CC in the tropics: Algebra of the structuralist macro critique

by

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ABSTRACT

We explore a short run structuralist macroeconomic model with a focus on "the problem of financing economic development" (Kaleçki, 1976). It is demonstrated that banks have a unique role to play in the production of commodities in a monetary economy. A case is made for class-based monetary and taxation policy.

I. INTRODUCTION

The evidence does not support the neoclassical justification for liberalisation of interest rates. In the case of poor countries, the general level of incomes is so low that sheer survival takes precedence over higher-order motives (Rosenzweig, 2001). From a Marxist perspective, we need to open the agrarian question, closed after structural adjustment programmes (SAPs). Following Henry Bernstein, the peasantry as a category is problematic and analytical lenses must be focused on the social relations of labour (Ellis, 2006). SAPs were introduced into sub-Saharan Africa in the seventies to rid agriculture there of rapacious parastatals. Accordingly, governments dismantled upper and lower bounds on prices and shoved the economies toward market exchange in order to induce the evolution of competitive private trade in rural areas. The outcome, overall, has been disastrous. Private traders have not rushed into spaces created by fleeing parastatals. The

characteristics that remain include a food security crisis which the upheavals of liberalisation only worsened.

In addition, the opportunities for sustaining savings in the long term or, indeed, even in the short term are limited. It is well established that the proximity of banks increases financial savings and crowds out the merchant-money lender route to the provision of insurance. The absence of well-functioning credit markets is reflected in inefficient asset stocks and compositions. The mechanism of financial intermediation is critical in extending credit to informationally opaque small borrowers (Berger et. al., 2001). The current wave of mergers and acquisitions is likely to create large banks that are adjuncts to capital markets and that are oriented towards large corporate clients. Pure transactions lending describes the relationship between lender and clients where due diligence and contract terms are based on information that is readily available at the time of signing of the contract. The information set might contain no more than the transparent data that is available in balance sheets. Their remoteness from the particularities of rural markets implies that the abilities of large banks to process local-level information is limited. In the absence of repeated interactions over time, lenders resort to class-based assessment of probabilities rather than case-by-case assessment procedures (Runde, 2002). In the case of small bank lending, on the other hand, information is of a qualitative kind and is garnered from the borrower's suppliers and customers and also from the borrower's interactions with the local community. Relationship banking entails a unique, one-to-one, face-to-face interaction between borrower and lender on the basis of which decisions concerning additional funding and monitoring strategies are arrived at.

We provide a non neoclassical formalisation of these intuitions below.

II. THE COMMODITIES CIRCUIT

A common starting point of any structuralist account of a developing economy would be the demarcation of the economy into an industrial and an agricultural sector. For the purposes of the present study, the division cuts across the division of the economy into Departments following Marx's schemes of reproduction (Kaleçki, 1976). Our Sector I includes Marx's Department II producing luxury goods for capitalists, Sector II is Marx's Department III producing basics for workers and Department I producing investment goods is divided into two parts, investment goods produced in Sector I and investment goods produced in Sector II. This classification is resorted to in order to make non basics and basics output correspond with the output of Sector I and Sector II respectively.

The pricing rule for the industrial sector takes the form

$$P_n = (1 + \tau)w_n b_n$$

where P_n is Sector I's producer price; τ is the markup rate; w_n is the nominal wage rate and b is the inverse of average labor productivity. Output X_n is divided in the familiar way between consumption and investment. Consistent with the division into Departments above is the assumption that the agriculture sector is a food sector providing basics to workers in both sectors. Similarly, the industrial sector output is consumed by capitalists from both sectors.

Modern non neoclassical macro models add a Keynes-Wicksell turn in the assumption that firms make their investment plans on the basis of the divergence between

the rate of profit in industry, r_n, and the real rate of return on bonds, $i - \pi$, with bonds and equities being regarded as perfect substitutes. Distinguishing the agriculture sector by the subscript a, excess demand in the non-food sector in nominal terms is given by

$$P_n C_n + P_a C_a + P_n I_n (r_n - (i - \pi)) - P_n X_n$$

where C_n is luxury consumption by urban capitalists and C_a is luxury consumption by their rural landlord-capitalist-merchant counterparts.

The agricultural sector is assumed to be flexprice and we assume, without loss of generality, that financial portfolio choices are unavailable to the kulaks. Investment in the sector depends only on the rate of profit there. Excess demand in Sector II is

$$w_n L_n + w_a L_a + P_a I_a (r_a) - P_a X_a$$

where $w_i L_i$ is the wage bill in sector i.

The traditional Keynesian adjustment process posits an inversion of the Walrasian tâtonnement adjustment process. Quantities are assumed to adjust to quantity discrepancies on the assumption of chronic excess capacity. We have

$$\frac{dX_n}{dt} = \left[P_n C_n + P_a C_a + P_n (I_n (r_n - (i - \pi)) - P_n X_n \right]$$

The agricultural sector, on the other hand, is resource-constrained. An increase in the supply of food can only come from investment activities like irrigation works and so on. The adjustment rule for the agricultural sector is

$$\frac{dP_a}{dt} = \left[w_n L_n + w_a L_a + P_a I_a (r_a) - P_a X_a \right]$$

The Jacobian of the system is given by

$$\begin{pmatrix} -P_n & C_a \\ 0 & I_a - X_a \end{pmatrix}$$

The two expressions in the diagonal neatly encapsulate and, indeed, resolve the tension in the debate on the optimal route to capitalism (Byres, 1996). The single north-west element is a validation of the Preobrazhensky thesis underscoring the necessity of the terms of trade to move against agriculture in order to facilitate accumulation outside agriculture. The function of agriculture is not only to generate a real surplus but also a financial surplus. The surplus of interest is the marketed surplus which represents a 'command over real resources' which can be transferred from agriculture. In addition, small farmers are net buyers of food. Kaleçki assumed that there would be no inflationary price increases of necessities, particularly of staple foods. Any policy stance of that kind "militates against any sense of social justice" (Kaleçki, 1976, p.18). It is necessary, then, to expand agricultural output in the short run (the second element in the expression in the

south-east corner of the matrix). The higher supply of food will enable the system to feed those who transfer to non-agricultural output. A substantial increase in agricultural output is feasible in a short period of time without heavy investment by the introduction of small-scale irrigation projects, double-cropping and the like. Any energies along these lines are hampered by class divisions in the countryside. The mass of small peasants is bonded to merchants and moneylenders. Farms operate under a system of disguised tenancy without security of tenure. Government polices must be targeted at breaking these institutional shackles. Service cooperatives could be set up for the purpose of credit disbursement and sale of produce. It is worth noting, for completeness, that addressing effective demand failure through an increase in the production of luxury commodities, (the north-east corner of the box), is irrelevant to the stability of the model. Indeed, it is the task of Marxian political economy to critique growth models which are oriented towards the production of non-basics (Perraton, 2007). The task is to articulate conditions under which real wages can grow consistent with the growth of productivity. The market-led model of land reform has been unsuccessful in pushing a productivity-led redistribution of wealth in contrast to the state-led model (Borras & McKinley, 2006). There can be no overall growth without accelerated rural development and the latter cannot result without serious land reform. The efficiency of the post-reform agrarian system in the state-led model which includes Japan, The Republics of Korea and Taiwan, Bolivia, Chile, Cuba, Mexico, was obtained by massive complementary public investments, credit and technical assistance.

At the same time, the first element in the second row and the second column suggests a critique of the Prussian road or, what Lenin called 'capitalism from above', according to which landlords are the motor to capitalist transformation. It is both necessary and sufficient that the animal spirits of that class be muted for the stability of the system. One regressive vertex of that path has been the continuous impoverishment of the peasantry resulting in a significantly shrunken home market. The impact on capitalist industry, as well, cannot be salutary. Department II branches (in the traditional sense) would be constricted by the narrow home market. Lenin was concerned with the sluggish mechanisation of agriculture. The consequence was a constricted market, once again, for the output of capitalist manufacturing industry especially the products of Department I branches (in the traditional sense) like chemical fertilisers, farm implements and machinery.

Lenin made the case for the American path or 'capitalism from below'. The dynamic here is from a differentiating peasantry with vigorous class-for-itself action pursued by rich peasants and capitalist farmers. As the differentiation proceeds, the capital-labour relation evolves. The transition is clearly plausible in a milieu where the landlord class is weak but is not ruled out in a regime where the class is strong, provided certain conditions are in place. The American path was progressive in two ways (Byres, 1996). The forces of production were developing in the countryside. Modern inputs were being applied and mechanisation was proceeding apace. Semi-feudal relations of production were not fetters. Secondly, the path entailed a massive growth of the home market. Department I industries supplying agricultural inputs were faced with an expanding home market. In addition, the rise in the standard of living of the peasantry provided an impetus to Department II industry. Such a transition can be facilitated by extirpation of the landlord classes along with dismantling the state structures and the class configurations that they represent. The requirement is heroic: a reconstituted, strong

state with the capacity to wage war against the might of an entrenched landlord class. For the same reason, the outcome is unlikely to be seen in developing countries, given the ambiguous nature of what Kaleçki called "intermediate regimes" there. The indispensability of land reform cannot be emphasised enough, for otherwise, rising incomes of producers of food would be absorbed in higher rents and debt payments, increasing the demand for non-basics among merchants, moneylenders and landowners (Toporowski, 2006). In our times, "relentless pressure from below" has worked in Mexico in the 1930s, Kerala in India in the 1960s and 1970s, and in Chile during the early 1970s (Borras & McKinley, 2006). The rural poor organized, independent of the tutelage of the State, and consisted of a thick spectrum of landless peasants, farm workers, small farmers, and indigenous peasants.

We proceed to consider the implications of lifting a regime of financial repression. Under the assumption of a regime of chronic excess demand, $C_n + I_n - X_n > 0$, in real terms, we have

$$\frac{dP_n}{di} = \frac{- \dfrac{dI_n}{di}}{C_n + I_n - X_n} \geq 0$$

and

$$\frac{dX_n}{di} = \frac{- \dfrac{dI_n}{di}}{- P_n} \leq 0$$

The outcome is stagflation. The credit contraction, subsequent to a financial liberalisation, and the negative eventual impact on output has been documented (Weller, 2001). The subsequent high interest rates raise the profitability of bank lending. Capital flows into short-term speculative asset holding impairing the accumulation of capital. The financial sector grows rapidly fuelled by an asset-price boom and, correspondingly, the real sector stagnates. The consequences for agriculture are no less deleterious. It is unnecessary to posit a regime of excess demand to conclude that the impact of rising interest rates is a rise in the price of agricultural output.

$$\frac{dP_a}{di} = \frac{- \dfrac{dI_n}{di}}{C_a} \geq 0$$

A final consequence to consider is the impact of the interest rate on the markup. The result is once again familiar. The degree of monopoly increases. A regime of excess demand benefits the capitalist class.

$$\frac{d\tau}{di} = \frac{- \dfrac{dI_n}{di}}{\dfrac{dP_n}{di}(C_n + I_n - X_n)} \geq 0$$

The task ahead is further enlighten the interplay between the real and financial components of the capitalist system. We suggest below that the circuit approach to monetary macroeconomics, active in France and Italy, is a natural abstract complement to the real circuit enunciated here. Comprehensive treatments of the former will be found in Cencini (2005), of the latter in Graziani (2003).

III. THE CREDIT CIRCUIT

In a monetary production economy, the production and circulation of commodities between the Departments is mediated by banks. The role of banks is unique in that they, and only they, can lend out claims on their own debt (Bossone, 2001). Only banks possess the ability to add to the existing stock of money by lending promises to pay. Thereby the total credit in the economy can exceed what is possible if credit has to be fully recovered. Banks create money and generate purchasing power in anticipation of the production of commodities. They are not restricted to transferring existing purchasing power from depositors to borrowers.

According to the circuit approach applied to our framework, the sequence consists of three points: 1. the creation, 2. transfer and 3. destruction of income. An illustration on the lines of Bossone in terms of the model sketched in the previous section is provided in an Appendix. The italicized items are the balancing counterparts, in the balance sheet sense, of identical primary entries whose numbers depict the three moments defined above. At the start of the circuit banks negotiate with capitalists (industrial and agricultural) the conditions for working capital loans, $w_a L_a$ and $w_n L_n$, respectively. The banks credit the deposit accounts of the capitalists with the loan amounts, denoted by the italicized entries, loan claims and loan deposits, respectively, in both Departments. Banks thereby emit money as a numéraire. The firms produce, using the loans to pay wages to workers (industrial and agricultural). Entries numbered 2 in the flow of funds distinguish this moment. Deposits are transferred from the bank accounts of the capitalists to the accounts of the workers. The latter is wages in the balance sheet of workers matched by the italicized wage payments in the balance sheets of the former. At the second point of the sequence, workers spend their incomes on basics. Capitalists spend their incomes on non basics. Sales across classes and commodities, depicted by $3'$ and $3''$ are identically equal to purchases 3. The circuit ends when capitalists use the proceeds from their sales to discharge their debt to the banks. The money that was created is destroyed. Banks do not create value. The freshly issued money assumes value only in the process of production. All money transfers and payments for commodities and labour services take place through deposit transfers across bank accounts. No cash circulates. At circuit end capitalists must secure enough money to pay off their initial debt. No transfer of real resources is entailed from them to the banking system. In case of the example worked out

in the Appendix, adding up over the two sides of the balance sheets of capitalists, their "financial obligations" to the banks equals their "deposits with the bank", both being equal to $w_aL_a + w_nL_n$.

V. CONCLUSION

The rationale for financial liberalisation is the following sequence. The increase in interest rates that follows encourages savings deposits providing thereby the wherewithal for investment. Banks can grant loans to firms only if they have the requisite income at their disposal. However, since the result of the exercise above is the explanation of income by production, it would amount to *petitio principii*, the French circuitistes never tire of complaining, to claim that the financing of the production requires the existence of prior income. Production is financed *ab novo* and the credit advanced is not for the purchase of existing commodities. The costs of production are met by the payment of wages. The latter generates new income according labour a special status as a factor of production.

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APPENDIX

THE MONETARY CIRCUIT

A. BASICS

AGRICULTURAL CAPITALIST (AC)

Deposit with bank		Financial Obligations	
1 + loan deposit	$+w_aL_a$	1 + loan debt to bank	$+w_aL_a$
2 - *wage payments*	$-w_aL_a$		
3 - *payments to IC*	$-P_aC_a$		
3' + sales to AW	$+w_aL_a$		
3″ + sales to IW	$+w_nL_n$		

AGRICULTURAL WORKER (AW)

Deposit with bank	0
2 + wages from AC	$+w_aL_a$
3 - *payments to AC*	$-w_aL_a$

B. FINANCIAL INTERMEDIATION

BANK

Loan Account AC	0	Deposit Account AC	
1 + *loan claim*	$+w_aL_a$	1 + *loan deposit from AC*	$+w_aL_a$
2 - debt payout	$-w_aL_a$	2 - payment to AW	$-w_aL_a$
		3 + payment from AW	$+w_aL_a$
		3 + payment from IW	$+w_nL_n$
		3 - payment to IC	$-P_aC_a$ 0
			$+w_aL_a$ $-w_aL_a$
		Deposit Account AW	
		2 + payment from AC	
		3 - payment to AC	
Loan Account IC	0	Deposit Account IC	
1 + *loan claim*	$+w_nL_n$	1 + *loan deposit from IC*	$+w_nL_n$
2 - debt payout	$-w_nL_n$	2 - payment to IW	$-w_nL_n$
		3 + payment from IC	$+P_nC_n$
		3 + payment from AC	$+P_aC_a$
		3 - payment to IC	$-P_nC_n$
		Deposit Account IW	0
		2 + payment from IC	$+w_nL_n$
		3 - payment to IC	$-w_nL_n$

C. NON BASICS

INDUSTRIAL CAPITALIST (IC)

Deposit with bank		Financial Obligations	
1 + loan deposit	$+w_nL_n$	1 + loan debt to bank	$+w_nL_n$
2 - *wage payments*	$-w_aL_a$		
3 - *payments to AC*	$-P_nC_n$		
3′ + sales to AC	$+P_aC_a$		
3″ + sales to IC	$+P_nC_n$		

INDUSTRIAL WORKER (IW)

Deposit with bank	0
2 + wages from IC	w_nL_n
3 - *payments to AC*	$-w_nL_n$