

"'CONTRACTUAL' SAVINGS AND UNDERCONSUMPTION:
REALIZATION PROBLEMS OF BRITISH CAPITALISM
IN THE RECESSION"

Christos N. Pitelis

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This paper is circulated for discussion purposes only and its contents should be considered preliminary.

ABSTRACT

This paper examines the possibility of an underconsumptionist tendency operating in the British economy in the recent recession as a result of (i) increases in contractual savings resulting in an increasing private savings-income ratio as a result of the lack of perfect substitutability between contractual and discretionary savings; (ii) a posited link between consumption and investment, either direct or indirect via the effects of falling consumption on capacity utilization and the rate of profit. Comparisons are made between our version and Baran and Sweezy's theory of underconsumption. Some temporal, spatial and theoretical limitations of our approach are also examined.

INTRODUCTION

The basic aims of this paper are: firstly, to examine the role of 'contractual' savings in the recent increase of the private savings-income ratio, and its associated impact on the realisation of the potential profits of firms. Secondly, to develop a (version of a) theory of under-consumption based on the previous findings and relevant assumptions. These are examined in sections I and II respectively.

Following Kalecki (1971) and further contributions by Cowling (1982a), Rowthorn (1981) and Sawyer (1982, 1983), the following assumptions-positions will be taken to hold throughout: The Institutional Setting, will be one of a monopolistic economy operating well below its full capacity level. This is taken to be characteristic of most of today's advanced capitalist countries. In such a framework firms will respond to changes in effective demand largely by varying the level of their production, while prices will tend to be rather inflexible.

Along with marginal cost, the Lerner/Kalecki degree of monopoly will determine prices, that is:

$$p = \lambda(M)mc, \quad \text{where}$$

mc = marginal cost, M is a vector of factors determining the degree of monopoly, and λ is the mark-up of price over marginal cost. In price-cost margins form the above equation gives

$$(p-mc)/p = \lambda(M) - 1/\lambda(M)$$

that is, the margin will depend on the factors entering M . In terms of the "surplus" (profits plus overheads) the last equation gives

$$S/pq = \lambda(M) - 1/\lambda(M)$$

In this "excess capacity" equation factors entering M will determine the extent to which the capacity to produce will actually be utilized. Summing over $1, \dots, N$ industries we may derive the weighted average degree of monopoly \bar{M} , as $\Sigma S/\Sigma pq = S^*/T^*$ i.e. the ratio of gross capitalist income plus salaries to aggregate turnover.

I. SAVINGS

Savings play the crucial role in our system. Based on ex-
^{2/}
post behaviour, we may distinguish two main types: 'Discretionary' savings, which are subject to the discretion of individuals and 'contractual' which are not. Strictly speaking the latter category contains only savings through private pension funds. The two other major forms of savings, i.e. corporate savings and 'quasi' corporate savings (made by unincorporated businesses), are essentially discretionary at least for those who control them. Given dilution of shareholding, however, both may take the form of 'contractual' savings for those to whose control they are not subject. To distinguish them from 'pure' personal (discretionary) savings, the term 'contractual' is taken to cover all these three types of savings. Disregarding their form, increases in savings propensities reduce effective demand, therefore capacity utilization and the rate of profit. Under our assumptions this results in lower investment, ^{3/} that is to a stagnant economy. Increased thriftiness will also be expected to

affect investment directly, by rendering slim the possibility of realization of potential profits, an issue taken up later.

The above effects apply for each separately and all types of savings together. However in the former case this is subject to the following proviso; namely, increases in one form of savings should not be compensated by reductions in all or any of the other types of savings. In the latter case, with constant income, increasing savings of the one form may result in a constant or even declining private savings ratio, that is in constant or even increasing effective demand. These possibilities need spelling out. Therefore we examine: (a) whether each type of savings has increased in recent years and why, and (b) whether movements in one type of savings are followed by compensatory movements in other types, i.e. the potential existence of substitutability.

a: TRENDS: 1: Contractual Savings:

i: Corporate Retentions; in the 1963-1970 period corporate retentions averaged at a 13.7% of personal disposable income. Between 1971-1981 the ratio has increased to 17.9%.⁴ Reasons for such an increase are provided by a flourishing literature, including three groups of theorists. Thus in Kalecki (1971) preference for retentions is attributed to preference for internal expansion on the part of the 'controlling group' of the firms, which again is due to the risks associated with external finance. Managerialists have a similar reasoning (Galbraith, 1967) but also consider a positive link between retentions and managers' bonuses (Marris, 1964).^{5/} "Plain-Marxists" agree with Kalecki but add tax advantages too (e.g. Baran and Sweezy, 1966). Indeed dividends are

taxed much more heavily than retentions (see Hay and Morris, 1979). On balance, therefore, the observed increase in the corporate retentions ratio, comes as no surprise for either owner controlled or management controlled firms.

ii: Pensions; savings through private pension funds are defined as contributions by persons to these funds, minus benefits paid back to persons. They have increased from an average of 4.8% in the 1963-1970 period to a 6.6% in the 1971-1981 period. Reasons for such an increase are mainly associated with the increased participation of persons in such schemes. An interesting phenomenon with regard to this tendency arose from the observation that increased participation was favoured by both unions and employers. A plausible explanation regarding the latter may be in terms of their desire to exploit the funds, either for profitable investment at home or abroad or for obtaining the going rate of interest, provided, of course, they expect them to be under their control. An explanation for unions' behaviour could rely on the realization on their part that, unless such provisions are made for retirement, workers will spend all income they can obtain, and therefore will be unable to finance their retirement years. Reasons for such behaviour could be, our consuming society, that is workers' continuous exposure to advertising and other selling efforts of the firms. Also 'subsistence' needs.

iii: 'Quasi' retentions; there are no figures available for savings made out of unincorporated businesses, since they are defined in the national accounts as 'personal' savings. A crude approximation would be in terms of (a) the share of self-employment income to personal disposable income and (b) the corporate retentions-personal disposable

income ratio. Since both (a) and (b) have increased during the last decade, 'quasi' retentions have increased too. The exact magnitude, however, is subject to great margins of error.

2: Discretionary Savings

Personal Savings: in the national income accounts they are defined to include both 'pure' personal savings plus savings through private pension funds, plus 'quasi' retentions. This treatment has led to inflated figures of these series. As a ratio of personal disposable income the thus defined personal savings have increased from an average of 8.25% in the 1963-70 period to 12.06% in the 1971-1981 period. When account is taken of their contractual and 'quasi' retentions elements, these figures are reduced dramatically (see e.g. Cuthberston, 1982). Our figures show a low of about 2% in the 1963-70 period and 3.3% in the 1971-1981 period.^{6/} Pure personal savings of such an order may be due to 'disequilibrium' phenomena such as the 'growth of incomes' (Marglin, 1975) and/or 'transaction needs' (Pitelis, 1982). The obtained increase can be attributed to changes in these phenomena and/or inflation effects such as in Deaton (1977).^{7/} In any case, the crucial implication of the above discussion is that pure personal savings are in fact least significant quantitatively, which explains our preoccupation with 'contractual' savings, in the rest of this paper.

To summarize, the picture which emerges from the discussion so far, is one of all types of savings being on the increase during the last decade. In the aggregate, defining private savings (S^{prv}) to be the sum of both contractual and discretionary savings, and private income (Y^{prv})

8/

to be the sum of personal disposable income plus corporate retentions, we have the following situation. An average ratio of 18.5% for $S^{\text{prv}}/Y^{\text{prv}}$ in the 1963-1970 period, which increased to 24% in 1971-1981 period. Obviously the figures involved (5.5% of Y^{prv}) are significant enough to raise concerns over the effects in the aggregate economy of such drops on effective demand.

b: SUBSTITUTABILITY

The observed increase in the private savings-income ratio may be due to a shift of the optimal saving propensities of the consumers. Alternatively it may be due to increases in the 'contractual' elements of their savings, along with their inability and/or unwillingness to compensate for these increases by reducing their discretionary savings; i.e. the position advanced in this paper.

For policy, it is not inconsequential which one is the case. Moreover, if it is the latter, we need examine whether (and why) compensatory movements are indeed following increases in 'contractual' savings, or not.

Three different views have been advanced in the existing literature. The perfect substitutability hypothesis derives from the analysis of Ando and Modigliani (1963) and posits that intertemporal utility maximizing individuals will realize that the 'contractual' elements of their savings increase their savings-income ratio, above its desired level, and will try to reach their optimal positions by exactly compensating for these increases; by reducing their discretionary savings by an equal amount.

The imperfect substitutability hypothesis hinges on two different reasonings. For Harrod (1948) increases in corporate retentions might lead to a private savings-income ratio, higher than the one which households would prefer in the absence of retentions. These are named "excessive savings". For Marris (1964) managers would exhibit a preference for internal finance, therefore retentions, higher than the one of small-shareholders. Possessing actual control, managers will be successful in achieving this aim. Small shareholders have themselves some preference for retentions. They will try, therefore, to compensate only for the difference of their desired to observed corporate savings, which will result in imperfect substitutability.

The independence, complementarity or add-on hypothesis for corporate retentions was originally advanced by Marglin (1975). The reasoning underlying the location of control in big corporations and consequently on saving decisions is similar to Marris. ^{10/} Complementarity however, obtains from the additional position of zero 'discretionary' savings out of all households. In this view, all savings are done in the firms by the hierarchical control of managers. Households, capitalists and workers alike, consume everything they can lay their hands on. This behaviour is due to the consuming nature of our society. For zero discretionary savings and assuming imperfect capital markets-constraints in borrowing, households are hardly capable to achieve any compensation at all, in view of increasing retentions.

The previous discussion was confined to corporate retentions. Obviously for both the perfect substitutability hypothesis and Marglin's version of the add-on hypothesis similar considerations apply for

pension funds too. Regarding the imperfect substitutability hypothesis neither Marris nor Harrod have extended their reasoning to cover pension funds; the hypothesis however remains as a feasible possibility.

From the previous discussion, we may see that both Marris's version of the imperfect substitutability hypothesis and Marglin's independence hypothesis, - with regard to corporate retentions - rely heavily on the presumed existence of a group of people, the managers, distinct from both capitalists and workers, who have control of the firms as a result of a, by now famous, successful "managerial revolution". That is, they both obtain under very specific-limited circumstances regarding the focus of control in today's large corporations. If owners-capitalists are still controlling big corporations are we back to a neoclassical world? Is moreover accumulation of capital bound to come to a virtual standstill, as Marglin would suggest?

i: The theory of the firm:

Managerialists have never examined the question why owners have ceded control to managers. The 'managerial revolution' instead apparently prevailed with no war or resistance on the part of owners. This 'paradoxical' conclusion has been reached by an analysis of minimum shareholding percentages held by individuals, institutions or cohesive groups. Increases in dilution of ownership, however, require an increasingly lower proportion of voting shares for effective control to be exercised, (e.g. see Cubbin and Leech, 1983). Moreover, it is, by no means, clear what the meaning of a fixed shareholding percentage is. Pitelis and Sugden (1983) for example, have argued that the use of an evolutionary-historical approach to the theory of the firm which commences from an owner controlled -19th Century - firm and traces its development through time will imply that the observed percentage holding

of shares actually observed will be the limit beyond which a subset of owners would lose control. Thus the managerialists' direction of causality from shareholding to control is in fact inversed, provided that a weak non satiation axiom is taken to hold on the part of the original owners-
 /11
 controllers.

Notwithstanding such fundamental differences, even the use of the fixed percentages measure on the part of managerialists is inadequate to answer such important issues as the one of control. Their approach has overlooked among its other shortcomings, kinship networks, interlocking directorates, common class origin, "secrecy based" methods of control, practices such as "defensive buying" etc.

Recently research has been undertaken along these lines, in most advanced capitalist countries. Important representatives of this school include Francis (1980)^{/12} for the UK and Zeitlin (1974) for the US. Scott (1979) provides with a useful summary of the up to then existing literature. What emerges from the latter is that a subset of owners - capitalists - are, by and large, still controlling the corporations. Managers are either capitalists themselves, or willing and/or obliged to act on capitalists' behalf. As long as they satisfy the latter's preferences, managers are left to pursue their 'own' policies. If, however, they prove unsuccessful, capitalists exercise their latent power, and managers are substituted by a potentially more efficient team. Separation of ownership from control, has only taken place between high level owners - capitalists - on the one hand and the vast majority of small shareholders - "owners" - on the other. According to the previous arguments therefore, a 'managerial revolution' has neither taken place nor is it expected to.

ii. Asymmetrical Choice and the Add-on:

The new evidence on the theory of the firm cast doubts on the Marris version of the imperfect substitutability hypothesis and Marglin's add-on hypothesis. Below we provide a 'generalized version' of the add-on hypothesis based on a theory of 'asymmetrical choice' advanced in Pitelis (1982, 1983a). In what follows the 'controlling group' - capitalists - comprises owners and high-level managers, the latter being owners themselves and/or owners' functionaries. The members of the 'controlling group' possess control of firms and consequently have the ability to choose their preferred consumption-savings pattern, subject to a 'minimum' savings level sufficient to finance the minimum accumulation of capital required for the maintenance of the capitalist mode of production. Workers and small shareholders possess no control of firms but only via their ability to influence the 'controlling group's' decisions. Their choices on their consumption-saving patterns is subject to a 'minimum' level of consumption constraint, required for 'subsistence', and to constraints imposed to them by decisions of the 'controlling group' regarding retentions. Under these circumstances the following behaviour will be observed by the 'controlling group', small shareholders and wage earners.

In every specific period, say $t-1$, the 'controlling group' on the aggregate will possess control over gross profits in the economy, that is distributed plus undistributed profits, plus rent plus interest. In the same period, they make a decision regarding the part of this income which they will save-consume. Moreover the second step of this process, (not necessarily separated in time though), is the choice of the form of their savings. When this choice is completed, in period t we observe a part of their savings in the form of personal savings and the rest in the form of

corporate retentions. What we observe therefore, ex post, is the complete decision of the 'controlling group' with regard to its consumption-saving pattern. The immediate implication is that, at least for this group, substitutability of retentions by personal savings is not to be expected. If this group was willing to have a greater part of its savings in the form of personal savings, it would have simply decided, ex ante, to put them in this form. The essence of the above analysis is that for the 'controlling group' the add-on hypothesis is true by definition.

The analysis of small shareholder's behaviour may be done in lines similar to Marris'. The crucial difference being that now the 'controlling group' rather than the managers will impose their will on small shareholders' preferences. In this case imperfect substitutability will take place, unless it can be shown that this group has zero personal savings i.e. keep all their savings in the form of retentions - pension funds. In the latter case the add-on will take place for this group too. For wage earners the add-on will apply in the case where their personal savings tend to zero too and they face constraints in borrowing. If wage earners save in the form of pension funds the question becomes one of potential substitutability between retentions and pension funds. Since the latter are not subject to wage earners' discretion, however, no such substitutability is to be expected. The analysis of 'quasi-retentions' can be conducted in lines similar to the case of retentions.

The existing empirical evidence suggests that pure personal savings do indeed tend to be very low, perhaps too low for any substitutability to be possible. (Klein, et al 1956, Marglin, 1975, Pearce and Thomas, 1981. Pitelis, 1982). In this case it would appear that, on balance, the add-on hypothesis is the most likely candidate; the obvious consequence being

that increases in contractual savings will increase the private savings-income ratio, and consequently under our assumptions reduce aggregate effective demand.

iii. Empirics

Empirical testing of these hypotheses imply estimating consumption, personal savings, or private savings functions with personal disposable income and corporate retentions and/or pensions as separate explanatory variables; rival hypotheses will imply different coefficients for the respective variables which may be tested on estimation.

Testing the effects of corporate retentions on personal savings (pension funds included), implies estimating equations of the general form:

$$S_t^{\text{prv}} = s(Y_t^{\text{prs}}, S_t^{\text{c}}, Z_t) \quad (1)$$

where S_t^{prv} = private savings, that is the sum of discretionary plus contractual savings: Y_t^{prs} = personal disposable income, and Z_t is a vector of relevant explanatory variables.

Similarly the effects of pensions to both corporate retentions and personal savings may be tested by estimating;

$$S_t^{\text{prv}} = s(Y_t^{\text{prs}}, S_t^{\text{pns}}, Z_t) \quad (2)$$

where S_t^{pns} represents savings through pension funds. Obviously if Z_t in (1) includes S_t^{pns} , the equation

$$S_t^{\text{prv}} = s(Y_t^{\text{prs}}, S_t^{\text{c}}, S_t^{\text{pns}}, Z_t') \quad (3)$$

can be a direct test of both the effects of S_t^{c} and S_t^{pns} on private savings. In equation 3, the three rival hypotheses will imply coefficients of the S_t^{c} and S_t^{pns} variables;

- (i) insignificantly different from zero (perfect substitutability)
- (ii) between zero and one (imperfect substitutability)
- (iii) insignificantly different from one (independence-add-on)

Consumption or personal savings functions can be estimated likewise, the difference being different implications for the three rival hypotheses.

The available empirical work on the issue appears to be paradoxically eclectic. There is a big and still growing literature on the effects of pension funds on other personal savings; surprisingly few studies on the effects of retentions on other savings (personal plus pension funds); and not a single study on the effects of pensions on corporate retentions.

Evaluating all the existing literature is beyond the scope of this paper. Rose (1983) summarizes seven of the previous studies of the first category. The picture emerging is either imperfect substitutability or add-on type of behaviour. For the UK the only, up to now, cross section study, conclusively supports the add-on hypothesis (Green, 1981).

From a total of six studies available in the second category one is inconclusive while the other five

support either the imperfect substitutability or the add-on hypothesis. For this category, we have undertaken such a test by use of three different models and a wide range of specifications to ensure comprehensiveness (Pitelis, 1983b). For the 1951-1981 period (annual data) for the U.K., outright support was given to the add-on hypothesis. Examination of the effects of pension funds on retentions, however, awaits further research.

On the basis of the existing evidence we may conclude that increases in contractual savings have played a significant role in the 5.5% increase in the private savings ratio in the U.K. in the last decade.

iv: The Monopoly Capitalism Savings Function:

Much debate has surrounded the form of the savings function throughout the years. In its classical form the savings function is one in which savings are only made out of profits. Workers are assumed not to save. The advancement of capitalism and the realization of the fact that workers do save a part of their income has led to the 'neo-Keynesian' savings function where both groups save but where capitalists (property income owners) save more than workers (wage income earners). The growth of firms and the significance of their retention policies has led to a further modification of the savings function. In this form

$$s_t^{Prv} = s \left[W_t + (1-r)P_t \right] + S_t^C \quad (\text{Kregel, 1971}) \quad (4)$$

where W denotes wages, P profits and r is the retention ratio of firms. In this form the idea is firstly introduced that savings are

done through households on the one hand and firms on the other. Carrying this idea a bit further Marglin (1975) imposes $s = 0$ in (4) which results in the idea that savings are only done through corporations, while households do not save.

Our analysis of i) pensions, and

ii) the theory of the firm,

suggests a further modification of the savings function. The Monopoly Capitalism Savings Function will be of the general form,

$$S_t^{prv} = s_w(1-p)(W_t) + S_t^{pns} + s_c(1-\tau)P_t + S_t^c \quad (5)$$

where p denotes the part of wage income contributed to the funds and not paid back to workers in the form of benefits, i.e. not included in ^{13/} W_t . In this form wage earners save both out of their disposable income and in the form of contractual savings through pension funds; and the 'controlling group' saves both in the form of personal savings and in the form of retained earnings. On the further assumption that $s_w = s_c = 0$ in equation 5, it reduces to

$$S_t^{prv} = S_t^{pns} + S_t^c \quad (6)$$

The implication of the assumption $s_w = s_c = 0$ in equation 5, is that disregarding contractual savings pure personal savings will tend to zero. Under monopoly capitalism savings will only be of a contractual nature. Propensities to consume out of both disposable wage income and disposable property income will be equal and both will tend to one.

True propensities, therefore, will only be obtained by estimating equation 5.

Equation 5 captures the idea that the 'controlling group' controls both its personal disposable income and corporate retentions, and makes savings decisions on the basis of this variable, i.e. aggregate profits. It moreover captures the idea that wage earners do save via their participation in private pension funds. Since S_t^C includes 'quasi' S_t^C too, equation 5 is general in that it contains all savings done by the private sector. In its form 6 it captures Marglin's idea of zero personal savings out of all households. This, however under our totally different analysis. Evidence for this idea was offered by Marglin (1975) for the U.S. and Pearce and Thomas (1981) for the U.K.

Our evidence (Pitelis, 1982) showed that disregarding retentions, propensities to consume out of wage and property income were very close to each other and tended to one in the long run. ^{14/} Estimation of the Monopoly Capitalism Saving Function (Pitelis, 1983c) has shown significantly different propensities to save out of the aggregate wage and ^{15/} property income variables. The inclusion of S_t^C in the property income variable reestablishes the empirical validity of the 'differential savings' function, and solves a lot of inconsistencies associated with previous empirical work on the issue, which have disregarded it (e.g. Klein and Goldberger, 1955). It is close in spirit to Kregel's reformulation of Kaldor's (1960) version of the "differential savings" function, but relies on different propensities out of groups of people who control or do not control firms (rather than households on the one hand and firms on the other) and explicitly recognises the institutional savings of wage earners, through pension funds.

For our purposes the significance of the previous analysis is

that it makes clear who makes the savings under monopoly capitalism, and therefore it shows where our attention should be turned if policy measures are to be taken. Further probing on the idea of control might lead to a "control" version of the Monopoly Capitalism Saving Function, according to which all savings are done by a "controlling group" which now controls pension funds too. (Minns, 1980); that is

$$S_t^{prv} = s_c (S_t^{pns} + S_t^c) \quad (6')$$

This would reestablish the classical savings function, but under a 'control' rather than 'ownership' type of analysis.

II. UNDERCONSUMPTION

The previous analysis is important in explaining the reasons and source of the observed increase in the private savings ratio. However, as long as it is ex-post known, it is not necessary for the building of a (version of a) theory of underconsumption. What suffices is the fact itself, that such an increase has manifested itself during recent years. 16/

Underconsumption has a very long history. Early contributions to such a theory include thinkers such as Malthus, Sismondi and Hobson. Bleaney (1976) gives a comprehensive survey. A long controversy emerged with regard to whether Marx himself was (would be) an underconsumptionist or not (Sweezy, 1942, Bleaney, 1976), an issue we do not intend to examine though. More recently the theory has experienced a revival in the work of Sweezy (1942). Building on this work and further contributions by Steindl (1952), Baran and Sweezy (1966) have advanced in recent years,

what is unquestionably one of the most elaborate up-to-date versions of underconsumptionism.

The essence of their theory can, briefly, be given as follows. As capitalism advances the 'controlling group' will attempt to cut marginal costs, that is wages will lag behind increases in productivity due to the inability of unions to overcome the power of monopolies. Given the downwards stickiness of prices (the 'kinked' demand curve), a decline in marginal cost will increase profit margins; what Baran and Sweezy call the 'surplus'. The latter is both actual and potential. Actual surplus includes reported profits of firms plus rent plus interest, plus all wasteful expenditure undertaken by firms, such as advertising and other selling expenses. Potential surplus is what could be produced under full capacity - full employment conditions. Monopolistic pricing and falling marginal costs will result in the 'rising tendency of the surplus'. However increasing profit margins do not warrant their realization. The surplus can be consumed, invested or wasted. In face of increasing profits, lags of adjustment of dividends (to their otherwise constant ratio), will result in a higher proportion of profits being retained, and a lower being distributed. Thus, consumption will tend to be an increasingly lower proportion of the surplus.

Investment, too, will tend to be an increasingly lower proportion of the surplus. Risk averse monopolists will tend to suppress inventions, since it pays them to keep old plants as long as they are still profitable. The conclusion therefore follows from this independence between innovations and investment-suppression of inventions type of reasoning. The only way for the surplus to be absorbed is wasteful expenditure by the firms

(advertising, selling expenses) and the government (particularly armaments expenditure). Both have increased dramatically in the last few decades. In the absence of such counteracting forces, capitalism would have been led to a profound depression.

Baran and Sweezy's analysis is an important contribution to the understanding of the workings of our economy. However, it lacks generality in some respects and can be questioned in a lot of others too. Regarding generality, their treatment of retentions is unsatisfactory. The aggregate retention-income ratio can increase even in the absence of lags of adjustment, as shareholding is further diluted. Saving through pensions are not considered. Such savings provide another source of increase in the private savings-income ratio. The argument regarding innovations-investment can be questioned too.^{17/}

Even worse, the very generation of the 'surplus' in Baran and Sweezy's theory can be questioned. As Cowling (1982a) has shown, in terms of the degree of monopoly the reduction in marginal costs in Baran and Sweezy's theory should be accompanied by accommodating shifts in the determinants of the degree of monopoly, that is, a fall in the elasticity of demand, and/or a rise in the degree of collusion, and/or a rise in the level of concentration; for the rising tendency of the surplus to be true. Such changes might have been characteristic of the Great Depression, but it is not yet clear whether they are to be expected under conditions of high rates of cost and price inflation, characterizing modern conditions.

With no conclusive answer to this question the rising tendency of the surplus remains a possibility to be demonstrated; Baran and Sweezy's evidence on this regard, moreover, appears to be very sensitive to their rather ad-hoc assumptions (see e.g. Bleaney, 1976, for discussion).

We try to show below that a (version of a) theory of underconsumption can be developed with the building blocks of our previous analysis, without the need for a rising tendency of the surplus. For this we make use of the ideas of the profits curve (PC) and the realization curve (RC), introduced by Rowthorn (1981).

The profits curve is shown in Figure 1. It has a positive slope of \bar{M}/k below full capacity, where k is the capital-output ratio, and it is vertical at the full capacity level. It shows the amount of net profits created at any level of capacity utilization, by using existing methods of production and with real wages at their current level. Under our assumptions only the sloping part of the curve is of consequence here. The profits curve defines a relationship between π and u , where π is the profit rate (profits-fixed capital stock ratio), and u is an index of capacity utilization (actual to potential output ratio). The realization curve on the other hand, shows the net rate of profits exactly realized at any given level of u , without either excess demand or supply. It establishes a linear relationship between π and u . Its slope will be positive if u has a positive impact on investment^{18/} and the aggregate propensity to save (only out of profits in Rowthorn) is greater than the propensity to invest.^{19/} This case is shown in Figure 2. The economy will always be on the profits curve, but for equilibrium to be

attained, it must also lie on the realization curve. Equilibrium will be stable if displacements along the profits curve generate forces which pull the economy back to its original position. For this to happen savings must be more sensitive than investment to such displacements. A high propensity to save gives rise to a realization curve

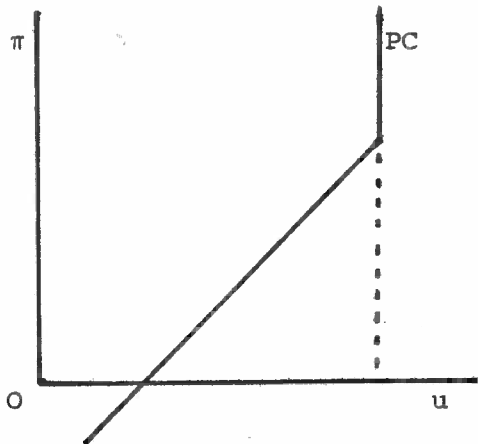


FIGURE 1
The Profits Curve

(adapted from Rowthorn, 1981)

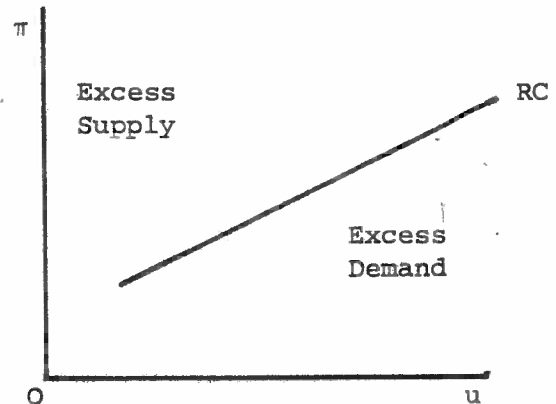


FIGURE 2
The Realization Curve

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with positive slope but less steep than the profits curve. Under such circumstances the underconsumptionist version of Baran and Sweezy can be shown in Figure 3. Figure 4 shows our version, which does not require a rising surplus (approximated by the profits curve). Indeed the profits curve could be falling (PC2) and still an underconsumptionist tendency exist, as long as the fall in the realization curve more than outweighs the fall in the profits curve. That is, starting from the original equilibrium level *a*, a fall in the realization curve will lead to *b*, that is a lower level of π and u . The fall of the profits

curve from PC1 to PC2 will lead to point c, a higher π and u than in b but still lower than the original equilibrium a. This 'generalized' version therefore meets the critique regarding the generation of the surplus.

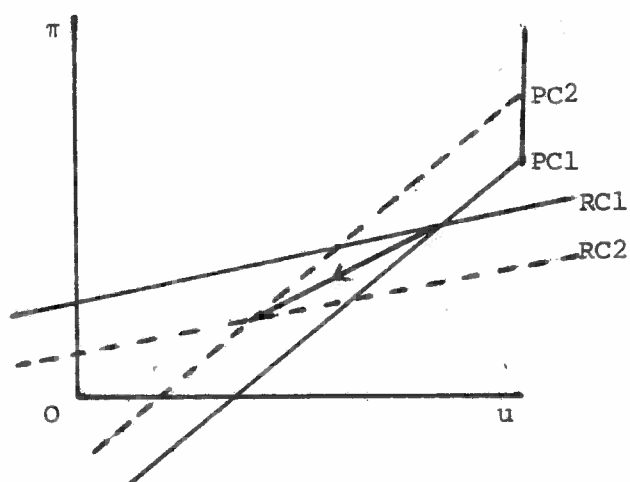


FIGURE 3
Underconsumptionist tendency
in Baran and Sweezy.
(Adapted from Rowthorn, 1981).

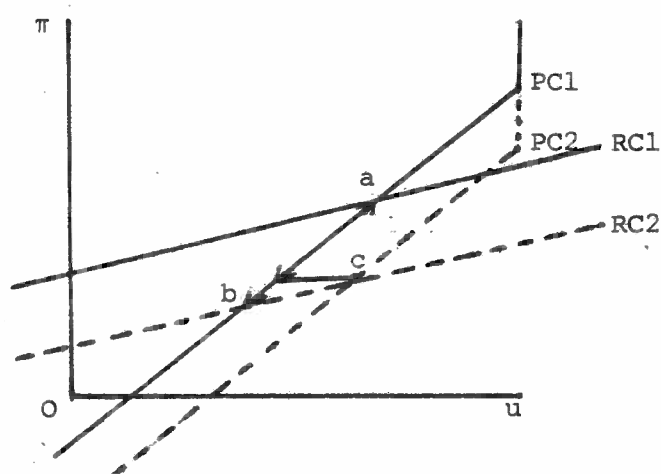


FIGURE 4
Underconsumptionist tendency due
to 'excessive savings' with
constant or declining 'surplus'.

A rising 'surplus' can render the situation worse but it is not essential.
The argument on consumption does not require rising profit margins.

Policy measures should be directed towards a reduction of these 'contractual' savings. Measures, such as the increase in the contribution of workers to pension funds, proposed recently by the conservative government in the UK would be expected to have a deflationary impact in the economy. The observed, dramatic fall in the private savings-private income ratio in the last couple of years (1980-1981), would, according to this analysis, be a sign of an incoming upturn. This, however presupposes the absence of offsetting factors. Regarding the potential role of the latter, if the existence of a deflationary tendency is to

be explained in terms of the ex-post observation of the increase in the private savings-income ratio, then the question of the role of offsetting factors becomes one of why they did not succeed in preventing it. This may be explained in terms of the existence of contradictory effects of the potentially offsetting factors themselves. Alternatively it would be argued that, in the absence of offsetting factors the underconsumptionist tendency would be even larger.

Factors which are usually considered to have a countervailing impact on realization problems include advertising, technological change and the state expenditures. None of these factors though acts in a mono-causal, straightforward manner an observation, which, assuming the correctness of our analysis, is highlighted by their ex-post observed 'failure'. A detailed analysis of this issue, however, would lead us too far for the purposes of this paper; Rowthorn (1981) and Cowling (1982a) have more detailed analyses.

To summarise the analysis so far, two are the crucial requirements upon which it hinges; firstly an increase in the contractual savings made in the economy which results in a higher S_t^{PRV} / Y_t^{PRV} ratio, i.e. a lower C_t / Y_t^{PRV} ratio. Secondly, a link between consumption and investment; either direct, or indirect throughout a lower level of capacity utilization and the profit rate.

It appears that the first condition was satisfied in the recent UK history, as it was shown in the first part of this paper. Coming to the second, most neo-Marxist versions of the Investment Function, include the profit rate and/or capacity utilization as explanatory variables (e.g. Sherman, 1979, Rowthorn, 1981, Cowling, 1982a). The direct link idea, however, has been criticized for its naiveté (Sherman

1979).

We do not try to resolve this problem here, suffice it to note that direct or indirect, the effects of consumption on investment are equally real; and in any case the directness or lack thereof of this effect does not bear adversely on our analysis.

It should be clear that the previous analysis does not intend to invalidate Baran and Sweezy's analysis; rather it can be seen as complementary to it in the sense that it identifies a different route by which an underconsumptionist tendency would operate. Moreover both versions could operate simultaneously if, say, profit margins increase in depression i.e. the 'surplus' increases, as a result of increases in the degree of collusion between firms; (see e.g. Cowling, 1982b). The real difference instead is to be found in the scope of the two versions, an issue to which we now turn.

Indeed it is in the advantages of the previous analysis that under the posited assumptions, it has definitely been in operation for the time and place under examination; but we do not require from it anything more than that. That is neither we intend to present this analysis as a theory of crisis nor as a causal mechanism which leads to a crisis. It could be, that realization failures of the sort described above are simply the result of the crisis or just one of the mechanisms and/or the results by which a crisis appears and/or manifests itself; along with other mechanisms such as the Rising Organic Composition of Capital and/or the Rising Militancy of Labour (see e.g. Weisskopf, 1973, Botty and Crotty, 1975). Alternatively, realization problems

could be linked to other problems such as falling profit rates as described e.g. in Wolff (1978). Unless all these features can be taken into account no pretence for the theory of crisis may (should) be made. In here we hope to have contributed towards the identification of one of the missing links ^{22/} and even this under very specific-limited assumptions; although their plausibility seems to be accepted by a wide spectrum of academics.

Other limitations of the analysis are i) the fact that certain issues such as class struggle are assumed as given or alternatively that their effect is assumed to have been exhausted in the observed data, ^{23/} and ii) that certain other issues, such as long-run growth trends, the role of the state and the open economy are not explicitly considered. The last mentioned, however, could offer in our case an explanation for the observed behaviour of capitalists. That is to say, the idea that increases in contractual savings result from the desire on their part of to exploit them for profitable investment abroad, ^{24/} which results in realization failures in the home economy.

Although the above qualifications further limit the scope of our analysis they do not however question its validity in principle, and/or the possibility of it operating elsewhere under similar conditions. Finally, we do not examine the similarities and differences of our approach to alternative underconsumption theories mostly because we do not regard it as an alternative theory but rather as a specific alternative version of the most elaborate versions of the existing ones. The interesting reader is addressed to comprehensive surveys such as in Bleaney (1976) Wright (1977) and Shaikh (1978).

Notes:

- 1/ Or constant, if it is assumed that increases in effective demand have no effects on the degree of monopoly; i.e. that the demand curve is isoelastic.
- 2/ By that we imply that we are not concerned with the reasons which have originally motivated individuals either to participate in pension funds schemes or to acquire shares. Rather we are concerned with the effects that the location of control on these funds has upon them, once their original decision to participate-purchase has been realized.
- 3/ This presupposes that increased savings do not result in lower interest rates, which in turn increases investment or alternatively that if such a mechanism operates, it has a less strong effect than the one described in the paper. In practice it appears that the first is the case since both in theory and the empirical work available it is not yet clear whether savings are negatively correlated to the interest rate, (see for a survey Feldstein and Fane 1973), let alone whether the latter is negatively correlated to investment.
- 4/ Measured after tax and after profits due abroad have been subtracted. To the extent foreign shareholders held a proportion of shares, this is assumed to be constant between the two periods under examination.
- 5/ We use Zeitlin's (1974) definition in here to describe thinkers such as P. Sweezy, J. Robinson, W. Mills, J.P. Sartre etc.
- 6/ These figures were obtained by subtracting the pensions funds ratio from the official definition of the personal savings ratio and then by subtracting the "quasi" retentions ratio, obtained by following the procedure described under (ii) above, from the resulting ratio. When pension funds are excluded from personal disposable income too, the new ratios obtained are slightly higher, but still low enough, we think, to justify our focus on "contractual" savings.
- 7/ Another reason could be a potentially high and undesired on the part of capitalists ratio of dividends to property income; a case examined in Pitelis (1982).
- 8/ Private income (Y^{PRV}) is defined as the sum of personal income (Y^{PRS}) plus corporate income (Y^C). Since, however, Y^C equals to dividends plus retentions, and the former are also included in the official definition of the personal disposable income, accounting for the double counting results in the definition adopted in the text.
- 9/ However, unless zero propensity to save out of personal disposable income is assumed, this hypothesis does not obtain from the formal specifications of the time-series version of the Life Cycle Hypothesis. See Lambrinides (1974) and Pitelis (1983b).
- 10/ This formal similarity which is extensively analyzed in Pitelis (1983a), should not obscure the fact of the immense difference between the two thinkers on other respects.

- 11/ That is the idea that a 'rational' capitalist faced with two non mutually exclusive alternatives A and B, will choose both unless choosing one and not the other yields higher utility for him, than choosing both A and B.
- 12/ This is the only study to have actually moved towards alternative methods of control identification and its findings should be treated very seriously. It conclusively shows that in the UK 15 out of 17 firms analyzed are subject to the control of a subset of their owners.
- 13/ Obviously there are some problems associated with equation 5 in that capitalists too, contribute to and receive benefits from pensions funds, and similarly workers may have part of their income in the form of retentions. Although we acknowledge these problems we can see no gain in actually giving them a formal account in equation 5. Similar problems are to be found in all previous saving functions (see Pitelis, 1982, for discussion). Put in the form of equation 4, equation 5 would give:
- $$s_t^{PRV} = s \left[(1-p)W_t + (1-r)P_t \right] + s_t^{pns} + s_t^c \quad (5')$$
- and the novel feature would be the explicit appearance of s_t^{pns} . The reason we have chosen form 5, and the other differences of our equation 5 from equation 4 are discussed in the text.
- 14/ Unfortunately a pension fund series was not available, so that to be subtracted from both personal disposable income and wage income respectively. Thus the estimates refer to property income excluding retentions on the one hand and wage income including pension funds on the other.
- 15/ That is wage income including pension funds on the one hand and property income including corporate retentions on the other. This finding was robust in all specification-models used including the Life-Cycle Hypothesis.
- 16/ This does not subtract, though, from the ex-ante validity of the following ideas.
- 17/ Steindl (1952) was the original proponent of this argument which Kalecki (1971) for example, never shared. More recently even Steindl (1979) has abandoned it.
- 18/ Which, far from being an assumption, appears to be supported by most existing empirical evidence. (See Cowling 1982a for a survey).
- 19/ For the UK Pearce and Thomas (1981) report that "between 1968 and 1978 ... fixed capital formation for nearly every year was much less than undistributed profits". Obviously this is even more strengthened if pension funds are also considered, which supports this assumption at least for the UK and the period under examination.

- 20/ Rowthorn (1981) analyzes the formal conditions under which this will be true.
- 21/ Advertising for example may increase consumption via its effects on propensities to consume, but reduce it, via its effects on the distribution of income, i.e. via a redistribution to profits. Similarly technological change may increase investment but also reduce consumption by redistributing income from wages to profits. Obviously there are myriads of other routes by which each of these factors can act, and it would be futile to try and analyze them here.
- 22/ That is the idea of 'contractual' savings being in the increase as a result of, say, capitalists desire to invest them abroad, and not savings in general being higher than 'required' as a result, for example, of an unequal distribution of income. The latter is an immanent feature of capitalist economies while a similar argument for underconsumption has yet to be proven.
- 23/ This is the idea that workers pressure, for example, for higher wages is reflected in the observed level of consumption, which we measure ex-post.
- 24/ Say because foreign conditions for workers exploitation are more favourable. This idea inverses the usual direction of causality which goes from underconsumption to imperialism. This, however, does not preclude the possibility of both happening synchronously, i.e. a 'feedback' relationship.

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