of valorization.

As we previously mentioned, a normal capital that uses borrowed funds earns a rate of profit of enterprise higher than the general rate of profit, since it gets the latter plus a residue given by the difference between the general rate of profit and the interest rate over the borrowed capital. A small capital has both a lower rate of profit as well as a lower residue since it pays a higher interest rate, resulting in a rate of profit of enterprise that is lower than that of normal capitals. Table 2 shows that, in addition to the differences between the general rate of profit and that appropriated by small capitals, there is a new difference given by the difference of the interest rate at which the normal and small capitals borrow, and the proportion of funds that they can borrow. Hence, the gap in their accumulation capacity widens (Caligaris, 2019).

Table 2. Differences between the rate of profit of enterprise between normal and small capitals.

	Capital			Rates		Total profit			Profit of enterprise		g_E
	K_O	K_B	K_T	g	i	G	G_E	I	$G_{E_{K_o}}$	$G_{E_{K_B}}$	
Normal	30	70	100	0,1	0,02	10	8,6	1,4	3	5,6	0,29
Small	25	25	50	0,05	0,03	2,5	1,75	0,75	1,25	0,5	0,07

Source: Own elaboration. K_O stands for own capital, K_B for borrowed capital, and K_T for total capital. g stands for profit rate and i for interest rate. G stands for total profit, G_E for total profit of enterprise, and I for total interest. $G_{E_{K_o}}$ stands for total profit of entreprise out of own capital and for total profit of entreprise out of borrowed capital. stands for rate of profit of enterprise.

Therefore, the differential access to credit plays a role in the heterogeneity between functioning capitals. Because of this, capitals compete for access to credit. The acquisition of interest-bearing capital pushes the centralization of productive capital, while the difference between the profit and the interest rate pushes its concentration (Iñigo Carrera, 2013).

TOWARDS A FRAMEWORK FOR UNDERSTANDING THE ROLE OF CREDIT POLICY FOR STRUCTURAL CHANGE

As we have shown, the interest rate plays a different role for normal and small capitals. Because of this, credit policy does not have the same effect on them. In what remains of this article, we briefly present the possibilities and limitations for credit policy to achieve structural change in the context of capital differentiation.

While the capital differentiation process is a universal capitalist process, it adopts different geographical expressions, resulting in a given international division of labor (Starosta, 2016). In particular, in the productive structure of 'developed' countries, there is a combination of both normal and small capitals, but in 'developing' ones there is a predominance of small capitals. Consequently, developing countries are characterized by their relatively low productivity, which harnesses their competitiveness and employment conditions (Graña, 2018).

In this context, credit policies are crucial to finance the transformation of the productive structures of developing countries. Additionally, these policies have the advantage that they remain relatively available in a context where most developmental policies are restricted by international organizations such as the World Trade Organization and bilateral-regional trade agreements (Naqvi, 2018). However, designing developmental credit policies for those countries is challenging. Considering the relationship between profit and interest rates discussed in this article, we can understand how different interest rate regimes affect small capitals and their possibilities of transformation.

On the one hand, a low interest rate policy incentivizes productive investment -discouraging financial investment-, an increase in the use of credit -instead of own capital-, and allows small capitals to remain in production, with positive effects on output and employment. However, the growth of small capitals means the creation of low-quality and low-wage employment (Graña, 2018). On top of that, given that the differentiation grows in time, it is likely that most of the small capitals that manage to survive only because of the low interest rate will increasingly lag behind

(Fernández-Arias et al., 2020). In other words, over time, they will require further reductions in the interest rate (eventually zero or even negative) to stay in production. For example, the so-called zombie firms are less productive firms that can only remain in production in a low interest rate environment (Banerjee and Hofmann, 2018).

Additionally, Marxist scholars emphasized that low interest rates could push idle capital to speculate on stocks and more risky assets (Cipolla, 1997; Crotty, 2017; Harvey, 2006; Itoh, 1988; Vasudevan, 2018; Weeks, 2010). In the developing world, a low or negative interest rate reduces domestic currency savings and leads to capital flight pushing exchange rates as well as inflation upwards, leading to a loss of control over credit policy (Bonizzi et al., 2020). As we can see, there are important downsides to an extremely low interest rate policy compatible with the valorization of small capitals.

On the other hand, a high interest rate policy -above the profit rate of many small capitals- discourages productive investment and leads small firms into bankruptcy, thereby contracting output and employment (Gertler and Gilchrist, 1991). Additionally relevant for developing economies, it also has negative external consequences, bringing international capitals to finance carry-trade operations, resulting in weak external balances and overvaluing the exchange rate, hurting competitiveness (Bresser Pereira, 2010; Bruno and Shin, 2015; Gabor, 2012).[1]

Therefore, the interest rate of a successful credit policy for structural change must place itself between these two extremes. Within this broad middle ground, there must be a recognition of the specific financial problems faced by small capitals. They not only have a lower profit rate, which constrains their own capital to finance future investment, but they also face harder conditions to borrow (higher interest rate, lower amounts, and shorter periods) resulting in problems to finance investment and in a lower capacity to increase their profit of enterprise relative to normal capitals. As a result, it is necessary to both increase the supply of interest-bearing capital denominated in domestic currency as well as direct it towards small capitals with potential.

Because of this, the direction of the flow of credit cannot be left to the determination of financial institutions (Mazzucato and Semieniuk, 2017). First, public institutions are needed in charge of these policies, including development banks, public commercial banks, and direct central bank intervention (Fernández-Arias et al., 2020; Naqvi, 2018). Second, credit should be given at below-market, close to zero, interest rates at long terms

with periodic supervision of the use of funds. Third, since the supply of interest-bearing capital is limited, its allocation should prioritize firms with the potential to become normal capitals, including considerations of branches and regions (Chandrasekhar and Ghosh, 2013). Fourth, given that credit policy needs to be directed to capital accumulation, its access needs to be linked to conditions (such as productivity growth, exports, employment) with a clear finalization date (Chandrasekhar and Ghosh, 2013; Dimitri and Cho, 1996). Fifth, financial policies are also crucial to control national champions and build a developmental coalition (Amsden, 1989; Wade, 1990). Finally, due to their access to privileged information, public credit institutions could gather information (for example about the difficulties faced by firms and how they solve them, the systemic impact of firms, and the potential gains from coordination) and learn from them to improve their design of productive development policies (Fernández-Arias et al., 2020).

While difficult to implement, credit policies are a necessary and key dimension for a developmental strategy. However, on their own they are insufficient, so they must be virtuously combined with industrial policies (Amsden, 1994; Chang et al., 1998; Fernández-Arias et al., 2020).

CONCLUDING REMARKS

In this article, we developed a Marxist framework to understand how the interest rate influences capitalist competition. We have shown that functioning capitalists compare their profit rate with the interest rate when making investment decisions, resulting in whether to invest productively or financially. In normal times, the general rate of profit is higher than the rate of interest, so functioning capitals will decide to invest productively. Once the investment decision has been made, the rate of interest reappears in the decision of how to finance the investment between own and borrowed funds. Productive capitals that use borrowed funds appropriate a higher rate of profit of enterprise because they get the difference between the general rate of profit and the rate of interest over the borrowed capital.

We also argued that the rate of interest plays an additional role in the context of capital differentiation by governing the valorization of small capitals. If the rate of interest is greater than their specific rate of profit, small capitals will be liquidated and turned into interest-bearing capital.

Following our findings, we made the case for a state direction of credit for structural transformation. A low-interest rate allows unproductive capitals to remain artificially in production, without a positive effect in the development of the productive forces. However, a high-interest rate sends

small capitals into bankruptcy, with negative effects on employment and output. In any case, abandoning the use of monetary and credit policy as an instrument of economic policy for development is nonsense. While on its own monetary policy is insufficient, without it there cannot be any hope to change the structural path of the economy.

We hope this to be the first step towards further research on a significant issue both for theory and policy. First, there are still important theoretical gaps to be filled. In particular, the Marxist literature has emphasized the cyclical movement of the interest rate along the cycle, so our analysis should be concretely applied to different phases of the economic cycle. Second, our theoretical argument could be further developed by modeling. Third, our theoretical findings should be complemented with empirical work on both the developed and developing world where the relevance of small and normal capitals is different. Fourth, our rather general remarks on credit policy should be further developed to make concrete policy proposals for the role of monetary policy in structural change. Finally, our framework should not only present a discussion within Marxist theory but engage with insights coming from other backgrounds. Hopefully, this contribution will spur dialogue between critical economists from different perspectives working on the same problems.

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Notes

1 This does not mean that banks cannot create money *ex nihilo*. In fact, they do so in practice. However, from a Marxian point of view, that must be later validated with a movement of real flows of value. For a discussion of the functioning of banks see Hall (1992), Harvey (2006), and Itoh and Lapavitsas (1999).

2 These determinations do not apply to consumption credit or state credit. The first was not studied by Marx, and it can be conceptualized as a part of the value of the labor force (Harris, 1976), as an extension of commercial credit, or as 'financial expropriation' (Lapavitsas, 2013). Marx understood the second as a form of fictitious capital because the loan is made to finance expenses already made that were not invested as capital. In this case, the lender has a title of debt against the state that grants her/him the right to participate in a given amount of income (for example, a proportion over the annual revenue of

the state), and the possibility to sell this title to others (Dias Carcanholo, 2017; Durand, 2017).

3 It is worth recalling that, while the profit rate is particular of each capital (even if they earn the general rate of profit, they only know their own), the market rate of interest is a given amount, quantitatively equal and known by everyone.

4 For a Marxist critique of the net present value criteria see (Iñigo Carrera, 1998).

5 However, this is a different rate of interest. When deciding whether to invest productively or financially, the relevant interest rate is the one at which capitalists can valorize their funds. When deciding how to finance the investment, the relevant interest rate is the one at which they can borrow. Typically, the latter is higher than the former, as the spread makes the profit of financial intermediaries. This also makes it profitable for non-financial corporations to borrow to finance financial investments (Davis, 2017)

6 Itoh (1988) argues that the difference between the profit rate and the interest rate plays a role in the profit rate equalization across branches. Individual capitals in branches that have a rate of profit higher than the rate of interest have incentives to borrow to expand their business whereas, in branches that have a profit rate lower than the rate of interest, firms have incentives to reduce their debts and not expand their business.

7 A final consideration refers to the borrowing of capital denominated in foreign currency. A discussion on this topic goes beyond the scope of this paper, but it is worth pointing out that, in addition to the interest rate, firms have to consider currency risk given their exposure to currency mismatches (Chui et al., 2016).

8 This does not mean that they will go bankrupt or that they will contract their scale of production. However, the new expenses required to keep their scale (mostly circulating capital) would be financed with own funds or using commercial credit that capitalists extend to themselves.

9 In this paper we do not explore the consequences of capital market financing. For a Marxist analysis, see Lapavitsas (2013).

10 It is worth mentioning that, in Marx's view, banks do not valorize at the rate of interest but at the rate of profit. They are born out of the development of moneyed capitalists, a type of commercial capital in charge of the technical operations of money in circulation. Because of this, they hoard sums of money coming from the technical operations of collection and payment, international payments, and movements of gold and silver. The availability of money allows these commercial capitalists to develop the administration of interest-bearing capital and become bankers. Borrowing and lending becomes their business. Thus, banking consists on acquiring large sums of money-capital, mediating between the real borrower and lender. As a commercial capital, banks participate in the formation of the general rate of profit. Even though the concrete form of their profit comes from the difference between the interest rate that it pays lenders and the interest rate that it gets from borrower, the bank earns profit

and not interest. The only exception is when the bank loans own funds, acting simultaneously as bank and lender, but this generally plays a small role (Fine, 1985; Hall, 1992; Saros, 2013).

11 The idea of 'normal' capital is similar to that of 'regulating' capital in Anwar Shaikh's work.

12 It is worth noting that, if normal capitals develop their productivity up to a point where their price of production falls below the one required for small capitals to appropriate a profit exceeding the rate of interest, small capitals will no longer be able to remain in production.

13 Linked to the argument of Itoh (1988), there are specific factors that result in a difference between the 'book' value of constant capital and the real value obtained from their liquidation. Among them, we can mention the modernity and specificity of the equipment to be sold, the moment of the cycle, the possibility to sell by unit or separately, etc. Moreover, passive interest rates are positively linked to the amount of capital which also affects the limit of liquidation of small capitals.

References

Amsden, A. H. (1989), *Asia's Next Giant: South Korea and Late Industrialization*, Oxford: Oxford University Press.

Amsden, A. H. (1994), "Why isn't the whole world experimenting with the East Asian model to develop?: Review of the East Asian miracle", *World Development*, *22*(4), pp. 627–633.

Argitis, G. (2001), "Intra-capitalist conflicts, monetary policy and income distribution," *Review of Political Economy*, *13*(4), pp. 453–470.

Baeza, A. V., and Mendieta Muñoz, I. (2010), "Apuntes sobre la teoría marxista de la tasa de interés," *Problemas Del Desarrollo*, *41*(162), pp. 161–176.

Banerjee, R., and Hofmann, B. (2018), "The rise of zombie firms: causes and consequences", *BIS Quarterly Review*, September.

Bonizzi, B., Kaltenbrunner, A., and Powell, J. (2020), "Subordinate financialization in emerging capitalist economies", in Mader P., Mertens D. and van der Zwan N. (eds), *The Routledge International Handbook of Financialization*, Abingdon: Routledge, pp. 177–187.

Bresser Pereira, L. C. (2010), *Globalization and Competition. Why Some Emergent Countries Succeed while Others Fall Behind*, Cambridge: Cambridge University Press.

Bruno, V., and Shin, H. S. (2015), "Global dollar credit and carry trades: A firm-level analysis", *BIS Working Papers*, *510*.

Caligaris, G. (2019), "Distintas tasas de ganancia y tipos de capitales en la crítica de la economía política. Un enfoque alternativo", in O. Martínez (Ed.), *Karl Marx desde América Latina. Dialéctica, política y teoría del valor*, Ande / GISLAT,

pp. 391–416.

Chandrasekhar, C. ., and Ghosh, J. (2013), "Policies for structural transformation: an analysis of the Asia-Pacific experience," *ESCAP MPDD Working Papers WP/13/01*.

Chang, H.-J., Park, H.-J., and Yoo, C. G. (1998), "Interpreting the Korean crisis: financial liberalisation, industrial policy and corporate governance," *Cambridge Journal of Economics*, *22*, pp. 735–746.

Chui, M., Kuruc, E., and Turner, P. (2016), "A new dimension to currency mismatches in the emerging markets: non-financial companies," *BIS Working Papers*, *550*.

Cipolla, F. P. (1997), "Interest rate changes in Marx's theory of the industrial cycle," *International Journal of Political Economy*, *27*(1), pp. 73–84.

Crotty, J. (2017). "The Centrality of money, credit, and financial intermediation in Marx's crisis theory: an interpretation of Marx's methodology", in Crotty J., *Capitalism, Macroeconomics and Reality. Understanding Globalization, Financialization, Competition and Crisis*, pp. 72-106, Cheltenham: Edward Elgar.

Davis, L. E. (2017). "Financialization and Investment: a Survey of the Empirical Literature," *Journal of Economic Surveys*, *31*(5), pp. 1332–1358.

Davis, L. E. (2018), "Financialization and the non-financial corporation: An investigation of firm-level investment behavior in the United States," *Metroeconomica*, *69*(1), pp. 270–307.r

Demir, F. (2008), "Financial liberalization, private investment and portfolio choice: financialization of real sectors in emerging markets," *Journal of Development Economics*, *88*(2), pp. 314–324.

Dias Carcanholo, M. (2017), Marx(ism) and public debt: thoughts on the political economy of public debt, *Critique*, *45*(3), pp. 303–317.

Dimitri, V., and Cho, Y. J. (1996), "Credit policies: lessons from Japan and Korea," *The World Bank Research Observer*, *11*(2), pp. 277–298.

Durand, C. (2017), *Fictitious Capital. How Finance Is Appropriating Our Future*, New York: Verso.

Evans, T. (1997), "Marxian Theories of Credit Money and Capital," *International Journal of Political Economy*, *27*(1), pp. 7–42.

Evans, T. (2004), "Marxian and post-Keynesian theories of finance and the business cycle," *Capital & Class*, *28*(2), pp. 47–100.

Fernández-Arias, E., Hausmann, R., and Panizza, U. (2020), "Smart development banks," *Journal of Industry, Competition and Trade*, *20*(2), pp. 395–420.

Fine, B. (1985), "Banking capital and the theory of interest," *Science and Society*, *XLIX*(44), pp. 387–413.

Gabor, D. (2012), "Managing capital accounts in emerging markets: lessons from the global financial crisis," *Journal of Development Studies*, *48*(6), pp. 714–731.

Gertler, M., and Gilchrist, S. (1991), "Monetary policy, business cycles and the behavior of small manufacturing firms," *The Quarterly Journal of Economics*, *109*(2), pp. 309–340.

Graña, J. M. (2014), "Los problemas productivos de las empresas y su vinculación con el deterioro de las condiciones de empleo de los trabajadores," in Lindenboim J. and Salvia A. (eds), *Hora de balance: proceso de acumulación, mercado de trabajo y bienestar. Argentina 2002-2014*, pp. 39–74, Buenos Aires: Eudeba.

Graña, J. M. (2018), "Labor market trends in a low and heterogeneous productivity country. Evidence from Argentina's manufacturing," *Brazilian Journal of Political Economy*, *38*(2), pp. 358–376.

Hall, M. (1992), "On the creation of money and the accumulation of bank-capital," *Capital & Class*, *16*(3), pp. 89–114.

Harris, L. (1976), "On interest, credit and capital," *Economy and Society*, *5*(2), pp. 145–177.

Harvey, D. (2006). *The Limits to Capital*, New York: Verso.

Hein, E. (2009), "Money, credit and the interest rate in Marx's economic. On the similarities of Marx's monetary analysis to Post-Keynesian economics," *MPRA Paper No. 18608*, 0–33.

Iñigo Carrera, J. (1998), *A Model to Measure the Profit Rate of Specific Industrial Capitals by Computing their Turnover Circuits*, Buenos Aires: Centro para la Investigación como Crítica Práctica.

Iñigo Carrera, J. (2013), *El capital: razón histórica, sujeto revolucionario y conciencia*. Imago Mundi.

Iñigo Carrera, J. (2016), "The general rate of profit and its realisation in the differentiation of industrial capitals," in Charnock G. and Starosta G (eds), *The New International Division of Labour*, pp. 25–53, London: Palgrave Macmillan.

Itoh, M. (1988), *The Basic Theory of Capitalism. The Forms and Substance of the Capitalist Economy*, London: Macmillan Press.

Itoh, M., and Lapavitsas, C. (1999), *Political Economy of Money and Finance*, London: Palgrave MacMillan.

Jagannathan, R., Meier, I., and Tarhan, V. (2011) "The cross-section of hurdle rates for capital budgeting: an empirical analysis of survey", *National Bureau of Economic Research, Working Paper 16670*, pp. 1–42.

Lane, K., and Rosewall, T. (2015), "Firms' investment decisions and interest rates," *Bulletin Reserve Bank of Australia*, 1–7.

Lapavitsas, C. (2013), *Profiting Without Producing. How Finance Exploits Us All*, New York: Verso.

Lapavitsas, C. (2017), "Two approaches to the concept of interest-bearing capital, in *Marxist Monetary Theory. Collected Papers of Costas Lapavitsas*, pp. 125–146, Leiden: Brill.

Lianos, T. P. (1987), "Marx on the rate of interest," *Review of Radical Political Economics*, *19*(3), pp. 34–55.

Lucarelli, B. (2010), "Marxian theories of money, credit and crisis," *Capital & Class*, *34*(2), pp. 199–214.

Marx, K. (1976). *Capital. A critique of political economy.* Volume I, London: Penguin.

Marx, K. (1999). *Capital. A Critique of Political Economy,* Volume III, Accesed at: http://www.marxists.org/archive/marx/works/1850/pol-econ/index.htm.

Mazzucato, M., and Semieniuk, G. (2017), "Public financing of innovation: new questions," *Oxford Review of Economic Policy*, *33*(1), pp. 24–48.

Meier, I., and Tarhan, V. (2011), "Corporate investment decision practices and the hurdle *r*ate premium puzzle, *SSRN Electronic Journal*, June 2014.

Naqvi, N. (2018), "Finance and industrial policy in unsuccessful developmental states: the case of Pakistan, *Development and Change*, *49*(4), pp. 1064–1092.

OECD, (2020), *Financing SMEs and Entrepreneurs 2020. AN OECD Scoreboard*, Paris: OECD Publishing.

Orhangazi, Ö. O. (2008), "Financialization and capital accumulation in the nonfinancial corporate sector: a theoretical and empirical investigation on the US economy, 1973-2004," *Cambridge Journal of Economics*, *32*(6), pp. 863–886.

Panico, C. (1980), "Marx's analysis of the relationship between the rate of interest and the rate of profits," *Cambridge Journal of Economics*, *4*(4), pp. 363–378.

Panico, C. (1988), "Marx on the banking sector and the interest rate: some notes for a discussion, *Science & Society*, *52*(3), pp. 310–325.

Petri, F. (1997)," On aggregate investment as a function of the interest rate, *Universita Di Siena Working Paper No. 217*.

Pivetti, M. (1991), *An Essay on Money and Distribution*, London: Macmillan.

Rikap, C. (2019), "Innovation as economic power in global value chains," *Revue d'Economie Industrielle*, 163 (3), pp. 35–75.

Robles Báez, M. L., and Escorcia Romo, R. (2016), "Acercamiento al capital que devenga interés y sus formas derivadas como formas necesarias de la reproducción del capital en tanto totalidad," *IX Jornadas de Economía Crítica*.

Saros, D. E. (2013), "The circulation of bank capital and the general rate of interest, *Review of Radical Political Economics*, *45*(2), pp. 149–161.

Shaikh, A. (2016), *Capitalism. Competition, Conflict, Crises*, Oxford: Oxford University Press.

Sharpe, S. A., and Suarez, G. (2014), "The insensitivity of investment to interest rates: evidence from a survey of CFOs, *FEDS Working Paper*, *2014–2*.

Starosta, G. (2010), "Global commodity chains and the Marxian law of value," *Antipode*, *42*(2), pp. 433–465.

Starosta, G. (2016), "Revisiting the new international division of labour thesis," in Charnock G. and Starosta G. (eds.), *The New International Division of Labour*, pp. 79–103, London: Palgrave Macmillan.

Vasudevan, R. (2018), "Shadow money in the 19th century: is Marx relevant for understanding contemporary shadow money?," *Review of Political Economy*, *30*(3), pp. 461–483.

Wade, R. (1990), *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*, Princeton: Princeton University Press.

Weeks, J. (2010), *Capital, Exploitation and Economic Crisis*, London: Routledge.

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