

CIRCUIT THEORY AS AN EXPLANATION OF THE COMPLEX REAL WORLD

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1. INTRODUCTION

The theory of the monetary circuit as developed over the last three decades by French and Italian writers – most notably Alain Barrère (1973), Bernard Schmitt (1966; 1975; 1984), Alain Parguez (1975) and Augusto Graziani (1990; 1996) – is gaining audience among Post Keynesians. *Money in Motion* edited by Deleplace and Nell (1996) has provided evidence of this growing audience, which undoubtedly derives from the extensive reference Circuitists make to Keynes's heterodoxy, a feature that they share with Post Keynesians. Actually, in the words of Arestis (1996, p. 113), the circuit school is recognized as being 'a strong component of the endogenous money thesis'². However, a number of obstacles stand in the way of any widening of this audience, including the question of the epistemological status of the model of the monetary circuit.

In the vein of Davidson's pioneering work *Money and the Real World*, Post Keynesians are habitually vigilant about the realism of economic theories.³ By contrast, the monetary circuit may appear an oversimplified and rather abstract model. For instance, Arestis and Howells (1999) observe that the emphasis that circuit theory places on the role of firms in the expansion of bank loans and deposits (as firms ask banks for credit to meet their production costs until such time as they can recoup money from sales) is not consistent with reality.

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² See also Rochon (1999a; 1999b).

³ 'Theories should be *relevant* in that they should represent reality as accurately as possible and should strive to explain the real world as observed empirically. Orthodox economic theory does not adhere to this basic premise, in that it is formalistic and makes inappropriate *a priori* assumptions. Post-Keynesian theory, by contrast, begins with observation and proceeds to build upon "realistic abstractions" rather than "imaginary models"' (Arestis, 1996, p. 116).

[T]he greater part of loan demand in the UK depends upon the decisions of households rather than firms. . . . [D]emand then depends upon whatever it is that drives households' demand for credit and this is unlikely to be costs of production (Arestis and Howells, 1999, p. 117).

Victoria Chick (2000, p. 132) even suspects Circuitists of departing from actual facts in order to refine the formal structure of their model. They supposedly adopt an 'extreme position', 'in the interest of having clear-cut macroeconomic aggregates, in which firms are borrowers from banks and households are deposit-takers' (ibid., p. 132).

The purpose of this paper is to show that these harsh judgments rely primarily on misunderstandings that, fortunately, can be cleared up. With reference to Keynes, Kaldor and Lawson, Arestis writes that '[t]he task of a social science is the elaboration of the deep structures and relations which underpin social phenomena' (Arestis, 1996, p. 116). I shall try to show that this is precisely the goal of the circuit school: the emphasis placed on firms as bank-borrowers and on households as deposit-takers is not some arbitrary device or *a priori* assumption; it derives from the deep structures and relations underpinning modern economies. To make my point, I shall compare the way circuit theory depicts relationships between banks, firms and households with the diversity of observable relationships and practices. The objective is to show that the latter are 'surface phenomena' complying with the deep structure and the causal factors established by the former.

In the next section of the paper, I shall focus on the financing of firms' and households' expenditure. In the third section, I shall address another aspect of the question under examination: the emphasis placed by Circuitists on the flux and reflux of money wages faced with the actual diversity of firms' expenses and the formation of profits.

2. THE FINANCING OF FIRMS' AND HOUSEHOLDS' EXPENDITURE

The monetary circuit, in its modern Franco–Italian version⁴, is defined with reference both to Keynes's principle of effective demand and finance motive. Endorsing Keynes's principle of effective demand, Circuitists highlight the role of entrepreneurs who decide on the level of firms' activity (and hence on the amount of employment) as a function of their expected proceeds from sales and of their expected costs. It is true that, contrary to Post Keynesians, Circuitists have not developed an extensive analysis of the context of uncertainty in which entrepreneurs make their decisions. But this is essentially a difference of focus between the two schools, not an incompatibility (see Fontana, 2000). With reference to the finance motive, Circuitists notably stress the role of bank credit in financing production costs, and so the role of the production process in the expansion of bank credit and money creation.

The model singles out the payment of factor costs (more specifically the payment of wages as stressed below in the second section of this chapter) by firms, considering that this payment in itself forms the net incomes in the economy as a whole. Then, it is argued, when recipients spend their incomes, firms are paid back and money incomes are cancelled. The very concept of the monetary circuit refers to these successive outlays and receipts met by firms and the resulting formation and cancellation of money incomes.

Notice that a number of Circuitists, notably Parguez and Seccareccia (2000), consider that firms' outlays and receipts involve the circulation of money units in the form of bank liabilities from firms to households and then back from households to firms. These writers argue that in response to firms' demand for credit banks issue 'debts upon themselves' (i.e. bank deposits) which act as a counterpart to the services sold by households (and bought by firms) and then to the goods sold by firms (and bought by households). With reference to bookkeeping and the double-entry method, Schmitt (1984; 1996) analyses more closely the way bank money intervenes in the circuit⁵. He observes that, strictly speaking, banks do not issue deposits they would lend to firms.

⁴ . The concept of the circuit in economics can be traced back to the Physiocrats, a group of 18th French economists and political philosophers.

⁵4. See also Cencini (1995) and Rossi (1997; 1998; 2001).

On the contrary, deposits are the effects of loans (as the saying goes, “loans make deposits”). This is so because when creating money, banks debit and credit accounts with purely numerical units of money. This distinction is not merely semantic. Being composed of purely numerical units, bank money cannot be the actual object or content of households’ income. Households are fundamentally paid in real goods and services just as they would be in a non-monetary economy. This is obviously the case since firms will have to sell goods to them in order to repay bank loans. Nonetheless, households do not obtain goods physically at the very moment they are paid in money units. This means that they save their income in the form of bank deposits until they spend it on buying goods in the market. This confirms then that, contrary to what casual observation may suggest, bank deposits do not constitute the money in the form of which households receive their income but an asset in the form of which they save it (at least temporarily). Just as Keynes (1937a and 1937b) pointed out in his presentation of the ‘finance motive’, the payment of factor cost by firms defines an investment generating an equivalent saving. Circuit theory is consistent also with Keynes’s analysis in the *General Theory* (1936, pp. 81–5) whereby deposits are a source of funding for banks matching the credits that banks grant to borrowers. Namely, so long as depositors save their income, they postpone their purchase and their consumption of the goods and services which are the objects of the production processes initiated by firms: depositors are the actual creditors of borrowers (firms) through banks.⁶

Let us now consider the supposedly excessive emphasis that Circuitists place on the role of the payment of factor costs by firms in the expansion of bank loans and so in the expansion of bank deposits.

To examine this point, we need to look closely at the economic operations that banks finance. When a bank extends credit to a firm for the purpose of financing its factor costs, this credit is backed by goods in the making and that the firm will later sell to income recipients (in accordance with the analysis of money creation outlined above). Hence the sale of the goods produced will allow the firm to recoup its outlay and thereby to pay back its bank loans. When banks meet demand for credit from

⁶. Among Post Keynesians, Moore also insists on this point. According to him, depositors are bank creditors and “ultimately the creditors of bank borrowers”; banks are thus “simply one type of financial

households for the purpose of buying goods produced, the situation is fundamentally different. In this case the credit granted is backed by income that the borrower will earn in the future and will have to part with in order to pay back the bank loan. At the present time, the borrower spends someone else's income, even when banks create additional money instead of drawing from pre-existent deposits. This is so because the present money income that the borrower spends is not simply composed of the money units he is credited with by banks but is defined by reference to goods produced (see above). So long as income recipients hold bank deposits, they save their income and any additional money creation for the benefit of consumers amounts *de facto* to lending the saved income to the borrower.

To check this latter argument, let us consider the way the transactions we have just referred to are currently recorded in banks' balance sheets.

Table 1. Loans and deposits resulting from the payment of factor cost financed by money creation

| Banks | | Liabilities | |
|-----------------|----|---------------------------|----|
| Assets | | Deposits of households H: | |
| Loans to firms: | £w | Deposits of households H: | £w |

Table 1 depicts the effect of the payment of factor cost (£w) by firms for the benefit of households H1. Firms are assumed to have been granted credit financed by money creation by banks to pay for factor costs. As said already, this credit is backed by goods in the making that firms will later sell to income recipients. Symmetrically, these same goods form the real content of households' income which is saved in the form of bank deposits (as stated above).

Let us assume that households H1 do not spend their entire income in the current period but keep holding bank deposits ($\text{£}y = w - x$). Goods are sold to H1 for £x, and firms

intermediary" (Moore, 1988, p. 20). Contrariwise, in coherence with their own view, Parguez and Seccareccia deny that credit is financed by depositors.

are able to refund banks for this same amount⁷; firms remain indebted to banks for $\pounds y = w - x$. We then have the situation shown in Table 2.

Table 2. The effect of households' purchases financed out of income

| Banks | |
|-------------------------------------|--|
| Assets | Liabilities |
| Loans to firms: $\pounds y = w - x$ | Deposits of households H1: $\pounds y = w - x$ |

Suppose now that households H2 ask banks for credit in order to finance purchases of goods produced. Then, in proportion as households H2 spend the borrowed money ($\pounds z$) in purchasing goods, firms are paid back and can refund their bank loans. Ultimately, the situation is the following (Table 3).

Table 3. The effect of households' purchases financed by money creation

| Banks | |
|-------------------------------------|---------------------------------------|
| Assets | Liabilities |
| Loans to firms: $\pounds y - z$ | Deposits of households H: $\pounds y$ |
| Loans to households H2: $\pounds z$ | |

Table 3 confirms my argument. When banks create money in response to a demand for credit from households, the operation amounts to superposing financial transactions among households on the process of income creation and cancellation which ties firms and households. Here, a part of the deposits held by households H1 covers equivalent loans ($\pounds z$) to households H2: the latter have borrowed (though implicitly, through banks) and spent the income saved by the former: they have bought produced goods in

⁷ In a recent article, Pressman (2000) denies that bank credit has to be reimbursed as soon as firms get the money back. He is right insofar as practice is concerned: firms may well roll over their existing debts to finance a new production. But, as Rochon (2001) puts it, '[this] makes little difference, and does not affect the core of the monetary circuit'.

their place. All in all, although banks grant credit to households as well as to firms, money creation has different effects in both cases. The money created for the payment of factor costs forms the income of households, whilst the money created for the benefit of households enables financial transactions (be they implicit) among households the object of which is this same income. In the final analysis, the relation tying financial transactions among households to income links the credit granted to households to the credit granted to firms for paying factor costs. This is why Circuitists may credit firms with a leading role in the expansion of bank loans and deposits despite the fact that most bank credit (and money creation) does not go towards financing production. Moreover, it should be noticed that the proportion of bank loans granted to consumers to bank loans granted to firms may be all the greater, in practice, because firms do not systematically have recourse to bank loans in order to finance factor costs. This is another aspect of the financing of firms' outlays that we will now consider.

Actually, firms often use pre-existing cash to finance their factor costs. Does this not run counter to the model of the circuit, which emphasises the role of banks, and behind banks the role of depositors, in financing factor costs?

To examine this point, let us consider banks' balance sheets anew. This time round, starting with the situation depicted in Table 1, consider firms F1 which have made profits that they currently hold in the form of bank deposits (£p). Below I shall explain that profits are wages transferred from households to firms; so, firms literally take the place of households on the liabilities side of banks' balance sheets. Let us call F2 the firms which have produced the goods that profits allow firms F1 to buy (these goods are the real side of profits). Firms F2 have paid £p for the factor costs of these goods by means of bank loans: they figure on the assets side. For simplicity, I assume that the current output (worth £w as measured by its factor cost) is made up of the goods produced and sold (at a profit) by F1 and the goods still unsold by F2. So, households deposits and loans to firms have been cancelled up to £w-p.

newly produced goods. This confirms the validity of the circuit scheme. Although banks do not necessarily finance factor costs from scratch, they nonetheless credit households with money, the purchasing power of which is not transferred from the deposits held by firms. Households receive and save newly formed income. A new circuit is thus initiated. Put simply, the way firms F1 paid for factor costs only exempted them from increasing their bank borrowings. To analyse this situation further, let us now refer specifically to Keynes's finance motive.

Keynes insisted that firms have to secure finance when they decide to start production. Such finance may be provided by banks (which notably grant overdraft facilities) or also by the market (Keynes, 1937a, pp. 208–9). In the latter case, firms borrow money from the general public which saves part of its income in the form of bank deposits. So, pre-existent bank deposits are used just as in the case of the payment of factor costs by means of profits examined above;⁸ the only difference here is that firms explicitly issue claims so as to avail themselves of finance. Keynes argued that such finance, which takes the form of an 'advance provision of cash' (*ibid.*, p. 208), does not exhaust any pre-existent savings but, as soon as it is actually spent (invested) on a new production, on the contrary, generates new net saving attached to the new net investment (*ibid.*, p. 209). In this way, Keynes confirmed that the payment of factor costs generates incomes which are not transferred from pre-existent deposits, although the money necessary for making that payment had been borrowed from pre-existent deposits. To account for this puzzling situation, Keynes distinguished between credit in the sense of 'finance' and credit in the sense of 'saving'. Credit in the sense of finance is, from the viewpoint of entrepreneurs, a 'demand for liquid cash in exchange for a deferred claim' (*ibid.*, p. 210). This means that deposit holders convert their cash into illiquid assets (as already stated above with reference to firms holding profits). Credit in the sense of saving corresponds to the fact that income, being paid in money, is necessarily deposited with banks (even bank notes represent deposits with the issuing central bank) and hence defines a credit granted by depositors to banks. The question, then, is to determine who ultimately benefits from this credit. When banks create money in response to demand for credit from firms, the answer is clear enough: firms are the

⁸. Keynes also evoked the fact that the entrepreneur 'may be in a position to use his own resources' (Keynes, 1937a, p. 217).

recipients. When firms use pre-existent cash the answer is less obvious since firms do not then borrow money from banks. Nonetheless, the answer is unchanged. We have seen already that book entries in banks' balance sheets have to be interpreted with reference to the economic operations involved. So long as income recipients do not spend their money on goods, they do not exercise its purchasing power. This means that firms have in hand the goods which are in the making or stocked in their stores until these goods are sold: saving by income recipients conditions firms' investment. Therefore, firms actually benefit from credit granted by income recipients, although the operation is not completely accounted for in banks' balance sheets (firms have not become explicitly indebted to banks). The circuit scheme is not impeded; on the contrary: depositing their money incomes with banks, households *de facto* extend credit to firms through banks.

3. THE FLUX AND REFLUX OF WAGES FACED WITH THE DIVERSITY OF FIRMS' EXPENSES AND THE FORMATION OF PROFITS

The theory of the monetary circuit gives a pre-eminent role to the flux and reflux of money wages (as considered with reference to firms' outlays and receipts). *A priori*, this is also a questionable feature. A first issue relates to the flux. In reality, firms pay not only for wages but also for capital goods they use in the production process. Moreover, it may be argued that capital goods constitute an original factor of production for which firms pay interest, with the latter being an income supplementary to wages in the economy as a whole. A second issue relates to the reflux and the formation of profits: how would firms be able to make profits from the sale of the goods produced if they injected only wages into the economy?

Let us consider the flux first. In producing goods or services, firms incur various charges: they purchase output from other firms and also pay factor costs. Certainly, in practice, this expenditure may be financed in a number of ways. To finance plant and equipment, firms generally prefer to use cash raised by the issue of long-term bonds and equities, and to plough back part of their profits. To finance the purchase of unfinished goods and raw materials, and the payment of factor costs, they resort by preference to

bank loans and also to their own cash balances (if any); they may also raise funds on the money market. Regardless of these usages and practices, circuit theory strictly divides the payment of wages and the purchase of manufactured goods into two separate categories. The former generates incomes whilst the latter spends incomes. Is circuit theory right to do so?

I have already partially answered the question under examination in the first section of the chapter when checking (in accordance with Keynes's analysis of the finance motive) that although firms may use pre-existent cash to pay wages, they do not actually spend pre-existent incomes in doing so. New incomes are then formed in the economy. As for the firms' purchases of manufactured goods by means of newly created bank money, this is similar to the purchase of manufactured goods by households who spend newly created money borrowed from banks: they actually spend part of the current income. To check this last point, let us consider anew banks' balance sheets (Table 6). With reference to the situation depicted in Table 1, we assume that the current output (as measured by factor cost, £w) is bought partly by households (£x) and partly by a number of firms, F1, which borrow £y from banks to that end. Since, in this case, firms (including firms F1) sell their entire output ($w=x+y$), they recoup in full the money spent to pay for factor costs and may repay the corresponding bank loans. Then the situation is the following. Firms F1 remain indebted to banks for £y (they borrowed £y to buy goods) whereas households are the banks' creditors for the same amount (they save £y). Current income has been spent and households are creditors of firms through banks. In other words, households' savings have been lent to those firms (F1) buying manufactured goods with newly created money borrowed from banks.

Table 6. The effect of firms' purchases of manufactured goods financed by money creation

| Banks | |
|--|--|
| Assets | Liabilities |
| Loans to firms F1 (granted for purchases of manufactured goods): | Deposits of households (formed in the current production): |
| £y | £y |

It is true that households had been already creditors of firms through banks as soon as wages were paid; but, now, since the produced goods have been sold, the loans are backed not by goods but by incomes (profits) firms F1 will earn in the future. When these firms will have earned profits, they will be able to repay banks, and households' deposits will again correspond to loans made to firms backed by goods produced (these goods are the real side of F1's profits). The whole process may be described step by step in the following banks' balance sheets. In Table 7 (similar to Table 4 above) firms F1 which make profits in a new period of time take the place of households for £p whilst simultaneously firms F2 figure on the assets side as borrowers for the same amount of money (£p is the factor cost of the manufactured goods constituting the real side of profits and produced by firms F2 in the new period). Then (Table 8), firms F1 repay the £y borrowed from banks so that £y is deducted from their profits deposited with banks. Therefore, households' deposits (£y) are again covered by equivalent goods for the production of which firms F2 paid £y as factor costs. Firms F1 purchased in place of households goods which constituted the real side of wages paid in the previous period, they now make up for them with goods constituting the real side of their profits.

Table 7. Firms holding deposits as a consequence of the formation of profits in a new period of time

| Banks | |
|---|---------------------------------|
| Assets | Liabilities |
| Loans to firms F2 (granted for the payment of factor costs of the goods constituting the real side of profits): | Deposits of firms F1 (profits): |
| £p | £p |

Table 8. The effect of the reimbursement of bank loans previously contracted to finance firms' purchases of manufactured goods

| Banks | |
|---|---|
| Assets | Liabilities |
| Loans to firms F2 (granted for the payment of factor costs of the goods constituting the real side of profits): | Deposits of households (formed in the previous period): |
| £p | £y |
| | Deposits of firms (profits): |
| | £p-y |

What the analysis confirms here is that despite the diversity of actual practices, the circuit scheme remains adequate. When starting production, firms purchase manufactured goods and pay factor costs as well. As compared with this diversity of expenditure met simultaneously by firms, the circuit scheme is not a simplified model though. The reality is that the start of production entails the superposition of different phases of the circuit (and so different individual circuits). When buying manufactured goods, firms spend pre-existing incomes (even when they spend newly created money). This spending is part of the reflux phase of a circuit previously initiated. Simultaneously, the payment of wages initiates a new circuit.

The next issue relates to the definition of factor costs. Do factor costs simply come down to wages, as argued by Circuitists, or should they also include interest which is currently paid for capital? This is a time-honoured issue in economics that circuit theory allows us to clarify. As stated above, the expenses met by firms starting production fall into two separate categories. On the one hand, firms pay for labour, which is in no way a manufactured good. Therefore, the payment of wages does not exhaust any pre-existent incomes that might be lent by their recipients to firms; on the contrary, this payment forms households' income. On the other hand, firms purchase capital goods which are outputs of industry. So, as stated above, they conduct financial transactions; they exchange current income, which they spend on capital goods, against income they will make over to lenders in the future. This latter income will have to repay the initial loan and pay interest proportional to the time elapsed. Where will it come from? Firms' income is profit, derived from sales in the market where it is made at the expense of buyers. Although interest is usually predetermined when firms borrow money, it is of

the same nature as dividends paid to shareholders out of profits. It does not constitute an original factor cost similar to wages: the payment of interest does not form an income supplementary to wages in the economy as a whole. Here again, circuit theory is consistent with Keynes's analysis (1936) regarding labour 'as the sole factor of production, operating in a given environment of technique, natural resources, capital equipment and effective demand'⁹.

Let us now precisely consider the formation of profits. According to circuit theory, the payment of wages generates the income that households will spend on goods. At that point, wages are repaid to firms; there is no additional money with which to pay profits to firms, that is, proceeds in excess of factor costs. A number of writers opt for a solution proposed by Kalecki and put in a nutshell by Joan Robinson (1964, p. 9): 'Workers spend what they get; capitalists get what they spend'. But this solution raises a difficulty: firms cannot pay profits to themselves. To overcome the difficulty, it has been suggested that individual firms simply anticipate the formation of their profits (for a detailed presentation of this solution see Renaud, 2000). Anticipating profits, a number of firms, let us call them F1, will borrow money from banks and buy goods (capital goods in all likelihood) from other firms, F2, (F1 and F2 may as well stand for two sectors of production), repaying the factor costs of the goods they buy and paying firms F2's profits in addition. So, firms F1 sell (at a price including profit plus factor cost) the goods they have produced to households and to firms F2, with the latter spending the profits they have made. Then firms F1 are able to pay back to banks the money that they borrowed to spend their profits in advance; ultimately, their profits consist of the goods they have bought with the borrowed money. Unfortunately, the question cannot be settled in this way. One can rightly suppose that firms borrow money from banks and spend in advance the profits they expect to make. But this is not sufficient to solve the problem under discussion: being anticipated, the formation of profits is not explained but presupposed. How can we sort things out?

In the history of economic thought, two competing explanations have been suggested. On one view, profits have been considered as a part of current output, surplus to the goods consumed by workers (this is notably what the Marxian theory of surplus value

⁹. Keynes (1936, p. 213-14).

claims). Then, profits are real and the question of their monetary 'realisation' is secondary. In this framework, Marx had already suggested that capitalists get the money that they spend. On the other view, profits have been considered as the result of a transfer of income from consumers to firms, occurring when prices exceed factor cost. This approach was initiated by James Steuart, an eighteenth century writer, who promoted the notion of 'profit upon alienation'¹⁰. This was also Keynes's approach in formulating the principle of effective demand by which 'entrepreneurs will endeavour to fix the amount of employment at the level which they expect to maximise the excess of the proceeds over the factor cost' (Keynes, 1936, p. 25)¹¹. The theory of the monetary circuit is consistent with this latter approach. If firms sell the goods produced at a price which just pays back factor cost, they make no profit. As soon as they sell goods at a price exceeding the factor cost, they earn a profit. But, in this case, neither the existence of a surplus in output nor in the money available in the economy need be presupposed. Firms clearly benefit from a transfer from buyers which is both nominal and real. As mentioned in the first section of this chapter, firms literally take the place of wage-earners on the liabilities side of banks' balance sheets (see Table 4) and then spend the corresponding income in their place. So, profits, nominal and real, are included in the circuit of money wages. There is no need then to look for any additional quantity of money. That many Circuitists appear to be preoccupied by this last question is probably to be explained by the fact that they roughly consider aggregates: how could wages amounting in the current period to $\text{£}w$ pay for $\text{£}w+p$, where p stands for profits? But this is not the right way to analyse the situation, even if we consider the economy as a whole. Adopting a macroeconomic view does not exempt theorists from considering the real world: whatever the period of time we consider (be it for example a month or a year) firms again and again pay wages and sell goods, production processes overlapping one another, so that firms have no difficulty gaining profits out of wages provided buyers are prepared to purchase goods at prices exceeding factor costs. So, we have a confirmation that the existence of profits does not run counter to the basic scheme. Note that profits are partially re-allocated among firms. This is the case when firms F1, in the example given in the first section of the chapter, buy goods sold by firms F2 at a price

¹⁰. See Schumpeter (1954).

¹¹. Cf. Gnos (1998).

exceeding their factor costs: firms F2's profits are paid by firms F1 out of their own profits earned at the expense of households. Note also that although profits are gained from sales firms can spend them in advance thanks to bank loans. We may surmise also that the additional money created will help raise prices and so allow firms (in the whole) to make greater profits. But, as shown above in the case of households asking for credit, the spending of incomes in advance amounts to superposing financial transactions on the process of income creation and spending encapsulated in the circuit; it does not condition the formation of incomes.

4. CONCLUSION

A priori, the circuit scheme, which singles out the payment of wages by firms, which borrow from banks to that end, and then the spending of wages by households, may appear an oversimplified and abstract model if set against the complexity of the economic transactions in the real world. I have endeavoured here to show that, in fact, the many-sided financing of firms' and households' expenditure, the diversity of firms spending and even (in this respect) the formation of profits are surface phenomena consistent with the deep structure and the causal relationships constituting the circuit.

At the beginning of this paper, I emphasised that the theory of the monetary circuit preferentially refers to Keynes's principle of effective demand and finance motive. Another reference, which the present study makes obvious, is to Keynes's statement in his *Treatise on Money* that

[h]uman effort and human consumption are the ultimate matters from which alone economic transactions are capable of deriving any significance; and all other forms of expenditure only acquire importance from their having some relationship, sooner or later, to the effort of producers or to the expenditure of consumers (Keynes, 1930, pp. 120–1).

This confirms that the circuit theory, which emphasizes the formation of wages paying for human effort and their spending on consumption (savings sooner or later end in

consumption), is consistent with Keynes's methodology¹² and, so, is undoubtedly destined to interact with Post Keynesian research project.

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¹². Remarkably enough, in his *Treatise on Money*, Keynes continued his story in proposing 'to break away from the traditional method of setting out from the total quantity of money irrespective of the purposes on which it is employed, and to start instead . . . with the flow of the community's earnings or money income, and with its twofold division (1) into the parts which have been *earned* by the production of consumption goods and of investment goods respectively, and (2) into that parts which are *expended* on consumption goods and on savings respectively' (Keynes, 1930, p. 121).

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