

**CREDIT, DEBT AND DISTRIBUTION IN THE MONETARY THEORIES OF
AUGUSTO GRAZIANI AND MICHAŁ KALECKI**

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Abstract

The Monetary Production Theory of Augusto Graziani provides a rich analysis of the use of credit in capitalist production, showing the endogeneity of such credit and giving new insights into the use of credit as money. The theory suggests a credit system, inflated by loans for production and investment and deflated by loan repayments, with incomes in the form of profits and wages recorded as credit transfers. In Graziani, a key part is played by workers' saving, and this results in a problem of interest monetisation. The paper shows that this difficulty disappears once it is recognised that capitalists own financial assets and bank deposits, as Kalecki argued. With this modification, Graziani's principles of monetary circulation are then used to examine Neo-Kaleckian theories of financialisation. The wage rate and workers' saving, rather than the workers' borrowing, are a more significant influence on the distribution of income between those classes, and the circulation of money among capitalists, rather than between capitalists and workers, is a more critical determinant of production and profits.

Keywords: Financialisation, Michał Kalecki, Augusto Graziani, Interest, Debt.

JEL Classification: D33, E11, E40.

1. Introduction

Augusto Graziani was a pioneer and leading scholar of the ‘circuit theory of money’, one of the more serious attempts to break away from thinking about money in terms of simple insights drawn from every-day exchange transactions and commonplace deposit and loan operations. His theory effectively broke the Post-Keynesian preoccupation with monetary endogeneity arising out of central bank operations with banks, to return the theory of money to its roots in capitalist production. This is perhaps the greatest achievement of circuit theory. Yet, circuit theory as constituted in Graziani’s most advanced version of it, his Federico Caffè Lectures on The Monetary theory of Production, comes to paradoxical conclusions over the ownership of financial resources and eventually to difficulties in the theory of interest. This paper explains the most fundamental of these problems by way of comparison with the ideas of Michał Kalecki and more recent accounts of financialisation.

The aim of this paper is not to extend the theory of the monetary circuit to more cases, using recent developments in the theory. Nor does this paper summarise Graziani’s many contributions to monetary theory. Rather its purpose is a prior fundamental, namely clarifying the conditions under which Graziani’s monetary theory of production is a correct theory. This is not an empirical question but a much earlier stage of the chain of reasoning through which the theory of the monetary circuit has developed: the model presented by Graziani, and subsequent models in the theory of the monetary circuit, are at the end point of a chain of reasoning. At the starting point of this chain, in Graziani’s theory, is the capitalist without money capital. I contrast this to Kalecki’s starting point which is the capitalist with money capital, and argue that this is the more general case.

In Graziani, credit comes into existence as ‘initial finance’ because entrepreneurs need money to commence production, and borrow it from banks. This arises from Graziani’s

assumption that all firms produce in one period, and then exchange their output. Victoria Chick argues that this is unnecessary because production occurs simultaneously with sales. In such a system of continuous production, new credit is only needed for expanded reproduction. In continuous production, the sales revenue that firms receive is not in the future but is received today for yesterday's production, and today's revenue will finance tomorrow's production. In this condition, new credit is only needed for the margin of production whose costs tomorrow exceed today's sales revenue (Chick 2005). Riccardo Bellofiore (2005) argues that initial finance is only a 'logical' rather than historic necessity, to show the inception of credit money. I agree with Bellofiore's interpretation. But the logical necessity arises because Graziani assumes that capitalists have no money. This assumption would seem to contradict their receipt of money profits. This indeed is conceded by Graziani in what he called step 4 of the monetary, where he observed that the use of today's revenue to finance tomorrow's production 'cannot be taken for granted' (Graziani 2003b: 30).¹ But if today's revenue does not finance tomorrow's production, then it remains in the bank accounts of capitalists and capitalists cannot be assumed to have no money.

By contrast with Chick and Graziani, Kalecki follows Marx in regarding initial finance as unnecessary because capitalists have money acquired, historically, through primitive accumulation, and subsequently coming in as money profits on production. Even with expanded reproduction, in Kalecki, new credit is not necessary because of the distinction that Kalecki makes between actual investment in a given period, and the logically prior investment decisions. This means that the costs of an investment project are not paid all at once, but are spread out over time. With investment giving rise to profits this means that, in theory at least, increases in production or investment can be accommodated by increases in

¹ I am grateful to an anonymous referee for pointing this out to me.

the velocity of circulation of a given stock of credit money belonging to capitalists (see ‘The Money Market’ in Kalecki 1933).

This paper then proceeds to show that, despite these differences, both the Graziani and the Kalecki approaches, correctly treat production and exchange as processes of monetary circulation. This is illustrated by consideration of neo-Kaleckian theories of financialisation that do not allow for monetary circulation. The introduction of monetary circulation then highlights certain inconsistencies in those theories.

2. The finance of production

In his Introduction to the published version of his Lectures, Augusto Graziani related the ideas in the circuit theory of money not only to its obvious precursors in the work of Bernard Schmitt and Alain Parguez in France, Hajo Riese in Berlin, and, further back, Knut Wicksell and Hans Neisser. The theory in particular rejects a Walrasian approach to general equilibrium, in which money is found only in exchange after production. A specific inspiration is of course Keynes, but also Kalecki and Post-Keynesian monetary theory (see ‘Introduction’ in Graziani 2003b; see also Halevi and Raouil 2002).

In his Introduction to the Lectures, Graziani gave a ‘synthetic explanation’ of how credit comes into the system:

‘Step one: A decision is taken by the banks to grant credit to firms, thus enabling them to start a process of production ...’ (Graziani 2003b: 27; a somewhat shorter account is provided in Graziani 1989).

The credit is used to pay the costs of production. In the course of the production process it finds its way into the pockets of workers who provide labour, and other firms that supply other inputs into production. In Step three of the process, commodities produced are sold, consumer goods to workers, and investment goods to other firms. 'The money that wage earners spend in the commodities market, as well as money spent in the financial markets on the purchase of securities, flows back to the firms, who can use it to repay debt. To the extent that bank debts are repaid, an equal amount of money is destroyed. ... Once the initial bank debt is repaid and the money is destroyed, the monetary circuit is closed.' (Graziani 2003: 27-30).

With remarkable modesty, Graziani pointed out in a footnote that 'It is debatable whether the description of the circulation of money as a monetary circuit is implicitly present in Keynes's thought', citing a number of his own works and those of other circuitists in support of the Keynesian connection, but also the American Post-Keynesian Jan Kregel as opposing such a link (in Kregel 1986) (Graziani 2003: 27).

However, a curious role is played by workers saving:

'As soon as the firm starts operating, ... the credit initially granted is totally turned into wages. At the end of the process, the firm being granted the initial credit is in debt to the banking system, while wage earners are creditors of the bank ...'

As already cited above, 'the money that wage earners spend in the commodities market, as well as money spent in the financial markets on the purchase of securities, flows back to the firms, who can use it to repay debt. To the extent that bank debts are repaid, an equal amount of money is destroyed. To the extent instead that wage-earners use their money to increase

their own cash balances, an equal amount of money remains in the form of bank debt and wage-earner's credit towards the banks.'

Graziani went on to explain that if workers spent all their money on consumption, or purchased securities, then firms (which might issue the securities) would get back the money needed to repay their bank debt:

'If wage-earners spend their incomes entirely – whether on the commodity market or on the financial market – firms will get back the whole of their monetary advances and will be able to repay the whole of the principal of their bank debt. In this way, as some would say, the circuit is closed “without losses”. If instead wage earners decide to keep a portion of their savings in the form of liquid balances, firms are unable to repay their bank debt by the same amount. As a consequence, at the end of the production cycle the money initially created will not be entirely destroyed. If banks are now intending to finance a new production cycle equal to the preceding one by granting the same finance, the total money stock will be increased: precisely it will be equal to the wage bill plus the new liquid balances set aside by wage earners at the end of the previous cycle.' (Graziani 2003b: 31-31).

In this way, the role of workers' saving is to place firms in debt to their workers, whether through the workers' liquid balances in the bank, whose counterpart is firms' bank debt, or through the workers' holding of securities, issued by firms in order to repay debt. (This last kind of funding of debt is further discussed in Graziani 2002).

The part played by workers' saving leads Graziani to a fundamental difficulty over the question of where the money comes from to pay interest. Graziani put the problem as follows:

‘It is self-evident that since the only money existing in the market is the money that banks have lent to the firms, even in the most favourable case, the firms can only repay in money the principal of their debt and are anyhow unable to pay interest. In order to get the money needed to satisfy their interest payments, the only thing they can do is to sell part of their product to the banks, which is tantamount to saying that interest can only be paid in kind. A parallel solution, not widely different in substance, is reached if the banks buy equities issued by the firms. The presence of a government sector would not make things easier. A government deficit might bring to the firms the money necessary to pay interest to the banks; but a government debt towards the central bank would remain pending. There seems to be no way out: either a debt equal to the interest payments remains unsatisfied, or interest is paid in kind.’ (Graziani 2003b: 31).

This was not an incidental observation. Graziani was here returning to a theme which he had taken up almost half a century earlier, namely the need for growth to provide the monetary resources for the payment of profit and interest. In a 1965 discussion of the Harrod Domar growth model he had argued that ‘In the position of equilibrium, the social rate of return to capital, which ... is constant over time, is equal to the rate of increase of money income ... divided by the propensity to save.’ (Graziani 1965: 77)

3. The Kalecki view of credit

In Graziani’s account of the origin of credit, investment is just another form of production, and finds its ‘initial finance’ in the same way (see Graziani 2003b: 71-72; also Graziani 2003a). Kalecki presented an alternative view of credit, in which the investment of firms may be financed from their own resources, or from bank borrowing:

‘... the equality between savings and investment ... (is) independent of the level of the rate of interest ... (I)vestment, once carried out, automatically provides the savings necessary to finance it... ... (I)f some capitalists increase their investment by using for this purpose their liquid reserves, the profits of other capitalists will rise *pro tanto* and thus the liquid reserves will pass into the possession of the latter. If additional investment is financed by bank credit, the spending of the amounts in question will cause equal amounts of saved profits to accumulate as bank deposits.’ (Kalecki 1954: 50).

However, Kalecki insisted that ownership of financial resources is the precondition for being a capitalist, and therefore any requirement for initial finance was solely a problem of small companies, rather than the corporations that dominate production and investment. In his words:

‘Many economists assume, at least in their abstract theories, a state of business democracy where anybody endowed with entrepreneurial ability can obtain capital for starting a business venture. This picture of the activities of the ‘pure’ entrepreneur is, to put it mildly, unrealistic. The most important prerequisite for becoming an entrepreneur is the *ownership* of capital.’ (Kalecki 1954, pp. 94-95.) The context clearly indicates that, by ‘capital’, Kalecki clearly had in mind *money* capital.

The contrast between the starting assumption of Graziani, that capitalists have no money, and Kalecki’s starting assumption is starkly illustrated by Marcello Messori in a paper on ‘Financing in Kalecki’s theory’, which acknowledges comments by Graziani on an initial draft. Messori correctly considers ‘questionable’ the notion that ‘desirable savings’ are necessary in for financing investment in Kalecki’s theory, advanced by Athanasios Asimakopoulos and Don Patinkin. However, Messori’s assumption that investment and current production need financing from ‘current monetary flows’ instead of existing holdings

of savings, money or liquid assets is not a correct interpretation of Kalecki or actual business practice (Messori 1991).²

In Kalecki's analysis, the banking system, in addition to its function as a clearing house for payments, serves as a credit club for capitalists as well as for workers. The net interest receipts or payments for each capitalist in a given period depend on the amount, maturity and interest rates on the debt or monetary instruments, or financial obligations, in that capitalist's balance sheet (cf. Toporowski 2008) An increase in equity transfers such monetary instruments in the form of bank deposits into the possession of a capitalist from another capitalist or a collective saving institution, or a rentier paying for the new shares with a bank deposit; or even from a hedge fund that may be using the shares as security for a bank loan. Production as the sole purpose of bank advances is incidental to financial operations in banking systems based on collateralised lending (see Withers 1920, Hobson 1913).

4. Circuit theory and interest applied to financialisation

The existence of an elastic credit system able to advance credit against the security of current market value, or future income, means that there is, in principle, no limit to the amount of interest that capitalists may pay each other. Their formal gross income (gross profits) rises by the amount of interest that they receive from each other as they increase their payments of interest to each other. The Ricardian notion that interest reduces net profit is only true of

² I am grateful to an anonymous referee for directing me to Messori's paper. See also Asimakopoulou 1983, Patinkin 1982 and Kregel 1989.

outside debt, such as the amounts that capitalists as a whole may borrow from workers as suggested by Graziani.³

It may be useful here to illustrate this with a more analytical comparison of the respective theoretical claims of Graziani and the recent school of those ‘financialisation’ theorists, who adhere to Ricardian theories of debt and profit-led growth but claim adherence to Kalecki’s macroeconomics (for example, Hein 2012a, Stockhammer 2012). As will be shown, the theories of Graziani and the circuit theorists, as well as the ‘Neo-Kaleckian’ financialisationists, attach major, but differing, importance to the credit and debt relations between capitalists and workers. To understand the limitations of the two positions requires a brief excursion into the theory of the determinants of profits.

Common to Graziani, Kalecki, and the Neo-Kaleckians is the view that income is created by expenditure. This relationship is expressed (but not wholly explained) by the national income identity between income and expenditure. In an open economy with government, in any given period, total income (Y) is equal to consumption, plus investment (I) plus government expenditure minus tax revenue ($G - T$) plus the foreign trade and income surplus ($X - M$).

With two classes in the economy, capitalists and workers, whose households consume and save, so that capitalists’ net (after payment of interest) profits are either consumed (C_c) or saved (S_c), and workers wage income is either consumed (C_w) or saved (S_w). Implicit in this is a three-sector system of production of wage goods, luxury or capitalists’ consumption

³ ‘The rate of interest, though ultimately and permanently governed by the rate of profit, is however subject to temporary variations from other causes.’ (Ricardo 1817: 297). Incidentally, the independence of interest from net profits is the reason why the rate of interest can only have a marginal effect on the business cycle. The margin of net debtors whose expenditure may be constrained or expanded by a rise or fall of interest rates is offset by the rise or fall in the expenditure of net creditors whose income is increased or reduced by that rise or fall in interest rates.

goods, and investment goods. From this can be derived the famous Kalecki profits equation whereby total profits is equal to the sum of investment, the fiscal deficit (corresponding to Kalecki's 'domestic or internal net exports'), the foreign surplus (as argued by Kalecki in his correction of Luxemburg), plus capitalists' consumption minus workers' saving:

$$\text{Total profits} = I + (G - T) + (X - M) + C_c - S_w \quad (1)^4$$

This equation gives us the total value of capitalists' profits, after they have paid (or received) interest on their borrowing (or credit balances). In order to obtain a complete picture of the economy, and break down those total profits among the individual capitalists or firms, it is necessary to introduce two systems of redistribution. First of all there is the network of prices in the economy. In addition to their commonplace function of making supply equal to demand in individual markets, prices also function to detail the distribution of total profits among individual capitalists and firms⁵. The second system is the redistribution of liquidity by means of interest and debt.

⁴ A referee has pointed out 'In a closed economy with the State is it possible to have a surplus of the private sector only if the public sector is in deficit. When we deal with an open economy an excess of saving over investment must be identical to the sum of fiscal deficit and trade surplus. This is a point which comes directly from Kalecki but it has been developed and incorporated in Wynne Godley approach.' This is correct for the *net saving* surplus of the private sector, rather than profits. Even if the private and public sectors as a whole are in balance, with neither surplus nor deficit, firms in the private sector may still obtain profits if firms are investing, and capitalists are consuming. Nevertheless, Graziani correctly pointed out that a government deficit would allow firms to acquire additional credit, corresponding to the government's borrowing from the central bank. See section 2 above.

⁵ This is the important function of the price system in the theory of Kalecki as well as in Marx. It should be noted that in Marx and Kalecki, capitalist profits cannot be derived in a mercantile way from buying cheap and selling dear, and hence the Kalecki profits equation, equation (1) above, necessary to show how profits as a whole are monetised, but not how they are distributed among individual firms and capitalists. See Lopez and Assous 2010: 197.

From the above equation (1) it is easy to derive an equation for the ratio of profit to wage income, or the profit share, in terms of the expenditures that are necessary to provide for income flows in money terms. This is:

$$\frac{\text{Profits}}{\text{Wages}} = \frac{I + (G - T) + (X - M) + C_c - S_w}{C_w + S_w} \quad (2)^6$$

in which the numerator represents the expenditures that generate profits, and the denominator represents the expenditure counterparts of wages.

Now it is clear that the Graziani concept of credit advanced by workers to finance production by capitalists is not the same workers' saving as given in equations (1) and (2) above. In Graziani's analysis, the credit is merely the means of payment that capitalists use to pay for labour, and that returns to capitalists when workers buy their wages goods (Graziani 2003b: 31-31). S_w represents the residual of that means of payment (or net saving) that workers as a whole retain at the end of a given period. We can now see how changes in prices, in particular the price of labour, affect distribution. If workers are given a pay rise that is spent on consumption, C_w rises. *Profits in absolute terms do not fall, but the share of profits relative to wages falls.* The distribution of profits changes, with a shift in profits from the investment goods and capitalist consumption goods sectors, which are paying higher wages, to the capitalists in the wage goods sector. If workers are given a pay rise that is wholly saved, then *profits in absolute terms fall, and the share of profits relative to wages falls.* Capitalists' indebtedness to workers increases.

⁶ In the Bhaduri and Marglin 1990 paper that initiated the 'profit-led growth' research agenda, equation (2) is presented as a profit margin that capitalists can increase or decrease 'in the long run'. This contrasts with Kalecki's observation 'Now, it is clear that capitalists may decide to consume and to invest more in a given period than in the preceding one, but they cannot decide to earn more.' (Kalecki 1954: 46).

This raises the question of the function of debt and credit in the economy. As mentioned above, in Graziani, credit is used as a means of payment. Since we are operating in a credit economy it is necessary to have in our notional capitalist economy a banking and financial system that intermediates credits and debts in the economy. The account ledgers kept in the financial system serve a similar function to the price system in determining the distribution of total profits and wages among individual capitalists and firms, and among individual workers. The system of bank or financial intermediation therefore consists of a network of credit and debt contracts between capitalists, in which the interest and payments merely redistributes liquid reserves and existing profits among capitalists; and a network of credit and debt contracts between workers, on which the interest and payments merely redistributes existing wage income among workers⁷. Since we are here concerned with the effect of debt on the distribution of income between capitalists and workers we may for the sake of simplicity ignore here credit and debt relations with the government and the foreign sectors. In addition therefore to the intra class indebtedness of capitalists to each other and of workers to each other, there is the possibility of the net debt of workers to capitalists, that is the excess of workers' debt over their claims on each other.

It is now possible to consider the conditions under which debt may increase the profit share. The literature on financialisation emphasises that falling wage income forces a resort to debt in order to maintain consumption standards and that debt is an obligation to capitalists (Stockhammer 2012, Hein 2012a). However, from the model outlined above it is obvious that, in a situation of falling wage income, workers have more than one option in financing a stable level of consumption. In the first place workers are likely to save less in the current

⁷ The process by which debt redistributes income is vividly illustrated by Kalecki in his fable of money circulating among mutually indebted inhabitants of a poverty-stricken village. See Toporowski 2015.

period. Secondly they may run down savings accumulated in previous periods. Thirdly they may borrow from other workers, whose aggregate saving is thereby reduced. All of these would allow a stabilisation of workers' consumption at the cost of a reduction in workers' net saving, S_w . As indicated in equation (2) an increase in profit share is likely as S_w is reduced, increasing the numerator and reducing the denominator of the wage share equation. However, that increase in the profit share is not because of workers' indebtedness to capitalists, or their indebtedness to rentiers. Capitalists overall are receiving the same amount of money because workers are spending the same amounts on their consumption and capitalists are spending the same amounts on investment and their own consumption. However, capitalists now have lower labour costs. The borrowing of workers from other workers would institute debts and claims that would then merely redistribute wage income in the future but, as indicated above, not increase or decrease in net terms (after interest payments) the income of workers.

Workers lending money to other workers directly or through the banking system would receive interest and repayments of the loans. The gross income of workers as a whole would be increased by the interest received on the debts to them of other workers, and reduced by the interest that they would pay to each other. Overall then, the net income of workers still depends on the wage rate and would be more or less unaffected by such borrowing, the margin between borrowing and lending rates being largely accounted for by the wages of workers employed in financial intermediation.

At the margin, however, it is possible that workers will realise their claims on capitalists from earlier saving, or borrow from capitalists⁸. In that case the borrowing and running down of credit with capitalists, still reduces net workers' saving, and the effect on the profit share is

⁸ Kalecki mentioned destitute American workers in the Depression borrowing from sympathetic retailers. According to him economic recovery was unlikely to be consumption-led because any growth in wage income was likely to be spent on repaying informal debts with retailers (Kalecki 1934).

the same as in the previous case where workers are borrowing from each other. Capitalists, having forced down workers's wages, will find that workers are still spending the same amount of money on consumption. The amount of money received by the capitalists producing consumption goods will be unchanged. But the capitalists producing investment goods, and luxury goods for capitalists' consumption, will have their profits increased because their labour costs have been reduced by the amount of the reduction in wages.

It follows that the change in the respective wage or profit shares in total income, as well as the change in workers' indebtedness, is, in this example, the result of a fall in the wage rate. The financialisation approach, however, views the rise in indebtedness as the *cause* of a rise in the profit share. As has been argued above, this cannot come about through workers increasing their borrowing from other workers because this merely redistributes workers' income or savings to other workers. If however workers' net borrowing from capitalists' increases, because workers' consumption is increasing (either directly financed by borrowing from capitalists, or because workers whose loans to other workers have been repaid spend the repayments on consumption) then the denominator in equation (2), showing total workers' income stays the same (workers' consumption has risen by the same amount as workers's saving has fallen). But the profit share rises with the fall in workers' net saving, because more of the money paid by capitalists to their workers returns to the capitalists in payment for consumption goods, rather than because workers have been borrowing from each other or from capitalists.

This can be illustrated and summarised by examining what happens to the circulation of credit in a simple, reduced form balance sheet of the banking system:

BALANCE SHEET OF THE BANKING SYSTEM

Liabilities	Assets
Deposits of workers	Loans to workers
Deposits of capitalists	Loans to capitalists

In the financialisation view, workers are obliged by the falling wage share to take out loans from the banking system. The assets of the banking system thereby increase with such loans. Corresponding to them are now deposits which the poor workers use to buy consumer necessities. In the process of buying those necessities, the deposits pass into the possession of the capitalists who are producing those necessities, swelling the deposits that capitalists have in the banking system. The financialisation view is that over time the deposits that correspond to this ‘forced’ borrowing of workers increase as workers recurrently resort to borrowing to make ends meet, or to finance housing or their purchase of otherwise ‘public’ goods such as education⁹.

However, as the analysis of Graziani shows, the capitalists who sell those necessities to the impoverished workers cannot just keep those deposits. With the exception of their profit margin, they have to spend the deposits on producing those necessities, because it is only by producing and exchanging wage goods with the indebted workers that the capitalists can acquire the bank deposits of those workers. In this way, the deposits that workers are forced to borrow largely return to the workers, to be recycled again through the production process. In this way, on the deposits side at least, the balance sheet of the banking system would tend to converge on its original proportions of distribution between workers and capitalists. On the assets side, the formerly destitute or underemployed workers now employed to produce wage

⁹ This I take to be the view of Lapavistas (2013).

goods, and their employers who receive payment for those wage goods may use the deposits that they receive to repay their debts, or accumulate them as a hedge against their debts, or use them to buy additional goods. In this latter case, output and employment will grow further. Thus the borrowing of destitute or low income workers, through the expenditure of that borrowing, generates production from the proceeds of which workers receive incomes out of which they may repay their debts.

It may be noted here that if unemployment and economic stagnation are due to underconsumption, a clear inference from the financialisationists' studies of household debt¹⁰, then workers' indebtedness must surely be an effective means of combatting underconsumption. The only substantial difference between this kind of household debt-financed consumption and debt-financed fiscal stimulus is that the government should, in theory, have less difficulty than workers in managing its debt (unless it happens to be in the European Monetary Union). The contradiction between underconsumption that is supposed to be due to workers' indebtedness, and the demand injected into the economy by the spending of indebted workers (whereby capitalists acquire the deposit counterparts of the workers' debts) is a fundamental inconsistency in financialisation theory that can only be explained by its proponents' incomplete understanding of the use of credit as means of payment.

Graziani has credit used as means of payment, with credit of workers as claims on indebted capitalists. The Neo-Kaleckian financialisationists have capitalists' credit as claims on indebted workers. However, in a capitalist economy, credit and debt are simply channels for redistributing income, rather than creating net new incomes. Changes in the profit share are

¹⁰ 'The debt-led consumption boom ... in Greece, Ireland and Spain (led to) ... negative financial balances (as a share of nominal GDP) of the private household sector and thus increasing private household debt ... with the corporate sector being in surplus in all countries of this group except Spain.' (Hein 2012b).

the result of changes in expenditure with only marginal effects on inter-class debt relations, represented by changes in the relatively small element of net workers' saving. As a result, the focus on credit transfers and debt contracts between classes can reveal very little about debt structures as a whole, and the debt structures that brought about recent financial crises.

Conclusion

Augusto Graziani was a pioneer in developing a theory of money in which banks create credit that is used in production. His starting point of capitalists without financial resources provides a poor foundation for corporate finance leads the analysis into difficulties over the monetisation of interest. Kalecki's analysis, defining capitalists by their ownership of money hoards, was more securely grounded in corporate finance and the classical theory of interest and may lead to a better circuit theory of money.

Kalecki's approach disposes of Graziani's paradox of the workers as creditors to the capitalist system, in favour of a much more plausible capitalist ownership of financial resources. It also resolves in a neat, even classical way, Graziani's difficulty over the payment of interest.

Banks in Kalecki's analysis intermediate between capitalists, and only insignificantly between capitalists and workers. In this situation interest becomes a purely distributional variable that, contrary to the classic view, is unrelated to the rate of profit. Capitalists that earn a surplus in the form of a bank deposit pay a portion of the surplus to other capitalists who are in credit with the banks. Capitalists therefore pay interest to themselves. The solution is classical, because Kalecki's view of interest is the same as Marx's view of the interest: a portion of the surplus that functioning capitalists pay to money capitalists or the redistribution of surplus among capitalists. But in Kalecki's case, the rate of profit overall is not reduced by the potential interest and debt payments that capitalists may make to each other via the

banking system. The system of credit and debt in a capitalist economy is therefore a system for redistributing bank deposits, rather than reducing the profits of capitalists as a class. By contrast, financialisation treats finance as gross interest and debt payments as deductions from net income, and hence as usury, rather than as a system for redistributing income within classes with only marginal shifts in net debt payments between the classes.

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