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**QUADERNI DEL DIPARTIMENTO
DI ECONOMIA POLITICA E STATISTICA**

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n. 824 – Aprile 2020



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Abstract: In this paper we present a Classical-Keynesian viewpoint on financialization by using Garegnani's 'integrated wage-commodity sector' method. We focus on three aspects. First, we argue that financial instruments such as derivatives have played the role of 'luxury' goods, unnecessary and/or detrimental to the direct and indirect production of the wage-basket. Second, we show that the accumulation of household debt can result in a higher normal rate of profit. Third, there is scope to reconsider the connection between financialization and labour market institutions, which makes labour bargaining strength wane. Labour market relationships need not be strictly tied to financialization.

Keywords: financialization, household debt, labour market, rate of profit, financial markets

JEL Codes: B51, E44, F65, G5

“Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation.”
(J. M. Keynes)

“The case can be made that the casino society channels far too much talent and energy into financial shell games rather than into producing real goods and services, and that it is a significant drag on economic growth.”
(Business Week)

1. Introduction

Financialization is one of the most widely discussed topics among heterodox approaches. The issue has been analysed from several viewpoints, touching upon a long list of aspects. Although since the Great Recession its main indicators have somewhat attested at lower levels, it is still a remarkable feature of the US economy, which in spite of the appearances remains weak and plagued with high private debt levels (Fontanari *et al.* 2019, Lapavitsas and Mendieta-Muñoz 2018, McCormack and Novello 2020). As an example, in Fig. 1 and 2 we show the tremendous rise of the ratio between financial and domestic corporate profits and the analogously burgeoning household debt in percentage of GDP in the US. Moreover, the process of financialization can be a source of rising inequality as well as a trigger of stagnationist tendencies (Panico and Pinto 2018, Hein 2019).

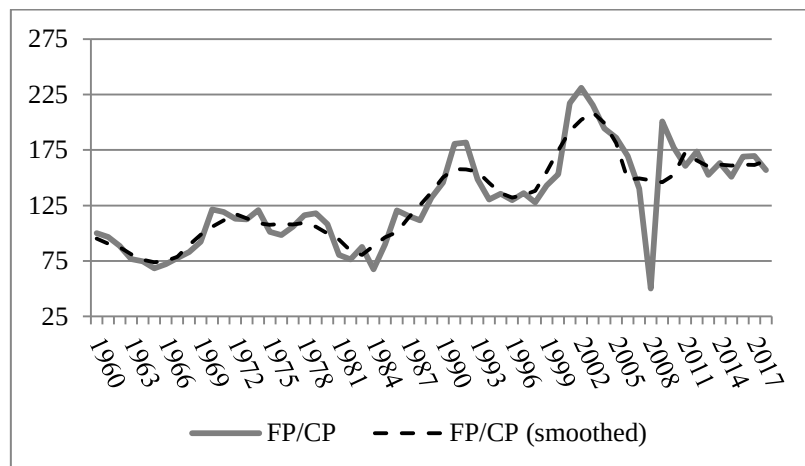


Figure 1 – Ratio of financial profits (FP) to domestic corporate profits (CP), USA (1960-2018; 1960 = 100). Smoothed series is a 5-year moving average. *Source:* Bureau of Economic Analysis, NIPA Tables.

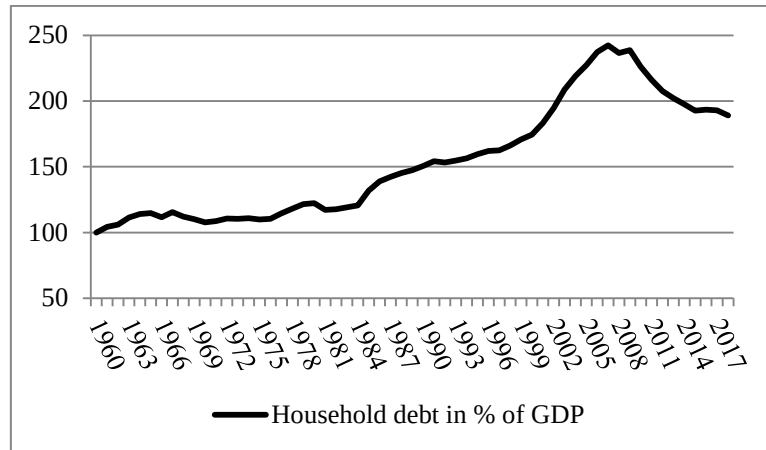


Figure 2 - Financial soundness indicator, households debt as a percent of GDP (USA 1960-2018; 1960 = 100). *Source:* FRED database.

The aim of the present paper is to study some of the fundamental features of financialization in a Classical-Keynesian framework and, while being inspired also by Post-Keynesian, neo-Kaleckian and Marxist viewpoints, we do not discuss mainstream standpoints (for a recent contribution, see Mian et al. 2020). For the sake of the analysis, we will use the ‘integrated wage-commodity sector’ method, which offers a particularly clear picture of the structural productive relationship within the economy and between distributive variables (Garegnani 1984, 1987; Fratini 2015, 2019). In particular, we will dwell on three main aspects. First, similarly to Barba and de Vivo (2012), we employ the wage-luxury good dichotomy to sort financial tools according to their usefulness to the direct and indirect production of wage-goods. We maintain that during the financialization era a large part of financial instruments turned out to be a drag on production. Second, after framing interests and commissions out of rising household debt as ‘financial expropriation’ in line with Lapavistas (2009, 2011) and McCormack (2019), we link their side-effect on absolute and relative surplus value extraction (Lattanzi-Silveus 2018) with the course of the normal rate of profit. In our view, this aspect results in a rise of both the amount of profits (when absolute surplus value rises) and of the normal rate of profit (when relative surplus value rises). Third, we offer some clues regarding the relationship between financialization and relative bargaining strength among social classes. According to us, the conventional connection between the two can be enriched by looking at literature suggesting a strong role for restructuring power relations prior to the rise of financialization, as well as the independent role enjoyed by labour market relations in shaping the wage share patterns. This of course is not meant to downplay the role of financialization, but to widen the debate on its origins and influence on income distribution. Obviously, our enquiry does not exhaust all the facets of a complex phenomenon. For instance, in Di Bucchianico (2019) an analogous viewpoint is used to study the effect on the normal rate of profit of: a high and rising size of the financial sector, the introduction of financial innovations, surging household indebtedness seen as a boost to aggregate demand and the shift to a pro-capital socio-political environment.

The reminder of the paper is structured as follows: Section 2 offers a literature review on financialization and sets forth the model we will deploy thereafter, Section 3 discusses the financial sector as a source of ‘unproductive’ services, Section 4 dwells on the role of household debt in spurring absolute e relative surplus value extraction with the ensuing effect on the normal rate of profit, Section 5 argues for the phenomenon of financialization to be not so clear-cut in its origins and effects on income distribution, while Section 6 concludes.

2. Studying financialization in a Classical-Keynesian framework

2.1 – Related literature

We will here briefly review, without claiming for exhaustiveness, some contributions dealing with the concept of financialization; see Sawyer (2013, 2018) for a comprehensive review. Some of the now-classic works on it are the seminal book of Magdoff and Sweezy (1987) who first shed light on the phenomenon. Epstein (2005) makes however clear the multi-faceted nature of the subject (and its somewhat definitory ambiguity) when stating that “financialization means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies”. This book, together with Krippner (2005), who particularly emphasised the rapidly surge of both the portfolio income to corporate cash flows and the financial to non-financial profits ratios, enjoyed a widespread success in their framing of financialization. More recently, van der Zwan (2014) concentrates the attention to three main aspects: financialization as a new regime of accumulation, financialization as corporations guided by the shareholder value orientation, financialization as the involvement of low and middle classes in financial markets. Post-Keynesian and neo-Kaleckian authors have been very active in this field of research (Hein 2010). Among others, van Treek (2009) enlarged the viewpoint on financialization from a micro to a macro perspective on the topic. Palley (2013) focussed the attention on: surging volumes of corporate and household debt, the rise of the financial sector’s profit share, the preeminent role of financial motives in guiding corporate behaviour.

We now highlight some literature particularly related to the aspects of major interest in light of the present enquiry. First, financialization has meant the progressive loosening of the controls over complex financial instruments diffusion and utilisation. Panico *et al.* (2013, 2016) maintain that, belonging in the Seventies, financial regulation gradually shifted from the attention to the supervision of financial firms management to the implementation of rules targeting liquidity and/or capital coefficients. This, according to the authors, buttressed the case for the financial sphere to increase its income share. One outcome of this process was the US financial bubble in the Nineties, which Parenteau (2005) investigates in details, providing insights on the incentives to its creation and the failure of regulatory powers to curb it. Dodd (2005) lingers on the spreading deployment of derivatives instruments, which proved to be a key feature of

the environment studied by Parenteau. According to him, together with some useful service they provide, they are liable to be employed in unproductive uses. Therefore, the author discusses possible ways to re-regulate that sphere of activity. Second, ballooning household debt has been an outstanding trend in advanced capitalism and remains a defining feature (Barba and Pivetti 2009, Lapavistas and Mendieta-Muñoz 2018). Palley (2010) analyses the cycles due to private debt pile up and subsequent deleveraging. Kim (2013) carries out an empirical exercise showing the negative effects on output due to private borrowing, while de Medeiros and Amico (2019) discuss the possible relationship between financialization and accumulation. This pattern resulted, as we will see, also in a drag on workers' living conditions. As an example, Boushey and Weller (2008) connect the rise of personal bankruptcy in the US in the last decades to worsening inequality, in turn incentivizing people to run in ballooning private indebtedness. Weller and Logan (2009) find that economic security steadily declined in US in the wake of the new millennium and in following years, the debt boom having a major role in such a dramatic shift. Pressman and Scott (2013) find that interest payments on previously accumulated debt used to finance consumption non-negligibly worsen the figures of inequality in the US. Scott and Pressman (2019) show the sizeable increase of financially unstable American households, in particular after the Great Recession. Third, financialization has been also studied in light of its medium- to long-run effects on functional income distribution. An explanation for both the rising strength of capital vis-à-vis labour and of the financial sphere with respect to the other portions of capitalists has been explained also in terms of changing the organization and way to conduct business through the rise of the shareholder value orientation (Lazonick and O'Sullivan 2000). Hein and Van Treeck (2010) set forth a model in which they study increasing shareholder power and the resulting pressure on labour. Hein (2012, Ch. 2, pp. 8-35) grounds on a Kaleckian perspective to maintain financialization be a major cause of falling wage shares across industrialised economies. Lapavistas and Mendieta-Muñoz (2016, 2019a, 2019b) have opened a line of research targeting the connection between financialization and the rate of profit. In their vision, financial firms have to be considered on the same footing as any other enterprise, providing services for the sake of realising the general rate of profit. Accordingly, they investigate the trends of profitability in the course of the financialization era.

2.2 – The “integrated wage-commodity sector” method

In order to get some clues on the financialization era, we place our analysis in a Classical-Keynesian, or Sraffian, standpoint (Sraffa 1951, 1960). There are basically two equivalent possibilities to treat income distribution within that theoretical strand: the ‘price-equations’ method or the ‘surplus-equation’ method (Garegnani 1984). In the former line of enquiry we find the seminal contributions of Panico (1985) and Pivetti (1991) investigating the role of monetary and financial factors in determining income

distribution.¹ Nonetheless, in our study we follow the second route by employing the ‘integrated wage-commodity sector’ (Garegnani 1984, 1987; from now on, IWCS). The IWCS is the “vertically integrated sector whose physical net product is the amount of the composite wage commodity required for the workers of the economy as a whole” (Fratini 2015, p. 534). This decision is driven by the fact that “it appears to exhibit some advantages of simplicity and transparency over the price-equations method” (Garegnani 1984, p. 309). In fact, we believe that the intuitive picture that is possible to get by means of the IWCS is an advantage when dealing with the analytical points we want to enquire on, in particular for the part devoted to changes in relative bargaining strength between classes. However, we will not neglect some aspects which, in Garegnani’s terminology, are place outside the ‘core’ of the analytical study.

In what follows we will refer to the stylised version offered in Fratini (2015, pp. 534-537), in which there is also the reconstruction of the link between Garegnani (1984, 1987) configuration of the surplus approach and its antecedents (in particular, Ricardo and Marx). In Fratini (2019) a step-by-step analytically developed construction of the IWCS can be found. First, assume the whole economy produces k commodities. The various industries engaged in their production are taken in proportions such that the gross product of the IWCS is the composite wage-commodity (where the k goods are taken in fixed proportions) plus the goods used in the integrated process of production. The IWCS net product corresponds to the wage-commodity paid to all labourers employed L . The amount of labour used in the vertically integrated process is L_v . The commodities used in the vertically integrated process are K_i ($i = 1, 2, \dots, k$). Commanded labour is used as standard of value (Garegnani 2018), wages are paid *post factum*.

$$p_\lambda = \sum_{i=1}^k \lambda_i \cdot p_i \quad (1)$$

$$w \cdot p_\lambda = 1 \quad (2)$$

In equation (1) p_λ is the value of the composite wage-commodity, λ_i are the single commodities entering in the physical composition of one wage-commodity unit, p_i are the prices of the single commodities entering the wage-basket. Equation (2) sets the numéraire to be the labour commanded by w units of the wage-commodity. Fratini (2015) then derives the value of the IWCS net product as the sum of the profits and wages therein distributed (supposing free competition).

$$L = L_v + r \cdot \sum_{i=1}^k K_i \cdot p_i \quad (3)$$

¹ For other contributions in this line of thought, see Dvoskin and Feldman (2019).

In equation (3) the normal rate of profit r is introduced, as it must be paid on the capital advances (in value) necessary to carry out production. At this point two further steps are needed. First, isolate the rate of surplus value, which in the IWCS also corresponds to the amount of profits per worker. This is done by bringing L_v to the left-hand side and dividing through by it. A term which is equivalent to the Marxian rate of surplus value (but in commanded labour terms), known in physical terms once the labour employments and the physical wage rate composition are given, is obtained. It is calculated as the difference between the wages paid to total labourers L and the ones employed in the IWCS L_v , without recurring to price valuations, given the physical homogeneity between the net product of the sector and the wages given to its workers. Second, on the right-hand side there are the prices p necessary to know the value of the means of production used up in the process. By resorting to the ‘reduction to dated quantities of labour (Sraffa, 1960, Ch. VI, pp. 40-47) it is possible to replace them with the quantities of labour expended in the production of the wage-commodity in the periods preceding the current one. In this way, a ‘profit function’, expressing the amount of surplus value per unit of labour needed in order to pay a normal rate of profit r , is obtained (Garegnani 1987). From these operations we obtain the normal rate of profit r as the only unknown in a single equation.

$$\frac{L - L_v}{L_v} = r \cdot \sum_{t=1}^{\infty} \frac{A_t}{L_v} \cdot (1 + r)^t \quad (4)$$

In equation (4) the newly-introduced terms A_t stand for the backdated quantities of labour used in the production of capital goods. On the left-hand side we have the rate of surplus value, which is a given constant. On the right-hand side, the profit function is a (convex) monotonically rising function of the rate of profit (Fratini 2019). The properties of these two sides allow an intuitive graphical representation.

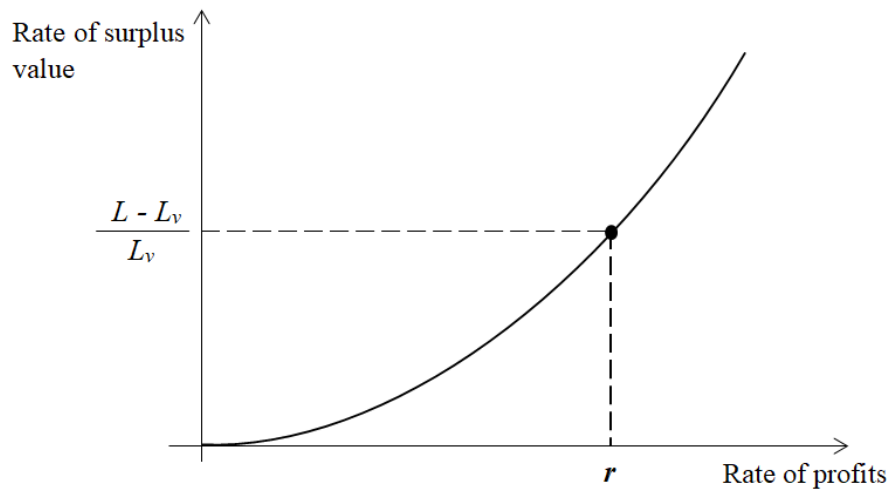


Figure 3 – The determination of the profit rate in the ‘integrated wage-commodity sector’. *Source:* Garegnani (1984), Fratini (2015).

In Fig. 3, the monotonically increasing profit function and the given rate of surplus value meet in a single point, where the normal rate of profit is univocally determined. In this theoretical framework the rate of profit depends solely on two factors: the rate of surplus value and the technical conditions of production. The technical conditions of production of the so-called ‘luxuries’, i.e. the goods and services not entering the wage-commodity, do not impact the normal rate of profit. We now have an analytical tool in which: input-output relationships must be given attention in order to seek which production lines determine the normal rate of profit, we can draw some clues on what are the factors affecting the normal course of distribution, and we can also establish a linkage between the latter and a broader set of socio-political circumstances.

3. Has finance been useful to the production process?

The well-known differentiation set forth by Sraffa (1960, Ch. 2, pp. 7-9) between basic and non-basic commodities served, among other things, to assert that only the former group matter for the determination of the normal rate of profit (Pasinetti 1977, p. 104). In the IWCS we find a very similar, albeit not completely identical, differentiation between wage-commodities and luxury commodities (Garegnani 1984, pp. 313; 1987, pp. 23). As said, only the technical conditions of production of the commodities entering the wage basket, and their direct and indirect means of production, enter into the determination of the normal rate of profit. When evaluated in terms of our study, this categorisation is relevant to assess if and how specific productions of goods and services should be seen as playing a role in the normal profit rate movements over time. Indeed, in this thread of literature there are attempts to sort out financial services as entering or not the list of basic goods (Barba and de Vivo 2012) or the IWCS (Di Bucchianico 2019).

Let us first expand on the view that considers large parts of the financial sector, those remarkably growing in the last decades of financialization, as an ‘unnecessary’ portion of the economy. This view is in fact enjoying contributes from various theoretical standpoints. Without any claim of exhaustiveness, we review some. According to the already mentioned Barba and de Vivo (2012), the financial industry, by issuing credit to trustworthy borrowers and managing risk, offers a valuable contribution to production. In spite of this, the authors maintain that there are large portion of this industry which do not perform activities useful to the economy’s reproduction. Two examples are the following. First, issuing credit to borrowers with poor trustworthiness profiles does not help to manage and reduce risk but rather fosters its unsafe circulation and diffusion. Second, the widespread trade in derivatives contracts has not been linked to the desire to buy insurances, but rather to simply engage in activities akin to pure gambling. The idea of distinguishing the financial sector into two different parts can be found in Bertocco and Kalajzic (2018) as well. The authors, moving in a Schumpeterian-Keynesian framework, aim at describing the

repartition of the financial sector in ‘good’ and ‘bad’ finance. On the one hand, they elaborate on Schumpeter (1912 [1949]) in order to study the good part of finance, which fosters a sound development of capitalist economies. On the other hand, starting from Keynes’s (1933, 1936) contributions, they describe the bad part of finance. The fundamental difference is between ‘enterprise’ and ‘speculation’. While the former is important in long-term economic development, the speculative part can lead to the boom and burst of bubbles, with the ensuing sheer adverse economic consequences. Mazzucato (2018, Ch. 4-5-6) offers a reconstruction of the role of the financial sector in creating and appropriating value and of the rise of financialization employing a framework similar to these last contributions. It is also interesting to note that mainstream economics, in spite of its customarily difficulty in aptly including the financial sector into its own theoretical body, seems to be acquiring awareness about the necessity to reshape its view (Blanchard and Summers 2019). For instance, Zingales (2015) points out that, even though the development of the financial sector is crucial, “there is no theoretical reason or empirical evidence to support the notion that all growth in the financial sector over the last 40 years has been beneficial to society.” Accordingly, the ‘rent-seeking’ dimension of finance, i.e. “those activities that while profitable from an individual point of view are not so from a societal point of view”, should be properly handled. Along with these theoretical enquiries, it is useful to review also some empirical evidence on the detachment and isolation of non-negligible portions of the financial sector from the rest of the economy. A famous contribution of Philippon (2015) finds that while in recent decades the quantity of financial intermediation rapidly surged, its unit cost remained stable. According to Philippon, technological and organisational advancements in that sector did not lead to an appreciable decrease in its unit costs. Therefore, “the finance industry's share of GDP is about 2 percentage points higher than it needs to be and this would represent an annual misallocation of resources of about \$280 billions for the U.S. alone” (Philippon 2012). In a close line of research, Spanò (2019) scrutinises financial flows in the European Union, distinguishing between those achieving the real domestic sector and those remaining confined to the foreign and financial sector. His investigation detects surging shares of finance circulating exclusively in the financial sector: “An increasing amount of credit in the countries analysed has involved transactions of assets already in place (housing, stock market) or of newly generated financial assets without contributing to the generation of real income” (ibid., p. 32). Dávila-Fernández and Punzo (2020) rely on an input–output approach employed for analysing financialization at the sectoral level in the US (1947-2015) and Brazil (1995-2011). They focus on the increase in the unitary financial content of output (in value). When aggregating all sectors, they show an increase in the importance of the financial sector in the last 35 years. Specifically, the service and information sectors are the ones which are connected to financialization the most. The financial sector features a tremendous growth of the share of activities taking place entirely within itself, exhibiting a progressive detachment from the real sector.

Overall, we believe the following general assessment to be a suitable closure of this part of the discussion:

Volumes of trading in financial markets have reached absurd levels - levels that have impeded rather than enhanced the quality of financial intermediation, and increased rather than diversified the risks to which the global economy is exposed. [...] We need focused financial businesses with a clear productive purpose and a management system, governance regime and capital structure appropriate to that purpose. We should aim to restore and nourish the rich variety of institutions and organisational forms that existed in the finance sector before the 1980s. (Kay 2015, pp. 281-291)

The next step is to link these critical views on the role of the financial sector, or at least of large parts of it, to our viewpoint focusing on the direct and indirect production of wage-goods. Our experiment consists in picking some fundamental products which enter the wage basket, and some others which are employed in the direct and indirect production of the former. *If* there is in the endless applied literature assessing the contribution of finance during the period of financialization evidence for the usefulness of financial services provision, *then* we can advocate for finance to enter in the IWCS, thereby affecting the normal rate of profit. *Otherwise*, that branch of production can be said to be considered *unproductive* and *unnecessary* to the reproduction of the system, analogously to Barba and de Vivo (2012). Without any claim of exhaustiveness, we present some broad evidence in favour of placing large parts of the financial sector outside the IWCS. For such a sake, we review applied evidence on goods and services which can be supposed to enter the socially recognised consumption of wage-earners. Among those, we put food, housing, healthcare, and education.² Among those entering the direct and indirect production of the former group, we selected commodities such as oil and energy, and retail services. For what concerns food, Girardi (2015) enquires upon the positive correlation between agricultural commodities' prices and stock market patterns. The combination of financialization and financial crisis is found to explain the phenomenon, which gets stronger during periods of financial shocks. Bruno, Büyükaşahin and Robe (2017) also study the importance of financial institutions' activity in explaining correlations between weekly grain, livestock, and equity returns. Girardi (2012), drawing on analogous results, maintains that "commodity derivatives were created to stabilize commodity price dynamics. As a result of their uncontrolled expansion, they now appear to be a factor of destabilization". Besides food production, Isakson (2014) analyses several facets of financialization in food provisioning. The author shows that: food provisioning has become progressively more financialized, food

² Strictly speaking, the healthcare and education elements may not always enter the basket of services to be paid out of the real wage. In Europe, for example, we would expect on average to have them offered for free or at an heavy rebate by the public sector, thereby being treated akin to an indirect wage component. In the US case, instead, we expect these same services bearing on the real wage workers earn.

retailers face increased competition by commodity traders, food workers exploitation is favoured by financialization, increasing volatility in agricultural markets heavily hinders small-scale farmers. Beyond food, Rolnik (2013) states that the financialization of housing has been fostered by the retreat of the public intervention from that sector. In addition, there has also been the willingness to incentivize new market-based housing finance models, causing housing to be progressively considered as an investment asset. These trends have adversely affected the widespread access to housing, as the financialization of home and mortgage markets is a diffused and growing phenomenon (Aalbers 2016). In addition, Aalbers (2017) contends that mortgaged homeownership and subsidized rental housing benefit financial markets, rather than the contrary. Similarly to the housing case, Hunter and Murray (2019) state that financialization in the healthcare field has been driven by the joint action of multilateral organizations, governments and private institutions. This process caused a dramatically detrimental shift in the way in which healthcare systems are organised. Healthcare as well has been turned into tradeable asset thanks to a deregulation steered by the conviction that enormous volumes of private financial capital are necessary for promoting development in that sector. The result, instead, has been to make room for extraction of revenues from situations of vulnerability. Education as well is not immune. Eaton *et al.* (2016) offer evidence on several aspects of financialization of US higher education. They show that: public and non-profit educational institutions noticeably resort to financially mediated flows of investment revenue and debt-funded capital, equity capital fuelled the growth of an explicitly financialized subsector of for-profit educational institutions, and that final users face rising interest payments. On this latter aspect, Adamson (2009) enquires the student-in-debt phenomenon, which has progressively gained ground in the US over the years, forcing many individuals to finance their studies via borrowing. Besides direct production, also the phases of indirect production and circulation are not exempt from being captured by financialization. Baud and Durand (2012) investigate financialization in the retail sector. According to the authors, the retail industry turned into a deeply financialized sector. This resulted in the enhancement of retailers' ability to offer high returns to shareholders. Another enormous field in which financialization has had major impact are commodities' markets. Tang and Xiong (2012) find that financialization is a major determinant of large increases in the volatility of non-energy commodity prices since the early 2000s. This is reflected, among other things, in the tightening correlation between non-energy commodity futures prices and oil prices in the US. Zhang, Chevallier and Guesmi (2017) investigate the role of stock markets in relation to crude oil and natural gas markets. Their results show the presence of systematic influence of the former markets on the latter. Panic episodes on stock markets affect crude oil and natural gas markets. Moreover, no de-financialization after 2008 is recognisable. Benedetto, Mastroeni and Vellucci (2019) by employing an entropy-based approach confirm these findings: de-financialization for crude oil and natural gas markets after 2008 is not detectable in the data. Ma, Ji and Pan (2019) deploy three predictors (fundamental, financial and macroeconomic uncertainty) of

crude oil price volatility to show that the financial one is the most powerful. The authors thus contend for financialization to be the major element affecting crude oil price behaviour since the Great Recession.³

The evidence herein presented shows that, in the spirit of Barba and de Vivo (2012), even from the point of view of the production of wage-goods, the services provided by financial actors appear to have been much more akin to the profile of ‘luxury’ goods, whose contribute to the reproduction of the system is questionable. Accordingly, they do not enter the determination of the normal rate of profit either. It has to be clarified that this does not in any way mean that the financial sector ought to be disregarded and treated as unimportant. There are in fact countless ways in which the explosion of finance and the widespread use of financial instruments can, among other things, affect income distribution. Just to make an example, as suggested by Stirati (2018, p. 272), the enormous earnings accrued to the financial sector may reshape expected earnings of enterprises operating in other sectors. Our conclusions are therefore aimed at improving the understanding of their effects, not at suggesting to downplay them.

4. Household indebtedness: a factor raising profitability?

Households have, during the financialization decades, massively resorted to borrowing from financial institutions (Langley 2008). Such a pattern can be shown to have two possible consequences on the normal rate of profit. In the first place, it causes aggregate demand to rise, thereby boosting production and employment. This, however, does not affect the *normal* rate of profit, but only the *realised* rate of profit. Following the vision of, among others, Barba and Pivetti (2009), Cynamon and Fazzari (2008) it can be maintained that households tried to keep up with previously formed living standards taking up increasingly higher amounts of private debt. Within the IWCS this can be read as follows. Private debt is a novel source of aggregate demand, that lets the economy grow in production and employment (Panico *et al.* 2012, Pariboni 2016, Panico and Pinto 2018). This means that the total amount of labour employed raises by a positive coefficient α , and with it wages to be paid. Employment in the IWCS thus has to rise as well. For given techniques, the rate of surplus value remains put and, hence, so does the *normal* rate of profit.

$$\pi_v = \frac{(1 + \alpha)L - (1 + \alpha)L_v}{(1 + \alpha)L_v} = \frac{L - L_v}{L_v} \quad (5)$$

³ However, the issue is not settled. For instance, Fattouh, Kilian and Mahadeva (2013) maintain that the evidence buttresses the case for considering economic fundamentals rather speculation the reason behind co-movements between spot and futures prices.

Such a result can be rationalised by considering that aggregate demand injections sustain the realised rate of profit via higher capacity utilisation, but do not impinge on a measure of the rate of profit which takes into account normal utilisation (Di Bucchianico 2019). This point enlightens half of the story. In fact, and we come to the second point, household debt during the era of financialization has progressively played also another role. Its continuous accumulation turned into a drag on workers' bargaining power and living conditions. For example, Kim *et al.* (2019) study the role of private debt burden as a factor making income distribution endogenous. In their model households' debt underwritten to consume more makes the cost of losing a job higher, given that the latter becomes a source of income directed also to service debt itself. Workers' bargaining power is thus impaired, making room for a surge in inequality. Furthermore, new rounds of borrowing meant to keep up with usual living standards become progressively less affordable. Kohler *et al.* (2019, pp. 945-947) list, among the most important factors causing the wage shares across industrialised economies to fall, rising household debt. The latter is said to favour financial vulnerability and to weaken class consciousness among workers. Hence, on one hand the middle class may gradually tend to leave wage bargaining aside while focusing on managing financial income streams and private debt. On the other hand, financial vulnerability can hinder class struggle. If households have to face mounting levels of debt (and debt servicing), they find undesirable the engagement in activities which may put at risk their job, which in turn consents them to sustain indebtedness. Such a process has become so relevant to let, for instance, Lapavistas (2009, 2011) to speak of 'financial expropriation'. According to this author, it constitutes a novel source of profits which is placed in circulation rather than production (the latter remaining the hallmark of capitalist exploitation). Such a profit extraction is facilitated by public sector's retrenchments and sluggish wage growth, two trends pushing workers towards the subsumption into the financial sphere with the ensuing extraction of interests from loans. In this line of thought, McCormack (2019) enquires on the 'financial stress' felt by working class members in the US (1992-2016). Financial stress is seen as a manifestation of financial expropriation occurring when households concretely resort to financial institutions for the sake of obtaining loans, and which affects much more lower-income groups. As the author puts it, the working class faces financial expropriation through fees and interest payments, usually paid on risky instruments (such as credit cards) prone to be a major source of financial stress. He then concludes advocating for the empirical relevance of financial stress, which questions the alleged beneficial effects of financial inclusion for workers.

What at this point is missing is a shortcut to analyse such an aspect through the lenses of the IWCS. A recent contribution placing the households' debt discourse in a Marxian perspective comes in particularly handy. Lattanzi-Silveus (2018) illustrates how household debt can adversely impact workers' bargaining power, in so making room for an increase of both absolute and relative surplus value (Sweezy 1942 [1962], pp. 63-66). As noted by Mavroudeas and Ioannides (2011, p. 424), "the extraction of

absolute surplus-value takes place when work-time increases and the value of labour-power remains constant or increases to a smaller degree. The extraction of relative surplus-value occurs when there is a reduction of the value of labour-power. In both cases the extracted surplus-value increases”. Moreover, “All these cases imply an increased ratio of unpaid to paid work-time, i.e. an increased rate of surplus-value, which reflects a greater degree of exploitation” (*ibid.*, p. 424). According to Lattanzi-Silveus (2018), the effect of private debt, with the ensuing interest payments, is to boost both types of surplus value extraction. It does so by forcing workers to work more in order to repay their outstanding debts, to sell their labour-power for less than its value (given that debt allows to get by with a lower direct wage), to consider their work vital also as a source of income to stick to regular repayments (becoming thus more vulnerable), and to cut on their substance expenditure when obliged to pay debt back. Moreover, it tricks working class into believing that class struggle could be replaced by mounting debt in order to achieve desired living standards. We now proceed to combine the supposed effects of rising private indebtedness with the various ways in which surplus labour can be elicited from workers. How can the effects of a high private debt burden on the household’s part translate, when mediated through Marxian definitions of absolute and relative surplus value as proposed by Lattanzi-Silveus (2018), into an impact on the rate of profit as calculated in the IWCS? We answer by separately analysing three instances. First, increased absolute surplus value extracted by lengthening the average daily work with an unchanged real wage composition. We can formulate this case in terms of an increase in the amount of working time necessary to get the same amount of wages, e.g. a reduction in the hourly wage.⁴ To better grasp what happens in the IWCS we make use of a simple system.

$$\Pi_v = L \cdot w \cdot p_\lambda - L_v \cdot w \cdot p_\lambda = (L - L_v) \cdot w \cdot p_\lambda$$

$$\pi_v = \frac{L - L_v}{L_v}$$

$$\overline{NP_v} = (\uparrow)L \cdot (\downarrow)w \cdot p_\lambda \quad (6)$$

$$W_v = (\uparrow)L_v \cdot (\downarrow)w \cdot p_\lambda$$

$$w \cdot p_\lambda = 1$$

⁴ In this case, it helps counting labour deployed in the whole economy as a number of hours worked rather than the number of employed persons. In fact, in the latter case it would appear that what we want to frame as increased exploitation results in an increase in the number of total labourers. Moreover, we will throughout assume that the wage-basket remains unchanged in composition. This helps us setting aside the fact that, with changing wage-goods composition, it is much more difficult to compare situations before and after the change (Garegnani 1987, Fratini 2019). However, we deem this hypothesis not to fundamentally change the validity of our results.

In (6) we have, in the first equation, the amount of surplus value (and thus profits) in the IWCS Π_v as the result of subtracting from the whole wage bill paid the part paid to the workers employed in the IWCS. In the second equation we simply recall the rate of surplus value π_v as we had in the left-hand side of (4). In the third equation the IWCS net product NP_v is kept constant, in such a way that while the amount of worked hours augments, the number of wage units per hour worked decreases. In the fourth equation the same happens: this time is the wage bill to the labourers in the IWCS W_v that remains constant. The fifth equation simply recalls how the numéraire is fixed. Workers thus acquire the same physical amount of wages in exchange of spending more time in the workplace. This has two consequences. In the first place, the value of the IWCS net product in commanded labour does not change. This can be seen through the fifth equation: even if the w units of the wage-commodity acquired by workers for one hour of work are less, since we use them as numéraire, no change occurs in this sense. Second, both L and L_v are now higher, and this boosts the *amount* of surplus value, owing to the fact that the former terms is by definition higher than the latter. Therefore, even though they increase by the same magnitude, the result is their difference to widen. Nonetheless, the *rate* of surplus value remains still, since the ratio of total surplus value *per worker* deployed in the IWCS does not change. Therefore, we can conclude that fostered absolute surplus value extraction heightens the amount of profits, but not the rate of profit.

Second, relative surplus value originated from either a compression of the real wage, or when productivity is enhanced. In the former case, increased relative surplus value comes about in the form of workers forced to accept a smaller wage-basket. This means that, for given wage-basket composition, there is a decrease in the w units acquired by workers. This causes the IWCS net and gross products to fall, because L total labourers now earn a lower wage bill and therefore less labour is required to produce their physical wages. This in turn causes labour employed in the IWCS to fall (Fratini 2019). Hence, in this case both the *amount* and the *rate* of surplus value increase.

$$L'_v < L_v \rightarrow \pi'_v = \frac{L - L'_v}{L'_v} > \pi_v \quad (7)$$

In equation (7) the superscripts denote variables after the decrease in the real wage level. For given techniques and hence unchanged profit function, the higher rate of surplus value results in a higher normal rate of profit as shown in Fig. 4.

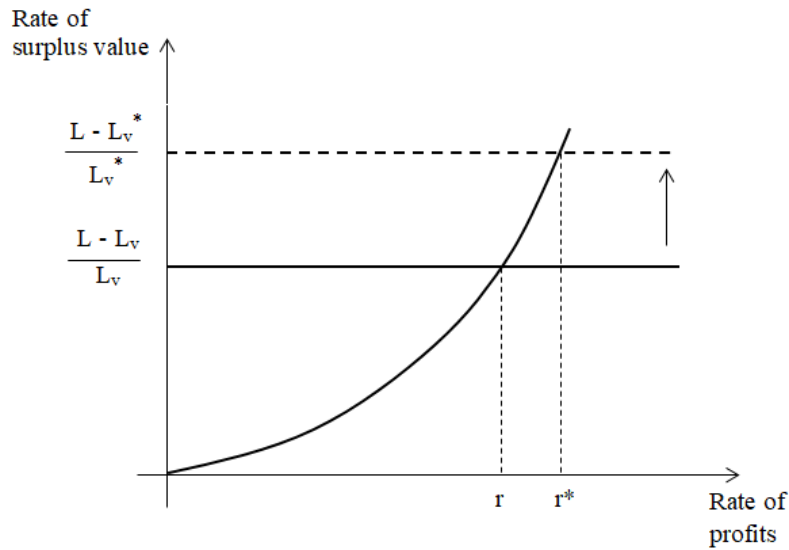


Figure 4 - The heightened normal rate of profit resulting from a lower real wage. *Source:* Garegnani (1984), Fratini (2019).

In the third and last case, increased relative surplus value stems from increasing productivity, which cheapens the elements entering the wage-basket. It can be argued that “this is a more subtle case of extraction of surplus-value, since workers can maintain their consumption standard despite the increased rate of exploitation” (Mavroudeas and Ioannides 2011, p. 430). In this case the enhanced productivity in the production lines of the IWCS can be translated into a lower amount of capital advancements in order to produce the same goods and services entering the wage-basket. In fact, if the productive process can be carried out with less means of production, this means that the same amount of profits can be distributed to remunerate less capital advancements.⁵ We hence have a higher normal rate of profit ensuing. In this instance, the effect passes via modification in the right-hand side of equation (4): the profit rate enhancement stems from an outward movement of the profit function as shown in Fig. 5.

⁵ On the other hand, if the productive process requires less labour, we would have both more profits, because the rate of surplus value increases as in (7), and less prior advancements.

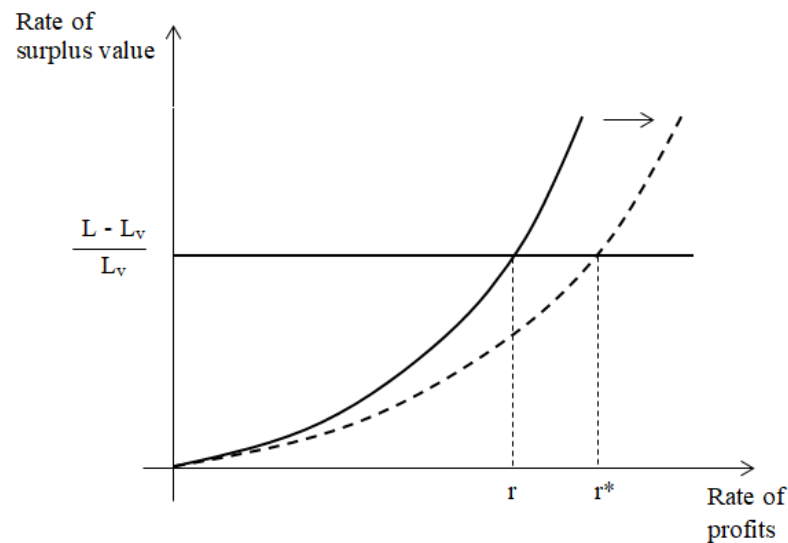


Figure 5 - The heightened normal rate of profit resulting from an outward shift of the profit function.
Source: Garegnani (1984).

Our analysis thus demonstrates that household debt, beyond its role in sustaining living standards and boosting aggregate demand, can be a powerful tool to boost the normal rate of profit, albeit in an indirect way. It goes without saying that it would be far-fetched to believe capitalists to desire workers to accumulate debt in order to boost the general rate of profit. Debt is welcomed because of it entails extraction of interests from a steadily widening public. However, the micro decisions to incur in additional debt can also foster, at the aggregate level, profitability via worsening bargaining power of workers.

5. What is the relationship between financialization and weakening labour bargaining power?

There can be little doubts on the unfavourable socio-political environment workers have been facing in the last decades. Beyond the effect of private debt accumulation seen in the previous section, there are several instances in which capitalists can exert pressures over labourers (Boyer 2000, Lazonick and O'Sullivan 2000), thereby creating a favourable environment to bolster the normal rate of profit (Di Bucchianico 2019). We here want to add some elements to the reconstruction of how financialization can have, and has had, a role in determining the aforementioned dramatic shift in bargaining power positions. This obviously does not exhaust the discourse on inequality, which involves a broader analysis (Nolan *et al.* 2019). Generally speaking, the relationship between financialization and workers' incomes is seen as bidirectional. Indeed, on the one hand, there is remarkable empirical evidence about the possibility for financialization to impact the wage share and inequality. In Dünhaupt's (2016) view, stronger shareholder value orientation, globalisation and financial liberalisation have a considerable negative impact on the bargaining power of labourers. Stockhammer

(2017) carries out an empirical exercise in which financialization is shown to have had a major role in the wage share's decline compared to globalization and the welfare state retrenchment. On the other hand, we find contributions stressing the complementary that financialization has with labour market flexibility and declining workers strength. Hein (2015) presents evidence about the fall of labour share due to both financialization and neoliberal policies. Three main mechanisms leading to this outcome are pinned down: first, the economy's sectoral composition change (from the public sector and the non-financial corporate sector to the financial corporate sector); second, the increase in management salaries and interest/dividend payments of the corporate sector; third, waning trade union bargaining power. However, this last point is also said to belong to a wider list of policies typical of neoliberalism, rather than being a proper feature of financialization in itself (ibid., pp. 924-925). Tridico (2018; similarly, Pariboni and Tridico 2018, pp. 245-251) finds that, in a panel data analysis for 25 OECD countries (1990-2013), income inequality has been mainly driven by financialization, labour flexibility, weakening labour unions and welfare state retrenchments. He then presents a bidirectional line of causation, running from inequality to financial crisis and conversely from finance to financialization and inequality. This latter direction is said to hold in the medium/long term, when a restructuring of capital-labour relations has taken place. Nowadays, there thus is evidence on the self-reinforcing, complementary linkage between financial expansion and workers curtailed bargaining power, as shown in Fig. 6.

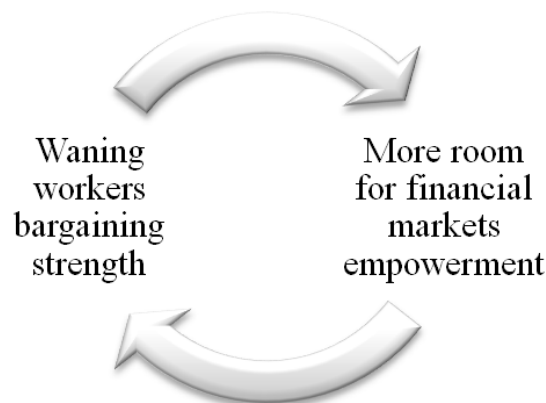


Figure 6 – The complementary, self-reinforcing relationship between financialization and workers bargaining power. *Source:* author own elaboration.

The point we want to raise is that, when the process of financialization started as much as today that it is consolidated, there is scope for problematizing the link directly connecting financialization and weak labour bargaining strength. This represents a discussion which, in light of the IWCS methodology, places us outside the analytical core. In fact, we know that a real wage decrease (or stagnation in the face of rising productivity) determines an increase in the mass of profits to be distributed. This holds regardless of the cause. However, to complement the analytical part an enquiry of what can have in turn triggered such a pressure over the real wage cannot be neglected.

Indeed, financialization could also be seen as a phenomenon arising and benefiting from other factors, while surely contributing to deepen the attack against labour. Similarly to a perceptive Business Week editorial, “Although the emergence of the casino society coincided with the economy’s prolonged slowdown in the mid-1970s, nobody can demonstrate which is the chicken and which the egg” (Business Week, quoted in Magdoff and Sweezy 1987, p. 143).

To start with, let us expand on two different lines of literature. First, there are recent contributions suggesting to look at the role had by the frontloaded attack that capitalists launched against labour in the middle of the seventies as *primum movens*. Stirati (2018) singles out the important role to be attributed to the attack against labour started in the US labour market relations in the mid-seventies, and which culminated in the Volcker monetary policy shock, causing an abrupt surge in the unemployment rate. According to her reconstruction, in fact, the surge in the short and long-term real interest rates started in 1979 came after a period of restructuring labour market relations in a sense unfavourable to workers. The change in labour relations came about in the form of delocalization, union avoidance and an increasing unemployment rate. The key role of the renewed capitalist drive against labour at the end of the seventies/early eighties is pointed out also by Shaikh (2011; 2016, pp. 729-736). According to him, the lasting stagnation of real wages, in comparison with surging labour productivity, created room for the enlargement of the financial sector in the sense of increasing quests for loans from the household sector. The Reagan era testified a noticeable divergence between labour productivity and real wages, and Shaikh singles out the attack on labour-protecting institutions, together with the competition with cheap labour abroad due to globalization, as the two main elements that mattered. At the same time, the ever-decreasing interest rates made momentarily sustainable the accumulation of household private debt. Moreover, slowing real wages and decreasing interest rates made the support of enterprise profitability possible. Note that even from the mainstream there are voices, such as Krugman’s (2007), recognising the role of political power and social norms in shaping income distribution. In his opinion, the retreat of labourers’ political power began by the end of the Seventies stems from political processes that were already under their way before. It was fostered by changes in political environment and legislation meant to recreate the conditions for inequality to thrive. Second, we want to draw the attention to some evidence from the past. We stress this aspect by referring to some contributions from the so-called “Social Structures of Accumulation” literature in the late eighties.⁶ In particular, they were published at a peculiar point in time, when neo-liberal policies were already considered a powerful tool against labour conditions and financialization just began to be taken into account (Magdoff and Sweezy 1987). In Bowles *et al.* (1986, 1989) one finds the scrutiny of the novel social structure of accumulation inaugurated by the transition to Reaganism in the US. The authors show

⁶ The general aim of that thread of literature is the examination of the institutional structures determining, on the one hand, the relative power of social classes leading to the repartition on income and, on the other hand, the effect that profitability so determined exerts on capital accumulation.

the major features of that policy shift, which they summarize in four aspects. First, the capital-labour accord, through which firms have benefited from secured control over decision-making processes at the cost of giving up higher real wages. Second, the Pax Americana, warranting a stable international economic environment and advantageous terms of trade for US capital. Third, the capital-citizen accord, exchanging favourable conditions for profitability while warranting the government intervention to take care of citizens' basic necessities. Fourth, the moderation of inter-capitalist rivalry, curbing external and internal competition conditions.⁷ These processes were assessed to be the cause of an undoubted success of the post 1979-Reagan policy in terms of re-acquired broad power in the economy for the corporate sector. Be this as it may, what matters to our discourse is that the issue of financialization and the role of the financial sector, at least in these influential works, was not mentioned. Yet, the progressive reacquisition of the power and influence of the capitalist world, via aggressive policies aimed at slashing the strength of labourers, was already evident and documented. Recently, Kotz and Basu (2019) argued that from 1979 US has been experiencing a new 'neoliberal Social Structure of Accumulation', whose implementation spurred income inequality, the spreading of speculative activities, the swell of asset bubbles. However, these are seen as consequences of restructuring power relations, whose "main opposition came from organized labor, which lacked the power to stop a unified business class pursuing a relatively simple agenda" (ibid., p. 21). Furthermore, Kotz (2015) argues for financialization to be mostly a consequence engendered by the wider neoliberal 'revolution'. The upshot of these considerations is to single out evidence, albeit surely not conclusive, in favour of the position appraising the reverse in the capital-labour confrontation as a necessary premise coming before the emergence of financialization.

After the digression into the origins of the phenomenon, let us see whether at the present days there is reason to suppose that the mentioned complementarity is the only way to frame the relation between financialization and labour strength. Several insights particularly fit for our discourse can be found in recent applied works of Darcillon (2015, 2016a, 2016b). Darcillon (2015) investigates how financialization affected labour markets institutions. Specifically, the author analyses the impact on workers' bargaining power and employment protection legislation, in a group of OECD countries (1970-2009). According to the outcomes, financialization made workers weaker by contributing to: decentralizing collective bargaining processes (with the ensuing fall of union density and coverage), and reducing the tightness of employment protection legislation. Darcillon (2016a) extends the scope of his enquiry to the interrelations among financial development, labour market institutions and inequality in OECD countries (1980-2012). The results point to the fact that: more flexible financial markets are linked to higher inequality if labour markets are more flexible as well, and more regulated labour markets help mitigating the effects on inequality due to financial

⁷ In the regression model they build, the determinants of profitability are capacity utilization, the real federal funds rate, product market tightness, the cost of job loss, workers' resistance, trade power, government regulation, capital tax share, and import penetration.

development. Seen in a comparative perspective, the author maintains that “a flexibilization in the financial markets implies larger inequality in countries with highly flexible labour markets, whereas countries with more regulated labour markets have experienced a more modest increase in income inequality” (ibid., p. 19). In there, a comparison between France and Germany is made. The former country has kept in place tight labour market regulation, experiencing relatively modest increase in inequality. The latter country undertook deeper financial and labour markets reforms, Germany witnessing a more marked increase in inequality. Darcillon (2016b) investigates the correlation between financial development and average wages and employment volatility in a group of OECD countries (1974-2007). The study adds to the picture by showing that financial markets development is positively correlated with labour market volatility, but the relationship is stronger when labour market regulation is looser (and viceversa). In addition to the narrower focus on the labour market offered by these papers, a wider picture on the institutional environment is also important, in particular in a comparative perspective among models of capitalism (Hein *et al.* 2020). For instance, Pariboni and Tridico (2019) emphasise the importance of institutional differences across countries when dealing with the effects of financialization. They list three fundamental models of capitalism: the Scandinavian model, where the impact of financialisation is curbed via state intervention by means of welfare policy and tax progressivity; the Continental European model, where a similar outcome has been attained via financial regulation and by resorting to the manufacturing sector as an engine for growth; the Anglo-Saxon model, where financialization was allowed to manifest more radically its adverse effects on inequality. Furthermore, the authors stress the fact that while the correlation between rising financialisation and increasing labour market flexibility and inequality is evident (Tridico 2012), the establishment of a definite causal relation is much more problematic (see also Pariboni and Tridico 2018, p. 250). We now come to one of the clearest examples of how the linkages between financialization and changes in the pattern of income distribution can be heavily shaped by institutions. Wood (2017) analyses the relation between changes in the engagement with mortgage finance and the behaviour of the wage share in Denmark, Sweden, UK and USA (1979-2012). The results display the negative effect on the wage share that an increase in mortgage credit had in UK and USA. For what concerns Denmark and Sweden, no such effect is found. The explanation offered by Wood rests in the institutional configurations’ differences. In fact, while scrutinised countries show similar mortgage debt levels, they greatly differ in light of collective bargaining, welfare states, markets regulation. These factors, which as seen are much tighter and widespread in the Scandinavian model, can in the author’s view offset the harmful consequences of mortgage finance. Finally, we see some evidence for the possibility to conceive, similarly to the Social Structures of Accumulation literature above, labour strength as an autonomous driver of wage share and inequality patterns with no reference to the role of the financial sector and/or financial development. Brancaccio *et al.* (2018) study the relationship between labour market structural reforms and income distribution and

growth. Their tests demonstrate how deregulation policies and structural labour market reforms are associated with shifting functional income distribution favourable to profits (but do not impact economic growth). Farber *et al.* (2018) enquires on the role of US unions in relation to inequality drawing on a lengthy dataset spanning eighty years. Their results “push against the idea that unions are simply an artifact of larger market forces and instead favor the idea that they may have their own causal effect in reducing inequality” (ibid., p. 2). Specifically, they maintain that unions have been an important factor in compressing the income distribution pattern. Kristal (2010) analyses the behaviour of the labour share in several OECD countries (1961-2005). According to the evidence provided, the evolution of labourers’ bargaining strength is the major element shaping labour shares trends. Of particular interest to our eyes is the explicit consideration of the period in which labour share rose (Sixties and Seventies) and that in which it decreased (from the Eighties). According to the author, rising rates of unionization, intensifying strike activity, and larger welfare state all decisively contributed to the upward trend in the former phase. The waning or reversion of these phenomena caused the widespread labour share fall. Focusing on the UK case and looking also at both econometric evidence and several case studies from collective bargain episodes, Moore *et al.* (2019) contemplate the tight link between declining collective bargaining and the plunging wage share. Their evidence points to the strong relevance of: union density, welfare state retrenchment, minimum wages, female employment.

In conclusion, we would summarise the insights reviewed in this section as shown in Fig. 7. While the complementary relationship between financialization and labour market conditions is nowadays established, we believe some qualifications to this process can be made. Accordingly, the dialectical process might be framed through a line of passages in which the begin is a restructuring of class relations. Then, at the end, we find a complementary but non-necessary link, in which financialization and labour market can also have their own independent dynamics, which may vary in the intensity and direction of the mutual influence.

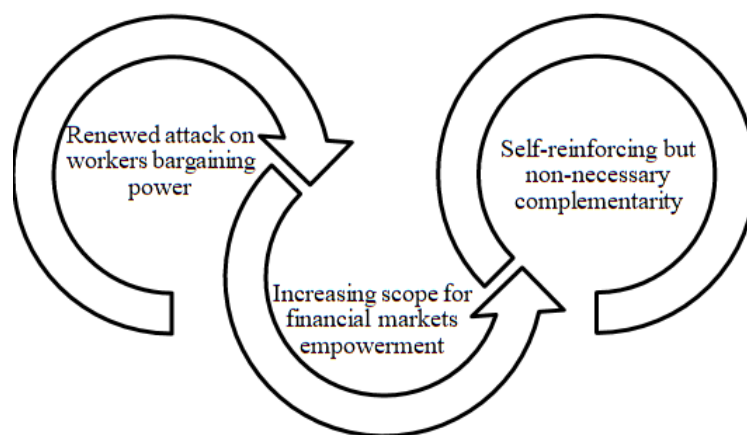


Figure 7 – A modified schema for describing the relationship between financialization and workers bargaining power. *Source:* author own elaboration.

As said, this does not make a great deal of difference within the analytical structure IWCS: be it as it may, nonetheless the result is a pressure over the real wage, to be analysed as in the previous section. However, this kind of complementary enquiry helps in better drawing the broader contours of a widespread, dramatically important phenomenon.

6. Conclusions

We believe the Classical-Keynesian viewpoint to be capable of offering precious insights to the broad framework of financialization, as already shown by Barba and de Vivo (2012), Panico *et al.* (2012), Panico *et al.* (2013, 2016). This is why we engaged in the present theoretical exercise. The “integrated wage-commodity sector” method proposed by Garegnani (1984, 1987) provides a clear picture which can be exploited to accommodate several features of financialization. Possibly, even more than the ones we have reviewed herein. In this paper we have pinpointed three major points. First, the role of financial instruments such as derivatives has been detrimental to the direct and indirect production processes of the wage-commodity. Second, the accumulation of household debt can be seen as a potential source of heightened profitability for capitalists, due to its harmful impact on workers bargaining strength. Third, the process leading to the rise of financialization and to the complementary link between its reinforcement and the waning of workers bargaining power can be said to be complex and not straightforward, suggesting the possibility to reframe it according to specific historical periods and institutional frameworks. While we believe these results to be of some importance, we also believe further research to enlarge the scope of the analysis through the framework we have proposed is needed.

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