political economy Studies in the Surplus Approach

contents

Distribution and Growth

Josef Steindl

1. No doubt distribution is a subject which can not be treated fully within the narrow framework of "pure" economic theory. It depends too much on institutions, politics and history. Yet there is a macro-economic relation which should not be neglected in any treatment of the subject: the influence of growth on distribution. This appears already in Marx's "law of accumulation". It is seen in the model of von Neumann where growth rate and profit rate are equal. It is suggested by Kalecki's profit equation (profits are equal to investment plus capitalists' consumption) from which both Joan Robinson's golden age rule and Kaldor's distribution paper are derived.

The idea is basically this: for a closed economy without government, if saving comes exclusively from profits and, in the simplest case, all profit is saved, and if income stands in a given relation to capital, then the share of profit λ in gross income is determined by the growth rate of capital, given the replacements R of plant and equipment retired:

$$\frac{\Delta K}{K} = \lambda \frac{Y}{K} - \frac{R}{K} \tag{1}$$

where λ is the share of gross profits in gross income, R are the replacements of plant and equipment scrapped, K is the gross capital stock and ΔK its change per year (gross investment minus replacements). It is assumed at this stage of the argument that profits λY are proportionate to income gross of depreciation Y, in other words that there are no supplementary costs. In order to isolate the technical from the demand element we shall split the capital-to-output ratio into two factors, the capital-to-capacity ratio v and the utilisation of capacity u. We define:

$$Y = u \hat{Y}, \tag{1a}$$

$$K = v \hat{Y} \tag{1b}$$

53

where $\hat{Y}$ is output capacity. Instead of [1] we have then in view of:

$$\frac{Y}{K} = \frac{Y\,\hat{Y}}{\hat{Y}\,K} = \frac{u}{v} \qquad\qquad [2]$$

$$\frac{\Delta K}{K} = \lambda\,\frac{u}{v} - \frac{R}{K} \qquad 0 < u \leq 1 \qquad [3]$$

An explanation of the concept of capital is required here. Capital stock is an ambiguous concept: It can mean gross capital which is a sum of gross investments, or net capital which is what remains of gross capital after the depreciation over its life-time has been deducted. In an economy with a constant growth rate the ratio of net to gross capital will be constant and they will both grow at the same rate. The increase in capital ΔK will be different in the two cases: In the case of net capital it will be gross investment minus depreciation, in the case of gross capital it will be gross investment minus actual replacements of plant and equipment scrapped. In a growing economy the replacements are always smaller than the depreciation; this makes it possible for the two measures of capital to grow at the same rate even though the gross capital is larger by the amounts already written off.

In the context of this paper K and ΔK are always understood to refer to gross capital. This concept can be regarded as more meaningful because it is closely related to capacity. Net capital is basically an accounting concept. This is not to deny that it may have, and indeed has, practical relevance in so far as business behaviour is influenced by such conventional concepts. The gross capital concept has been preferred here because it is the natural basis for the technically determined concept of a capital-to-capacity ratio. In the following we shall try to dispense as far as possible with the capital stock and base the argument on the capacity concept.

We start from:

$$\Delta K = \lambda\,Y - R \qquad\qquad [4]$$

and introduce the definition:

$$\Delta K = v'\,\Delta\,\hat{Y} \qquad\qquad [5]$$

where v' is the incremental capital-to-capacity ratio. We obtain then from [4], using the definitions [1a] and [5]:

$$v'\,\Delta\,\hat{Y} = \lambda\,u\,\hat{Y} - R,$$

$$\frac{\Delta\,\hat{Y}}{\hat{Y}} = \lambda\,\frac{u}{v'} - \frac{r}{v'}, \qquad\qquad \frac{R}{\hat{Y}} = r. \qquad [6]$$

54

In this formulation the growth of capital is replaced by the growth of output capacity, a concept which perhaps is a shade less complicated, although it must be admitted that it is still very abstract: We have no very satisfactory statistics of capacity, and for the long term which is the primary object of this analysis it is a problematic concept in view of the structural changes (although hardly more so, in principle, than the concept of industrial output). The incremental capital-to-capacity ratio v' is certainly more amenable to empirical measurement than the ratio v used in [3].

What is the interpretation of [6]? Let us write it in the form:

$$\frac{\Delta \hat{Y}}{\hat{Y}} = \lambda \, \frac{Y}{v' \hat{Y}} - \frac{r}{v'}. \qquad [6a]$$

This means that the total gross profit $\lambda\, Y$ is expressed as a fraction of a hypothetical capital stock which is obtained by applying the incremental capital to capacity ratio to the actual total capacity. The implication of this is that the profit is imagined to be distributed in proportion to output capacity over the old and the new equipment[1]. (The motivation for this new concept is the endeavour to avoid using the capital stock which is especially difficult to measure statistically). It is thus a somewhat artificial profit rate which in our interpretation is equal to the growth rate of capacity.

It hardly needs stressing that the starting point of our analysis is only a special form of the investment-saving equation, to which all the transformations are still related. The interpretation of [6] is as follows: The profit rate can adjust to the growth rate in one of two ways: By a change in λ or in u. The former represents the antagonistic change in distribution, a change in the shares in income. A change in λ corresponds roughly to a change in surplus value produced in Marxian terms, while the change in u represents a change in surplus value realised.

In contrast to neo-classical theory it is assumed in the above formulations that v' is independent of distribution. The rate of profit might influence the choice of technique but it is uncertain in which direction (double switch theorem). An indirect influence on v' via the rate of interest is possible but the link is very tenuous. Interest is determined by monetary policy and its relation to profit (or more likely, to growth) rests only on a customary policy of braking the upswing by tight money policy.

---

[1] In my paper in the *Cambridge Journal,* March 1979, I related profits directly to output capacity and not to capital, thus employing a concept of the profit rate which is quite similar to the above one.

Moreover, interest will influence all investment and not necessarily cause a "deepening" of capital[2].

More important is the observation that the choice among available techniques is in most cases very restricted[3]. More often than not you have hardly any choice and as far as you do have one other criteria are usually more important. If a long historical tradition has shaped the profit rates in different countries differently, however, this may influence the level of techniques.

To turn to a different question: The equations [3] and [6] have to be read from left to right — the growth rate acts on the profit rate. This does not exclude that there is also a feed-back effect, an action of profit margins and utilisation on the growth rate. This is evident for the trade cycle, but it may be relevant also for long-term development.

The present paper, however, does not try to analyse the whole dynamic process[4] but confines itself to the action of growth on the profit rate and distribution. The trend of the growth rate may be regarded as given exogenously for the purposes of this analysis.

2. The algebraic formulation — equation [6] — serves only to define the basic notions; for this reason it is exceedingly simple. Still remaining on a high level of abstraction we shall in the following introduce some additional elements.

First, we shall take into account that owing to the existence of fixed costs, profits increase more than proportionately to income:

$$\Delta K = \lambda (Y - Y_0) - R, \qquad (Y_0 > 0) \qquad [4a]$$

Y_0 is the income at which profits disappear, the break-even point. We may express this as a percentage of capacity output and write for it:

$$Y_0 = b \hat{Y}$$

The above equation becomes then:

$$\frac{\Delta \hat{Y}}{\hat{Y}} = \frac{\lambda}{v'} (u - b) - \frac{r}{v'}. \qquad [6a]$$

[2] L. PASINETTI, *Structural Change and Economic Growth*, Cambridge, CUP, 1981, p. 217 (see also pp. 192-194).

[3] JOAN ROBINSON, *Economic Heresies*, London, Macmillan, 1971, p. 54: "The notion of a 'book of blue-prints exhibiting the state of technical knowledge' has played a part in doctrinal controversy, not in realistic analysis. In reality techniques are blueprinted only when they are about to be used".

[4] For an attempt to deal with the whole process, see my paper in the *Cambridge Journal of Economics*, March 1979.

Not λ but $\lambda \, (1 - b)$ is now the share of profits in income at full utilisation.

Second, we have to take into account that business finances its investment in part not from its own profits but from outside sources through borrowing. If we write for the flow of these outside funds — the increase in debt — ΔD, we have:

$$\Delta K = \lambda \, (Y - Y_o) + \Delta D - R. \qquad [4b]$$

Defining the proportion of investment financed by borrowing as

$$\frac{\Delta D}{\Delta K} = \delta$$

we obtain:

$$\Delta K \, (1 - \delta) = \lambda \, (Y - Y_o) - R. \qquad [4c]$$

Transformed, this becomes:

$$\frac{\Delta Y}{Y} (1 - \delta) = \frac{\lambda}{v'} (u - b) - \frac{r}{v'}, \qquad (\delta < 1). \qquad [6b]$$

The introduction of debt implies that interest on it has to be paid. We shall write:

$$\frac{i \, D_t}{Y} = i \, d_t$$

for the payments at a rate of interest i.

Third, account has to be taken of consumption by entrepreneurs. This is cyclically much more stable than profits. To a great extent it follows the trend of the economy. We may therefore relate it, if somewhat arbitrarily, to gross capital, neglecting for the sake of simplicity that part of consumption which depends on profits.

In absolute terms we have:

$$\Delta K = \lambda \, (Y - Y_o) - C - R + \Delta D. \qquad [4d]$$

We shall write:

$$c_t = \frac{C_t}{Y}$$

to leave room for long-run changes in consumption patterns. As far as replacement of scrapped plant and equipment is concerned, which has been already introduced from the beginning, it is given by the gross

57

investment I_{t-n} n years before, if a fixed life-time of n years is assumed. In relation to present capacity this would give:

$$\frac{I_{t-n}}{\hat{Y}_t} = r_t.$$

It will be realised that the amount of scrapping in reality will not always follow such easy rules because it depends on technical obsolescence and the economic situation in general. To this extent r_t has to be regarded as exogenous. The complete equation is then:

$$\frac{\Delta \hat{Y}}{\hat{Y}} + \frac{id_t + c_t + r_t}{(1 - \delta) v'} = \frac{\lambda (u_t - b_t)}{v' (1 - \delta)} \qquad [7]$$

The growth rate of capacity together with the requirements of replacement and capitalists' consumption determine the rate of gross profit obtained on the "hypothetical capital" v' $\hat{Y}$ (see above p. 57). The flexibility i. e. the response of the right hand side of [7] to a certain percentage change in u is now greater than in [6] because of the introduction of the break-even point b and the borrowing ratio δ. On the other hand the introduction of the replacement factor, of interest payments and of capitalists' consumption tends to attenuate the effects of changes in the growth rate.

It should be noted, however, that the above treatment of debt may be misleading since it suggests that the borrowing ratio δ is a controlled variable whereas in reality it is *ex post* determined by circumstances beyond the control of the enterpreneur. In fact, in a closed economy without government the amount of borrowing is constrained by the amount of saving outside enterprises. If we assume that a constant proportion s of the non-enterpreneurial income is saved then the amount of borrowing is determined as follows:

$$\Delta D = s [(1 - \lambda) Y + \lambda b \hat{Y}]. \qquad [4e]$$

Instead of equation [7] we obtain then the following:

$$\frac{\Delta \hat{Y}_t}{\hat{Y}_t} + (id_t + c_t + r_t) \frac{1}{v'} = \frac{\lambda}{v'} (u_t - b_t) +$$

$$+ s [(1 - \lambda) u_t + \lambda b_t] \frac{1}{v'} \qquad [7a]$$

The essential circumstance is that the savings outside enterprise are less elastic with respect to income than the savings out of profit. This

58

implies that the changes in the profit rate have to bear the brunt of the burden of adjustment to changes in growth.

When we come to consider, further below, the open economy and the budget, we shall find sources of saving (or dissaving) which are rather elastic with respect to income, and which therefore tend to loosen the strong bond between profit rate and growth rate somewhat (without, however, dissolving it).

3. This theory of distribution, together with the explanation of the underlying mechanism which makes it work, was used in my *Maturity and Stagnation*[5]. In view of my special purpose there I only treated the problems arising from declining growth, i. e. the adjustment of a profit margin which is too high for the established growth rate. I propose now, first, to deal equally with the other case of a rate of growth which is too high in relation to the customary distribution parameter λ and, second, to discuss the modifications which may be necessary to adapt the theory to post-war conditions and to go beyond the very specific assumptions I formerly made (closed system, negligible role of government, unemployment, large role of internally generated financing of business etc.).

Generally speaking I assume that the link between growth and share of profits exists. In the short run it is operated by changes in the rate of utilisation. The same kind of adjustment is very important also in the long run but there is also another possibility here, namely an adjustment of λ to the growth rate. Let us now deal with the case of a high rate of growth. This will evidently lead to full utilisation and therefore to scarcity of equipment. It will be the ideal case for a profit inflation (an increase in λ). In fact, Kaldor in his paper on distribution[6] appeared to be thinking of a high growth rate as being accomodated in this way, but he was not very explicit about the way in which it would work.

However, looking at the post-war experiences of various countries (excepting the first years of reconstruction) it seems doubtful whether profit inflation played any important and lasting role. In fact, it seems that after full employment had been established for some time there was a strong force acting against an increase in profit margins λ: Whenever a firm or an industry obtained extraordinary profits, by innovation for example, the workers of this industry or firm pushed forward with demands for a share in the extra profit. These demands were usually successful in view of the scarcity of labour and of the interest of management in a satisfied and hence permanent and stable work force. This process of

---

[5] J. STEINDL, *Maturity and Stagnation in American Capitalism*, Oxford, Basil Blackwell, 1952.

[6] N. KALDOR, "Alternative Theories of Distribution", *Review of Economic Studies*, XXIII, No. 2, 1955-56.

piece meal advance of real wages is called wage drift, in contrast to the centralised collective agreements which cannot be based on the conditions in specially favoured firms.

The wage drift will cause some inflation, in so far as workers in other (protected) branches manage to draw level and push up their wage, the increase in cost being shifted to prices. However, the degree of inflation under full employment, as seen from later standards, was modest and there were no signs of profit inflation. What prevented a more or less permanently booming economy from slipping into profit inflation?

In any investment (or export) led boom there is a kind of automatic control (quite apart from the safety valve of the foreign balance) which restrains the boom once it approaches the ceiling of available resources. Bottlenecks make it impossible for the real investment to increase beyond a certain volume, and via the multiplier the rest of the economy is restrained too. This is the basic reason why the boom usually does not get out of hand. The growth rate is constrained by the volume of saving at full utilisation of capacity and the productivity increase which causes this saving to increase annually.

One may ask why under these conditions profit inflation does not arise in the investment goods sector since investors might be induced to drive up the prices of the scarce equipment etc. If they did so they would, however, destroy the basis of their profit calculation[7].

Moreover, in industrial countries the bottleneck seems to have been not the equipment but manpower. For this reason the high post-war growth rate was dependent on the supply of additional manpower from agriculture, from the households and from abroad. The hunger for additional manpower shows that output capacity of material equipment was not the bottleneck. Competition for labour under these conditions may well arise and drive up wages. This, however, will be a case not of profit inflation but of wage push inflation. Our consideration has been that the adjustment of income distribution has limits in so far as growth itself has limits; ultimately these limits are given by the ability of a society to learn. The learning process is constrained to a certain maximum pace which it can not exceed without trouble.

On the basis of the preceding considerations we might picture the high growth era of the 50's and 60's as follows. On the basis of high investment and exports full employment with fast growth and high utilisation was established. The bottlenecks prevented the booming economy from creating excess demand and profit inflation. At the same time the

---

[7] They could not expect to be able to shift the price increases of investment goods to the prices of the products, for one thing because they have to compete with the existing equipment. Profit inflation, in fact, has to start from the sector of consumer goods and work up from there to the means of production, not the other way round.

tendency to an increase in profit margins, for example in innovative firms or in some countries in export firms, was checked by the action of wage drift which kept up consumer demand and prevented the economy from sagging. The system was moving along near the ceiling although at a fairly safe distance from it, always under pressure from below owing to the continued growth and the maintenance of consumption levels by wage drift which kept the share of labour from falling.

This constellation unfortunately does not exist any more and now it has been shattered it is not so easy to re-establish it.

4. We must not by any means expect symmetrical results if we now turn to the other case, that of low growth. This depresses utilisation and profits, and therefore tends to lower the growth rate even further. This result could be avoided if the profit margins (λ) were to decrease.

I have discussed in *Maturity and Stagnation* the conditions for a mechanism by means of which λ would adapt itself to a lowering of the growth rate. It would work through a competitive struggle with the aim of eliminating high cost producers; this would re-establish a normal degree of utilisation and at the same time lower the profit margin λ. In an industry dominated by oligopolies, however, this mechanism can not easily work, because the risks and cost of a competitive struggle are much too high. In consequence the oligopolistically organised industry will experience permanent excess capacity if the growth rate falls, with further depressive consequences, since the excess capacity will discourage investment. Using the same assumptions it can be shown that the transition from a competitive to an oligopolistic regime, if it causes an increase in profit margins at a given rate of utilisation, will lead to excess capacity and hence to a secular decline in growth. I also mentioned the possibility that oligopolies would be influenced not only by actual excess capacity but also by the mere fear of it. That is, a transition to oligopoly would automatically lower the inducement to invest.

This line of thinking has been used by G. Nardozzi[8], in his analysis of the Italian economy's development in the post-war decades. He showed that a given amount of cash flow had less and less effect on investments as the concentration of industry developed and the flow of new entrants subsided. The role of new entrants in the competitive struggle is rightly stressed by Nardozzi. This is rather an improvement on my own arguments which relied too much on the large scale economies and the advantages they give to large firms. Nardozzi also laid great stress on a characteristic feature of oligopolistic industry: the financial uses of profit, in contrast to investment in new equipment and buildings (real capital) play

[8] G. Nardozzi, "Sviluppo e stagnazione dell'economia italiana 1951-1971", *L'Industria*, 1974.

a large role in these industries. Their interest is very much more concentrated on take-overs which promote the concentration process even more rapidly, than on real investment. The stimulus to real investment which profits ought to have is thereby lost nearly as much as with other financial uses of profit[9].

In view of the enormous role the take-over movement has played over the past decades, especially in Great Britain and the United States, one might guess that it has weakened the link between profits and investment and therefore discouraged the investment process.

It is natural to ask now what relation if any the post-war process of concentration has had with the big change which has overtaken the economy since 1974. There are two alternative though not wholly exclusive answers to that.

One would be to apply the explanation which Nardozzi has given for Italy also to other countries. This would meet objections in so far as investment in the U.S. seems to have been strong until 1974; and in so far as the weakening of investment in Germany and Britain might be put down to other reasons (banking policy etc.). Yet it is no doubt true that the weakening of private investment incentives (which might have been compensated for some time by tax relief and other measures) would be a very convenient basis for explaining much of the subsequent history. Unfortunately so far we have not quite enough hard facts and investigations to enable us to judge this question.

Another answer would be that the prosperity period has bred a number of circumstances which were destined to ruin it: The excess of depreciation over replacement arising from high growth; the increase in household saving in some countries; the break down of international economic cooperation; the change in the political climate due to the reaction against the welfare state which turned the course of economic policy round by 180 degrees.

Once the growth rate had begun to decrease the effects of oligopoly certainly became relevant. The relative inflexibility of the profit margin showed itself in a low degree of utilisation over the past decade.

5. We must, however, now take into account that the conditions of our time differ vastly from the closed economy with negligible role of govern-

---

[9] It is true that the sellers of the firm, unless they merely receive shares, will get money which they might theoretically invest. But a large parte of the funds passed on in take-overs are used to repay debts and thus only increases the liquidity of the banks. If received by shareholders it is far away from direct real investment. American critics of Reagan, incidentally, have suggested that the additional net profits due to reduction of profits tax will only be used in take-overs and thereby be lost for investment. (RONALD E. MÜLLER and DAVID H. MOORE, "America's blind spot: Industrial Policy", *Challenge*, January-February 1982).

ment which had been assumed in my original discussion of the effects of oligopoly on growth. There I concluded that the increase in mark-up by the oligopolistic industries would not increase the volume of profits in industry as a whole, which would be kept constant by a reduction in utilisation. There would only be a redistribution of profits from the competitive to the oligopolistic sector of industry. This is far from true nowadays because the depressive effect of the oligopolist's action will increase the budget deficit and increase also the foreign balance surplus. In consequence the oligopolists will obtain an increased volume of profit not only at the expense of the competitive sector but also at the expense of the budget and of the outside world. This also means that the blow which the GNP receives will be considerably softened.

These considerations are particularly relevant to the present situation of a reduced long-term growth rate in the face of inflexible profit mark-up. The budget softens the blow for business. This is of course no consolation for the long term structural effects of a reduced investment activity on industry.

These considerations can be elaborated in formal terms, starting from the earlier algebra. We return to equation [4e] and introduce the budget surplus ΔB and the foreign balance ΔF, that is we write

$$\Delta D = s \left[(1 - \lambda) Y + \lambda b \hat{Y} \right] + \Delta B - \Delta F. \qquad [4f]$$

The budget surplus is strongly dependent on incomes. We can describe this more than proportionate response by a linear expression (in analogy to the expression for business profits):

$$\Delta B = \beta Y - \alpha \hat{Y} = \beta \left(u - \frac{\alpha}{\beta} \right) \hat{Y}, \qquad [8]$$

i. e. revenue is proportionate to income and expenditure is proportionate to capacity. Implicitly we have here defined a degree of utilisation α/β at which the budget will be balanced; at a lower u it will be in deficit, at a higher one in surplus. This definition is an alternative to the more frequent notion of a "full employment deficit or surplus". It would be preferable to formulate it also in terms of the rate of employment rather than of utilisation, but that would involve an embarassing complication of our algebraic apparatus. The critical utilisation may be above 1 (corresponding to a full capacity deficit); this has to be regarded as a hypothetical value, based on linear approximation.

The above treatment of the effects of a budget deficit is, however, still not complete, because we have not yet considered what effect the budget — taxation as well as expenditure — may have on profits and savings. To

discuss this we must start from the hypothesis of a balanced budget, so that the effects of deficits and surplusses are eliminated. We have then to compare the effects of taxation with the effects of the corresponding expenditure.

If the taxes are levied on mass consumption and the spending of the government is on mass incomes, there will be little effect on profits and savings. If, however, profits are taxed, then this tax will almost certainly not be paid out of capitalists' consumption alone; the greater part of the tax will impinge on saving; if government spending is increased in step with the profit tax and is directed again to mass incomes, then the output (given unused resources) will increase until the additional profits cover the tax payments. The profits tax, in other words, will be paid out of the gain resulting from increased utilisation [10].

If, on the other hand, the government's additional spending is directed not to mass incomes but to, say, interest payments to service the national debt, which presumably are paid to a large extent to big savers; then the result is rather likely to be that profits via taxation are shifted from industry to the rentiers.

Evidently the complications involved in these issues are too large a subject to be treated in the present context [11]. We have to cut them short by the arbitrary assumption that the budget structure is such that expansive and restrictive tendencies created on the side of taxation and on the side of spending cancel out, so that the balanced budget as such is neutral.

In the same way as for the budget we shall define for the foreign balance a level of utilisation at which the current foreign account will balance. We assume that imports depend on income Y and exports on output capacity $\hat{Y}$. Thus:

$$\Delta F = \beta' Y - \alpha' \hat{Y} = \beta' (u - \frac{\alpha'}{\beta'}) \hat{Y}. \qquad [9]$$

We obtain finally:

$$\frac{\Delta \hat{Y}}{\hat{Y}} + (id_t + c_t + r_t) \frac{1}{v'} = \frac{\lambda}{v'} (u - b) +$$

$$+ \frac{1}{v'} [u \{s (1 - \lambda) + \lambda b\} + \beta (u - \frac{\alpha}{\beta}) + \beta' (u - \frac{\alpha'}{\beta'})] \qquad [10]$$

[10] See M. KALECKI, "A theory of commodity, income and capital taxation", in *Selected Essays on the Dynamics of the Capitalist Economy*, London, Cambridge University Press, 1971.

[11] The so-called Haavelmo theorem has tended to obfuscate these complications and to draw away attention from the role of the distribution problems involved.

If we compare now equation [10] with equation [3] we can see how much more flexible i. e. responsive to a change in utilisation the system has become after the introduction of a series of important elements: While in [3] an increase in λ (increase in oligopoly) with a given growth rate requires a drop in u in the same proportion, the adjustment of u in [10] will be more moderate, increasing as it does also the budget deficit and the foreign balance surplus, as well as to some extent non-entrepreneurial savings, so that the impact on profits is much reduced.

Let us finally compare the flexibility of the profit margin in the one or the other direction — upwards or downwards: we have found that there is considerable assymmetry. There is a kind of ceiling, determined by the limit of the growth rate (given by bottlenecks, but ultimately by the limit to the speed with which a society can learn). But there is hardly a well-defined floor. Is the inflexibility of the profit margin (at a given utilisation) — downwards — absolute? It would hardly seem plausible even with widespread oligopolistic structures; since long-term growth rates, within historical experience, for example in America, have been in the range of 0 to 5 p. c. it would seem that changes in the long-term utilisation would have had to be rather large to accommodate them. But there is, of course, the budget deficit which as explained above, may contribute a great deal to the accomodation of a low growth rate. Somewhat paradoxically, the flexibility of the budget facilitates the rigidity of the profit margin. Thus if there is a floor at all, it must be provided from other sources than private business. I can see no kind of automatic control such as exists to some extent at least in the upward direction. I think there is a danger in long-wave theories, now coming back into fashion, in that they suggest an automatic recovery from secular stagnation. But there is no good reason for this. It can happen only through appropriate economic policies.

6. As an afterthought we may revisit now the old question of the stability of distributive shares. The empirical evidence for it is not as unshaken as it was at the time of Bowley[12], but there may still be some evidence of a certain resilience of distributive shares. The analysis must be restricted, of course, to the capitalist sector of the economy to the exclusion of the public sector as well as agriculture and other "mixed incomes" (small traders etc.). The great shifts which have been occuring in the structure of the economy in our times clearly would distort the distribution shares if we considered all sectors together.

Further, it must be remembered that the constant share of wages as demonstrated by Bowley applied to the wages of manual workers only, which at that time could be regarded as approximately variable, as distinct

---

[12] A. L. BOWLEY, *Wages and Incomes since 1860*, Cambridge, 1937.

from supplementary costs, i. e. as proportionate to the output. The remaining non-wage share was less subject to the effect of changing utilisation. It corresponds to gross profit in Kalecki's sense which is obtained by adding a certain percentage (mark-up) to the cost of manual labour and materials. We do not make use here, however, of the concept of mark-up which starts from a micro-economic level and proceeds by aggregation to the total economy. The concepts used above, on the contrary, are conceived from the start on a macro-economic level. This concerns in particular λ which is one of the parameters of the linear function which links the profit share to the utilisation of capacity. $1 - \lambda$ represents that part of labour costs which is proportionate to output (or income). In Kalecki's concept this is approximately equal to the wages of manual workers and the constancy of their share during the trade cycle according to Bowley's statistics would tend to confirm this supposition for the period covered by his data. Since the end of the second world war at the latest the qualifications to this identification have become rather strong: a far from negligible part of skilled labour has become in practice a fixed charge.

At the same time there has been a large shift from wage earners to salary earners in all countries which has put an end to the constancy of the share of wages observed by Bowley. Thus we can only consider the wage and salary bill together which means that we cannot expect any more cyclical stability of the share. The interesting question remains how far the trend of the share has varied. It seems that these trend variations still keep within narrow limits. As an example two series from the U.S. from 1929 to 1982 are given in Table 1.

The first one (A) is the share of the private wage and salary bill in the private domestic product. This series is not quite satisfactory from our point of view because it contains the "mixed incomes" of the self-employed working proprietors. Their inclusion depresses the share of employment income, reduces the cyclical fluctuations of the share and apparently produces a slight increasing trend of the wages and salaries share owing to the structural changes in the share of self-employment. The other serie (B) is the share of the compensation of employees (which includes also social insurance contributions) in the gross domestic product of non-financial corporations. This corresponds more nearly to the theoretical model of distribution. The cyclical fluctuations of the share are quite strong. A simple regression on time confirms the visual impression that there is hardly any trend (+ 0.03 points p. a.). The share has fluctuated during these 50 years around 65 percent approximately; the trend value was 64.3 at the beginning and 65.8 at the end of the period.

We may consider briefly how the apparent resilience of the shares may be fitted into the theoretical analysis. The parameter λ has become adjusted through a long process to a level at which variations in the rate of growth can be accomodated by the rate of utilisation which can fluctuate

66

TABLE 1

A: Share of private wages and salaries in the domestic business product of the U.S.

B: Share of the compensation of employees in the domestic product of the non-financial corporate sector of the U.S.

	A	B		A	B
1929	47.7	64.5	1956	51.0	65.4
1930	49.6	65.2	1957	50.7	65.7
1931	49.4	68.1	1958	50.0	66.0
1932	49.5	70.1	1959	49.7	64.5
1933	48.6	68.4	1960	50.4	65.4
1934	48.0	64.2	1961	49.8	64.9
1935	47.0	63.5	1962	49.3	64.2
1936	46.6	63.1	1963	49.0	63.5
1937	47.5	64.6	1964	49.2	63.1
1938	46.5	64.9	1965	48.8	62.5
1939	46.8	64.5	1966	49.0	63.4
1940	46.3	61.9	1967	49.7	64.3
1941	46.1	60.7	1968	50.0	64.5
1942	47.3	61.5	1969	51.1	65.9
1943	48.6	63.0	1970	51.5	67.1
1944	48.1	63.8	1971	50.1	65.9
1945	47.8	65.0	1972	49.8	65.9
1946	49.7	67.7	1973	49.5	66.7
1947	50.3	65.9	1974	50.1	68.0
1948	49.6	63.9	1975	48.4	65.3
1949	49.2	63.9	1976	48.5	65.4
1950	48.3	62.3	1977	48.1	65.4
1951	48.3	63.2	1978	48.3	66.2
1952	49.5	64.9	1979	48.8	67.6
1953	50.6	66.0	1980	49.2	67.7
1954	50.0	65.9	1981	48.2	66.4
1955	49.5	63.9	1982	48.6	67.5

Source: Dept. of Commerce, *The National Income and Product Accounts of the United States, 1929-1976*, Sept. 1981. "Revised Estimates of the Net Income and Product Accounts", *Survey of Current Business*, July 1982.

between one and the break even point (it could not go below it for any length of time). In so far as the rate of growth undergoes long-term changes they will have to be accomodated in principle by a change in λ which would be brought about by a competitive mechanism by which both the utilisation and λ would be adjusted to a level which would again permit the economy to cycle between the two extreme values of u.

However, the variation in λ is strongly impeded *a*) in the upward direction because of bottlenecks; it will therefore be the growth rate itself

which will adjust by going back to a more moderate level; *b)* in the downward direction because the oligopolistic structure of modern industry will prevent λ from falling. As a consequence the pressure will fall on u; the pressure may be increased further if the concerns manage to reduce b (the break even point) which at least in some cases they did during the last recession in the U.S. The pressure on u will be relieved to a considerable extent, however, by the budget deficit which will prevent business from foundering on the rocks of a low growth rate. In this way the share of gross profits will also be prevented from falling strongly.

The existence of factors which tend to limit the fluctuations in the trend leave us still puzzled when faced with the data. The explanation is less likely to be found in general theoretical considerations than in an analysis of the historical conditions over the period concerned.

Österreichisches Institut für Wirtschaftsforschung, Wien.

Prof. Pierangelo Garegnani
Department of Public Economics Faculty of Economics
Via del Castro Laurenziano, 9
00161 - Rome (Italy)