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Profit Squeeze and Keynesian Theory

This chapter explores one aspect of the relationship between the system of production and the macroeconomic structure, namely, the role of profitability in determining investment demand and the level of economic activity. Within the system of production, wages are a cost: the lower are profits per unit of production, the lower the stimulus to investment. In a Keynesian view of the macroeconomic structure, however, wages are a source of demand, hence a stimulus to profits and investment. In this view, aggregate demand provides the way out of the dilemma that high wages pose for the system of production. If demand is high enough, the level of capacity utilization will in turn be high enough to provide for the needs of both workers and capitalists. The rate of profit can be high even if the profit margin and the share of profit in output are low and the wage rate correspondingly high.

Introduction: The Uncomfortable Facts of Profit Squeeze

Profit squeeze presents a problem for this Keynesian solution. How do we reconcile the argument that profit squeeze was a major cause of the decline in growth rates that took place in the 1970's with Keynesian doctrine on the role of aggregate demand in reconciling the requirements of the system of production and those of the macroeconomic structure? That is the task of this chapter.

Our profit-squeeze story goes like this. First, profit squeeze is itself explained by the pressures of productivity growth. As a result of a long period of high employment, productivity growth began to lag behind wage growth in the late 60's, and this put pressure on profits. Pressure on profits in turn put a two-sided pressure on the growth rate of the capital stock. On the one hand, profits were an important source of saving, so the reduction of profits made less income available for accumulation. On the other hand, the reduction in realized profits led business to anticipate lower profits in the future, and the fall in expected profits led to a reduction in the demand for investment. In short, high employment encouraged the growth of wages and inhibited the growth of productivity; this put pressure on profits, and the resulting pressure on profits led to a crisis of accumulation.

Basically, the Keynesian objection to this view of profit squeeze is that higher real wages should increase aggregate demand, at least under the assumption that the propensity to save out of wages is less than the propensity to save out of profits[1]. Although higher wages may diminish the profit per unit of output, business will make up the difference by an increased volume of production and sales. If investment demand increases

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[1]Proponents of life-cycle and permanent income hypotheses will object at once. And it is the case that the available empirical evidence does not suggest important differences between the propensities to save out of wage and property income across households, at least not for the United States. This is partly due to shortcomings of the data, but more due to the unimportance of household saving, properly defined, in the accumulation of plant and equipment. The bulk of saving for the business sector is done by corporations and pension funds. A contemporary specification of the Kaldor-Robinson-Pasinetti two-class model would distinguish corporations, pension funds, and households, rather than capitalists and workers. See Chapter 1, above, and Marglin (1984, chs. 17-18).

with the rate of capacity utilization, there will be even greater aggregate demand, and both aggregate profits and the profit rate will be higher even as the profit share is lower. In this view there is no trade-off between growth and distribution. High wage policies promote income equality, output, and growth. Policies which increase the workers' share of the pie also increase the size of the pie[2].

This argument was a cornerstone of the "cooperative capitalism" incorporated to a greater or lesser extent in the post World War II regimes of all the industrialized countries, and articulated in left and center-left politics and economics until the demise of the golden age. It is rightly thought of as Keynesian in nature since aggregate demand, or more precisely deficiencies of aggregate demand, are central ingredients of the story. But a cooperative vision of captialism based upon stagnationist or underconsumptionist ideas long antedated Keynes, as this resolution of the Leicester framework knitters, put forward in 1817, indicates:

> That in proportion as the Reduction of Wages makes the great Body of the People poor and wretched, in the same proportion must the consumption of our manufactures be lessened.
>
> That if liberal Wages were given to the Mechanics in general throughout the Country, the Home Consumption of our Manufacturers would be immediately more than doubled, and consequently every hand would soon find full employment.
>
> That to Reduce the Wage of the Mechanic of this Country so low that he cannot live by his labour, in order to undersell Foreign Manufacturers in a Foreign Market, is to gain one customer abroad, and lose two at home...., (H.O. 42.160. Quoted in Thompson [1963], p 206.)

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[2] A positive relationship between wages and profits can hold only up to full capacity utilization, at which point higher wages will induce higher prices rather than higher output. In the full capacity case, there can be no squeeze on profit margins at all.

At the turn of the century J. A. Hobson attempted to systematize the underconsumptionist view, as did various others in the late 19th and early 20th centuries. But it took the combination of Depression and the talent of Keynes to make the stagnationist view politically and intellectually respectable. The central point of this chapter, however, is to draw a distinction between a theory of a capitalist economy in which aggregate demand plays a central role, and models built on particular assumptions about the components of aggregate demand. It is our position that while both the general theory and specific models may hold at certain times, the models are much more bound by time and place than is a theory based on the centrality of aggregate demand. In particular, we view the Keynesian insistence on aggregate demand as an important ingredient to understanding how modern capitalism works quite generally, but the stagnationist model as very much bound to particular places and times.

A Simple Model

We can present the basic ideas of this chapter in terms of a reformulated aggregate demand-aggregate supply model. The reformulation consists primarily of giving a central place to income distribution in the modeling of aggregate demand. Income distribution is reflected in making the sensitivity of investment demand to the profit share π a central element of the model. In a second, relatively minor, modification of the usual model, we also introduce the rate of capacity utilization z as an additional state variable. The variables π and z replace the variables P and Y in the standard model. One advantage of the present model is that it is normalized in terms that permit it to be applied to the determination of

equilibrium over a longer period than the conventional macro-model defined in terms of levels of prices and outputs. Here is the model in summary form:

(1) Accounting Identity: $r = (R/K) = (R/Y)(Y/\bar{Y})(\bar{Y}/K) = \pi z \bar{a}^{-1}$

Aggregate Demand (Investment & Saving)

(2) Saving Function: $g^s = (S/K) = sr = s\pi z\bar{a}^{-1}$

(3) Investment Function: $g^i = (I/K) = i(r^e(\pi,z))$

(4) Equilibrium Condition: $g^s = g^i$

Aggregate Supply (Producers' Equilibrium)

(5) Flexible Mark-up $\pi = \pi_o + b(z)$

In these equations, S, I, Y and K have their usual meanings, R is total profits per annum, $\bar{Y}$ is potential output, r is the actual rate of profit on the aggregate capital stock, r^e is the rate of profit anticipated on new investment, π is the share of profits in income, z is the rate of capacity utilization ($=Y/\bar{Y}$), $\bar{a}$ is the capital-output ratio at full capacity output, and g^s and g^i are the growth rates of the capital stock desired by the savers and investors respectively.

A few remarks are in order. As has been mentioned, the distinguishing feature of our model is the centrality of income distribution in the determination of aggregate demand. The saving function reflects the

Classical (or Income Shares) Hypothesis, which assumes that all profit income and all wage income is consumed[3].

The investment function introduced here is somewhat unorthodox, and will be discussed and defended in some detail below. Suffice it to say here that our formulation is designed to emphasize a central element of the Keynesian view of the economy: the connection between profit expectations and the existing distribution of income between wages and profits.

Although the same class is assumed to save as well as to invest, saving and investment remain separate and distinct actions. It is not assumed that agents, be they households, pension funds, or corporations, necessarily save in order to invest or invest only what they individually save. Passive, or endogenous, money may be assumed to bridge the gap between desired investment and effective investment demand when the economy is in a situation of excess demand.

Lastly, we should make it clear that nothing of substance hinges on our assumptions about the supply function. As in many Keynesian analyses, we assume that firms use a mark-up over wage costs to set prices, and that the mark-up varies positively with the rate of capacity utilization ($b'(z) > 0$). The alternative of competitive profit maximization also yields a positive relationship of the mark-up (and hence the profit share) with the rate of capacity utilization, at least on fairly common assumptions about the

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[3]The assumption that capital formation is financed entirely out of profits is not necessary to the argument of this paper, but it simplifies the exposition. It is necessary to assume that the propensity to save out of profits exceeds the propensity to save out of wages. If the propensity to save is assumed to be uniform across income classes, as is standard in elementary texts, it is difficult to produce the downward sloping IS schedule on which the stagnationist model relies. Footnote 5, below, gives sufficient conditions for precluding stagnation.

production function and the organization of markets, specifically, an elasticity of substitution of less than one coupled with competitive product markets.[4]

Before we analyze this model, it may be useful to present its geometry. This is done in Figure 1, where we use the profit share and the rate of capacity utilization z as the two state variables. The schedule IS represents goods market equilibrium as reflected in Equation (4), in which planned expenditure equals output available and there are no unanticipated changes in inventories. PE represents the supply side equilibrium, Equation (5), where producers are satisfied with the level of wages and prices. The upward slope of the PE schedule is evident from Equation (5). The slope of the IS schedule, however, depends on the relative magnitude of various parameters which it is the purpose of this chapter to investigate.

The stagnationist-cooperative version of Keynesian theory turns on the IS schedule having the shape it has in Figure 1. The essence of stagnationist cooperation can be seen through the simple comparative-statics exercise of changing the profit share at each point on PE, that is, by displacing this schedule. Imagine the consequences of a reduction in the

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[4]It is by no means necessary to assume the PE schedule slopes upward. A labor extraction model of the kind developed in Chapter 5, for example, will generally lead to the conclusion that the PE schedule turns downward at high levels of capacity utilization. Within limits, nothing in our argument hinges on the slope of the PE schedule, and in any case our attention here will focus elsewhere.

For the record, we note that competitive profit maximization was Keynes's own way of modeling the supply side in the General Theory. Realism apart, the difficulty with this approach for present purposes is that it makes the real wage depend exclusively on the level of capacity utilization. Within the strict confines of the General Theory, one simply cannot examine the consequences of a change in the distribution of income. Distribution is itself a consequence of demand and output rather than a cause, a thermometer rather than a thermostat.

mark-up, that is, an increase in the real wage, associated with each level of output. The PE schedule shifts downward, as indicated in Figure 2. As the picture shows, a higher real wage leads to a lower equilibrium profit share π' but to a higher rate of capacity utilization z'.

So far the argument says nothing about the effect on the rate of profit, or on the rate of growth, for that matter. The essence of stagnationist cooperation is that while π' is less than π^*, r' exceeds r^* and g' exceeds g^*, where g' and g^* both refer to goods-market equilibria at which $g^d = g^s$, that is, both are points in the IS schedule. Since

$$g^s = sr = s\pi z\bar{a}^{-1},$$

isoprofit and isogrowth contours are both rectangular hyperbolas, as indicated by the dashed lines in Figure 2; they differ only by the constant factor s. Thus, the analytical essence of the argument is that the IS schedule is flatter than the dashed isoquants: in this case, movement down the IS schedule increases rates of profit and growth at the same time it increases real wages.

Evidently this theoretical argument does not square very well with the argument that profit squeeze was implicated in the demise of the golden age, and it is difficult to reject the view that wage pressure was heavily implicated in the profit squeeze that set in during the 1960s. This appears to leave us with three choices.

First, we can throw out Keynes, that is, eliminate aggregate demand from the analysis altogether, in the fashion of the neoclassical revival that goes under various names according to time and place--rational expectations, equilibrium business cycles, monetarism, and supply-side economics. It should surprise no one that we do not take this route.

A second possibility is to follow the conventional distinction between the long and the short run and to argue that the writ of Keynes runs for the second but not for the first. In the neoclassical analysis of the long run, as in Figure 3, the IS schedule simply disappears from the analysis. Equilibrium is determined by <u>two</u> supply-side considerations: one is a cleared market (CM) condition, which reflects the assumption that in the long run all markets, and in particular labor and capital markets, clear; since workers must be on their supply schedules for the labor market to clear, we may identify the CM schedule with a labor-<u>supply</u> schedule. The second consideration, represented by the schedule labelled R-max, is profit maximization. In equilibrium, price (or more generally, marginal revenue) and marginal cost must be equal; R-max is thus a labor-<u>demand</u> schedule. In this analysis, the wage and mark-up settle at levels consistent with full employment, which must be understood as a level of employment at which the marginal disutility of labor is equal to the marginal utility.

In the neoclassical long run, unemployment can exist only if the real wage is too high, "too high" here having two meanings. On the one hand, the wage will be too high to make it worthwhile for capitalists to hire the number of individuals corresponding to equilibrium employment: z_1, which corresponds to π_1 on the R-max schedule (at point A), falls short of z^*. On the other hand, high wages induce a greater supply of labor than is available at a profit-maximizing, market-clearing equilibrium: z_2, which corresponds to π_1 along the market-clearing schedule (at point B), exceeds z^*.

We reject the notion that fundamentally different theories apply to the short and the long period. In our opinion, despite the short run preoccupations of Keynes and others who worked the same street (like Michal

Kalecki), Keynesian theory does far more than to offer a theory of the short run. It offers a distinctive way of viewing the capitalist economy in the long run as well. The essential novelty of this approach is precisely the central role attached to aggregate demand and particularly to investment demand as a driving force of the economy. Whatever the shortcomings of this theoretical perspective, the insistence on the centrality of demand remains an enduring contribution to understanding capitalism[5].

A third possibility for dealing with the apparent contradiction between profit squeeze and Keynesian theory is to accept the framework of the model outlined in Equations (1) - (5), and to argue that profit squeeze is the result of outward shifts of the IS schedule against a fixed, but downward sloping, PE schedule. Essentially this is the view of Michal Kalecki (1971) and Wesley Clair Mitchell (1913), though neither couched their arguments in terms of a model like the present one. This view is developed in the following chapter, albeit in a model that has a sufficiently different focus from that of the present one to obscure the basic similarity of the framework of analysis: both the Bowles-Boyer model and the present one are hybrids of Keynes and Kalecki or, in their terminology, Keynes and Marx. The difference is that our analysis emphasizes the role of investment, whereas the Bowles-Boyer model emphasizes the dynamics of labor extraction.

A fourth possibility is developed here. We utilize the framework summarized in Equations (1)-(5), but we do not rely on a cyclical squeeze of profits of the type that would be produced by an outward shift of the IS

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[5]Marglin (1984, Ch. 4) presents a long-run version of Keynesian theory in a comparative framework. Ch. 19 suggests some problems with the theory (pp. 473-479), and Ch. 20 attempts to synthesize Keynesian and Marxian perspectives.

schedule against a fixed, but downward sloping, PE schedule. Our argument is more long-run in nature, appealing to the evolution of both the IS schedule and the PE schedule in the quarter century of unprecedented prosperity that followed World War II. The focus of our analysis is on the determinants of investment demand.

The Theory of Investment Demand

We begin with a formulation that does no violence to views as diverse as those of Jorgenson (1965), Tobin (1969), and Malinvaud (1980), with investment depending on expected profits and the cost of capital:

$$I = I(r^e, \sigma) \ , \tag{6}$$

where I and r^e are defined as before and σ represents the real (inflation corrected) rate of interest. This formulation however raises more questions than it answers. First, there is the problem of normalization: if Equation (6) is supposed to hold over a period longer than the Keynesian short period, in which the capital stock is fixed, it must be normalized to reflect growth in the scale of the economy: assuming the basic structural relations remain the same, given values of r^e and σ can be expected to induce twice as much investment demand when business has doubled in size.

But how do you measure the "size" of business? By the capital stock, or by output, or by profits? This, of course, is an unimportant issue as long as the economy is on a balanced growth path, for by definition all economic magnitudes then expand proportionately. But what if the capital:output ratio or the profit share change? In this case the choice of

one normalization or another implies a theoretical assertion about the investment function, namely, that, for given levels of its arguments, the level of aggregate investment demand is more likely to be stable as a ratio to one magnitude rather than another.

Despite its theoretical interest, we shall elide this issue, choosing a normalization on the basis of simplicity and convention. On this basis, the capital stock is the obvious choice, and accordingly we shall assume that investment demand per unit of the capital stock is a stable function of r^e and σ. Thus in place of Equation (6) we have

$$\frac{I}{K} = i(r^e,\sigma) ,$$

or writing $g^i = I/K$ as the rate of growth of the capital stock desired by investors,

$$g^i = i(r^e,\sigma). \tag{7}$$

We shall simplify even more, by eliminating σ from the investment demand function, so that Equation (7) becomes

$$g^i = i(r^e). \tag{8}$$

We make this simplification not because we believe there is good theoretical reason for investment demand to be totally insensitive to the cost of capital, but because our focus lies elsewhere. Besides, it is a fact that over most of the period with which we are concerned, from 1945 to 1980, real interest rates exhibited very little trend, and indeed hovered near zero, despite the pronounced movement in nominal rates. Over the same period, actual profit rates, and presumably expected profit rates, showed considerable movement. Thus, in trying to understand the behavior of investment during the golden age and its demise, it makes empirical as well

as theoretical sense to focus the analysis of investment demand on profit expectations.

The very notion of an expected rate of profit raises important conceptual problems. Although the adjective "expected" suggests the mean of a probability distribution, the terminology of probabilities must be used very cautiously. For it is of the essence of the Keynesian view of investment that the future is uncertain, which is to say not only that it cannot be known precisely but that it lies beyond the grasp of a probabilistic calculus; the outcomes of investment decisions are fundamentally unlike the outcomes of roulette, to a calculus of which (following Knight, 1921) the term risk applies.

From a Keynesian point of view, the neoclassical blurring of this distinction by means of the device of subjective probabilities is problematic, for it obscures an essential difference between investment decisions and other kinds of economic behavior. There are of course serious problems with the very idea of subjective probability. As Ellsberg (1961) and more recently Kahneman and Tversky (1980) have demonstrated, untutored individuals stubbornly refuse to obey the axioms of probabilistic decision making as laid down by diFinetti (1937) or Savage (1954). But with due caution the idea of subjective probability provides a useful heuristic for describing the investment-decision process. It has the great merit of emphasizing the state of mind of the investor as a crucial determinant of investment demand.

Indeed the problem with using subjective probabilities lies less in the concept itself than in its customary neoclassical bedfellow, namely, the assumption that the world works as if the markets required to extend

neoclassical general equilibrium theory to an uncertain world--the "contingent commodity markets" introduced by Arrow (1952) and developed by Arrow and Debreu (1954) and Debreu (1959)--actually exist. For the existence of such markets would have the effect of eliminating the investor's state of mind from the investment-decision process. Indeed with complete markets for contingent commodities over the investment horizon, there would never be any need for an investor to hold physical capital to back his or her hunches about the future.

In fact, the inherent uncertainty that surrounds the outcome of any investment together with the absence of contingent commodity markets makes capital markets and capital accumulation fundamentally different from other economic processes. Many writers, both outside and within the mainstream of the economics profession (for example, Keynes 1936, pp. 144-145; Minsky 1986, pp. 190-192; Stiglitz and Weiss 1981) have recognized this fundamental truth and at least some of its implications, for instance in the area of adverse selection and moral hazard. But it is much less widely accepted that the imperfections inherent in capital markets require more than marginal changes in neoclassical theory, indeed, require a significantly different theory of how a capitalist economy functions in the long run as well as in the short (Marglin 1984, Gintis 1986).

In the Keynesian view, or at least in our "neo-Keynesian" variant, the argument of the investment-demand function, r^e, is heavily influenced by the subjective probabilities, or state of confidence (to use an older terminology), of the capitalist class. So is the investment-demand function $i(r^e)$ itself. Absent contingent commodity markets, capitalists play out their intuitions about the future prospects of the economy through their

willingness to add to the stock of productive capital. This assumption is key to the unique role and power that businessmen have, in the neo-Keynesian scheme of things, to shape the course of capitalist development.

In our model, the expected rate of profit depends upon the actual profit share and the rate of capacity utilization, as in Equation (3)

$$g^i = i(r^e(\pi,z)). \tag{3}$$

The first of these variables measures the return to capitalists on condition that goods can be sold; the second, an "accelerator" variable, reflects the impact of demand conditions. The partial derivatives of expected profit with respect to each variable can plausibly be argued to be positive: a higher profit share and a higher rate of capacity utilization can each be argued to induce higher profit expectations, the first because the unit return goes up, the second because the likelihood of selling extra units of output increases.

The IS Schedule

It should be noted at once that the shape of the IS schedule in Figures 1 and 2 is not guaranteed by the formulation of investment demand summarized in Equation (3). With the saving function defined by

$$g^S = s\pi z\bar{a}^{-1} \tag{2}$$

and the IS schedule defined by Equation (4)

$$g^i = g^S \quad , \tag{4}$$

we have

$$i(r^e(\pi,z)) = s\pi z\bar{a}^{-1} \tag{9}$$

and

$$\frac{d\pi}{dz} = - \frac{s\pi\bar{a}^{-1} - i_z}{sz\bar{a}^{-1} - i_\pi} \quad , \tag{10}$$

where

$$i_\pi = \frac{di}{dr^e} \frac{\partial r^e}{\partial \pi} \quad \text{and} \quad i_z = \frac{di}{\partial r^e} \frac{\partial r^e}{\partial z}$$

The shape of the IS schedule depends on the sign and magnitude of both the numerator and the denominator of Equation (10), but the qualitative structure of the model, which tells us only that i_π and i_z are positive, provides insufficient information to determine even the sign, not to mention the magnitude, of either expression. At issue is the relative responsiveness of desired investment and desired saving to π and z.

A stagnationist regime, one in which (by definition) a lower profit share is associated with a higher level of economic activity, is characterized by a downward sloping IS schedule: in this case, the expressions $s\pi\bar{a}^{-1} - i_z$ and $sz\bar{a}^{-1} - i_\pi$ have the same sign. In exhilarationist regimes, a higher profit share goes along with a higher level of activity: the IS curve has a positive slope, which is to say the numerator and denominator on the right-hand side of equation (10) are of opposite signs.

Under what conditions can we specify these signs? In much conventional macroeconomics, the numerator is assumed to be positive for reasons of stability. The condition

$$s\pi\bar{a}^{-1} - i_z > 0 \qquad \text{[Keynesian Stability]} \tag{11}$$

says that at the margin saving is more sensitive than investment to capacity utilization, and this is the standard guarantee of the stability of

equilibrium in elementary versions of Keynesian theory. It is tantamount to the condition that the saving schedule be steeper than the investment schedule in a textbook diagram like Figure 4. If Condition (11), which we shall refer to as the "Keynesian Stability Condition," were not to hold, changes in capacity utilization would induce more investment than saving, and any disturbance to equilibrium would set off a cumulative movement away from the initial equilibrium--the multiplier would magnify the initial excess or deficiency of aggregate demand and the process would end only at full capacity utilization or at zero output.

But the Keynesian Stability Condition, though standard in the texts, is necessary for stability only in a model which abstracts from all determinants of equilibrium but the level of output, and in particular, one which abstracts from the impact of the distribution of income between wages and profits on investment and saving.

Once the variable π enters into investment and saving functions, the Keynesian Stability Condition is not logically required to ensure that displacements from equilibrium are self-correcting. Moreover it is empirically plausible that over some portion of $z \times \pi$ space investment will be more sensitive than saving to capacity utilization, in violation of the Keynesian Stability Condition.

However even if there were adequate grounds for assuming the Keynesian Stability Condition, this would hardly clinch the issue. The slope of the IS schedule depends on the sign of the denominator of Equation (10) as well as on the numerator. If the Keynesian Stability Condition holds, then the inequality

$$sz\bar{a}^{-1} - i_{\pi} > 0 \qquad \text{[Robinsonian Stability]} \qquad (12)$$

makes $d\pi/dz$ negative and the IS schedule is stagnationist. If the inequality in (12) is reversed, the IS schedule is exhilarationist.

We shall refer to Condition (12) as the "Robinsonian Stability Condition" because of the role this inequality, or something very much like it, plays in certain long period formulations of Keynesian theory that drew inspiration from Joan Robinson's work (1956, 1962), particularly Harris (1978), Roemer (1980), and Marglin (1984). In these models, as in the present model, prospective profits are supposed to drive investment, but the expected rate of profit is assumed to depend on the current rate of profit alone. The model is closed by appealing to a form of rational expectations justified by the long run context of the theory: in equilibrium the expected rate of profit r^e and the actual rate r are assumed to be equal. Robinsonian equilibrium is pictured in Figure 5; in the diagram, stability of equilibrium is assured by the assumption that saving is more responsive than investment to changes in profitability (Marglin 1984, ch. 4, where the model is called "neo-Keynesian").[6] In effect, the Robinsonian Stability Condition plays the same role in the long run model that the Keynesian Stability Condition plays in the short run model.

However, this line of argument is also problematic. The present model describes a longer run than the textbook short run in which capacity utilization is the sole adjusting variable, but its time frame is shorter than the Robinsonian long run in which rational expectations can be invoked

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[6]One aspect of the Robinsonian model which has gone generally unnoticed is that it implies a stagnationist-cooperative view of capitalism. Since investment demand is a function of r alone, the derivative h_z vanishes and the IS schedule in π x z space is a rectangular hyperbola. Since in this model it is the rate of profit that is determined by saving and investment, the profit share and the volume of output are inversely proportional.

to identify the expected rate of profit with the actual rate of profit. In our model there is no assumption that the rate of profit on new investment is equal to the actual rate of profit overall. Quite the contrary: in our time frame, the two rates will normally diverge. In this context, π and z play separate roles, and the single-variable Robinsonian Stability Condition cannot simply be assumed on the grounds that otherwise centrifugal forces would dominate the dynamics of the model.

We can however derive rather than assume the Robinsonian Stability Condition, provided we are willing to assume both the Keynesian Stability Condition and a condition we shall refer to as the "Strong Accelerator Condition." This last appears to be innocuous enough, requiring us to assume only that an increase in the rate of capacity utilization will, at a given rate of profit (as distinct from a given profit share), increase the expected rate of profit r^e. Write the investment demand function as

$$g^i = i(r^e(\pi,z)) = h(r^e(r,z)) \tag{13}$$

with the functions i and h connected by the accounting identity

$$r = \pi z \bar{a}^{-1} \tag{1}$$

It is then straightforward to show that if the inequality

$$h_z = -i_\pi \frac{\pi}{z} + i_z > 0 \qquad \text{[Strong Accelerator]} \tag{14}$$

holds along with the Keynesian Stability Condition, the Robinsonian Stability Condition holds as well.[7]

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[7]By assumption, we have

$$h_z = -i_\pi \frac{\pi}{z} + i_z > 0 \quad \text{and} \quad s\pi\bar{a}^{-1} - i_z > 0$$

Combining these two inequalities gives $s\pi\bar{a}^{-1} - i_\pi \frac{\pi}{z} > 0$,
from which the Robinsonian Stability Condition follows directly.

Indeed, we can prove a stronger result, namely that the IS schedule is flatter than the iso-profit curves, so that, as in Figures 1 and 2, the regime is cooperative as well as stagnationist. That is to say, a decreasing profit share goes along with a higher profit rate (and growth rate) as well as with a higher wage bill. The essence of a stagnationist-cooperative regime is that

$$0 > \frac{d\pi}{dz} > -\frac{\pi}{z} , \tag{15}$$

which follows from Conditions (11) and (14)[8]

The problem with this line of argument is that it rests on a very weak premise. It has already been noted that the Keynesian and Robinsonian Stability Conditions cannot be carried over to the present model from the single-variable models in which only capacity utilization or the profit share vary. With respect to the Strong Accelerator Condition, the issue is more complicated. Despite its incorporation into many neo-Keynesian formulations of investment demand (for example, Sylos-Labini 1974, Rowthorn 1982, Taylor 1985), it is by no means certain or even especially likely to be the case that an increase in the rate of capacity utilization will induce additional investment when the profit rate is held constant. The reason is

[8]From Condition (14), we have

$$-i_\pi \frac{\pi}{z} + i_z > 0$$

and from Conditions (11) and (12)

$$0 > \frac{d\pi}{dz} = -\frac{s\pi\bar{a}^{-1} - i_z}{sz\bar{a}^{-1} - i_\pi}$$

Hence, combining these two inequalities gives us

$$0 > \frac{d\pi}{dz} > -\frac{s\pi\bar{a}^{-1} - i_\pi \frac{\pi}{z}}{sz\bar{a}^{-1} - i_\pi} = -\left(\frac{sz\bar{a}^{-1} - i_\pi}{sz\bar{a}^{-1} - i_\pi}\right)\left(\frac{\pi}{z}\right) = -\frac{\pi}{z} .$$

a simple one: if the rate of capacity utilization increases while the rate of profit remains constant, it must be the case that the profit margin and share fall. So the effect on investment is the resultant of two forces: the positive impact of higher capacity utilization and the negative impact of lower unit profits. Mathematically h_z is the difference between i_z and $i_\pi(\pi/z)$, and the qualitative structure of the model gives us no grounds for asserting anything about the relative magnitude of the two terms. This is to say that in a linear approximation of the form

$$g^i = \alpha r + \beta z = \alpha\pi z\bar{a}^{-1} + \beta z \qquad (16)$$

the sign of β, where $\beta = h_z$, is indeterminate. It requires a belief in rather strong capacity utilization effects to argue that β is positive.

This belief would be justified if the prime concern of capitalists is whether or not they can sell additional output. In this case the capacity utilization effect may be expected to dominate, and the partial derivative h_z will be positive. If however capitalists are confident of their ability to sell extra output, and are concerned rather with their profit margin, the negative, profit share, effect will dominate, and h_z will be negative. One might "rationally" expect the capacity utilization effect to be stronger at low levels of capacity utilization, but the subjective aspect of expectations makes it possible that some or even a large number of capitalists will be confident about their ability to sell their output even when the overall rate of capacity utilization is relatively low. In short, the sign of h_z is an empirical matter about which we are not in a position to make any categorical assertion.

As a consequence of the lack of conditions which allow us to attach definite signs to the numerator and denominator of Equation (10), both stagnationist and exhilarationist regimes--downward and upward sloping IS schedules--are possible. Indeed the slope of the IS schedule can change signs in various ways. For instance, it is possible that the IS schedule will have the shape of a "C", as in Figure 6. Observe that in such a case there are two routes to high capacity utilization: one follows the stagnationist logic of higher wage shares, while the other follows the exhilarationist logic of higher profit shares. As Figure 6 is drawn, neither stagnationist nor exhilarationist policy is "wrong." Either a policy of a high wage share or one of a high profit share, pursued consistently and aggressively, will provide sufficient aggregate demand for high employment and high capacity utilization. In this situation the fatal error is moderation: a compromise of middling wages and profits will provide the worst of possible worlds, in which low capacity utilization and low growth become the order of the day.

However, if high wage and high profit shares are each consistent with high capacity utilization, the implications for growth and distribution of the two strategies are very different. The exhilarationist outcome like A, representing the pair $\langle z_1, \pi_2 \rangle$ is more favorable for capitalists and less favorable for workers (at least in its immediate consequences) than a stagnationist outcome like B, which represents $\langle z_1, \pi_1 \rangle$: the point is that π_2 exceeds π_1. And not only does a higher profit share map to a higher profit rate for a given z; since investment and saving are both positive functions of the profit share, the exhilarationist outcome is more favorable

for growth as well as for profit. (Thus the long term consequences for workers are more favorable than the short term ones.)

The coexistence of exhilarationist and stagnationist branches sharpens the point made at the outset of this chapter, that to reject the policies inspired by a stagnationist reading of Keynes does not require one to reject the Keynesian framework of analysis. One need not reject the theory, as critics from Viner (1936, see especially pp. 162-163) to modern monetarists, supply-siders, and enthusiasts of rational expectations and equilibrium business cycles have done, or limit its applicability to the short period, as the mainstream has done, in order to reach neoclassical conclusions about the relationship between wages, profitability, growth, and the level of economic activity. The program of a Margaret Thatcher, which is usually justified in terms of one version or another of neoclassical theory, also makes logical sense as an attempt to move the British economy from a stagnationist regime to an exhilarationist one. We may well doubt the implicit assumptions about the energy of the British capitalist class, but we would assert that this justification of Thatcherism is more plausible than one based on the presuppositions of monetarism and supply-side economics.

An alternative to Figure 6 is the "U"-shaped IS schedule presented in Figure 7, in which stagnationist logic governs at low levels of capacity utilization and exhilarationist logic at high levels of capacity utilization. In the situation described by Figure 7, high wages would be appropriate to combat a severe depression, for in this case it is plausible that private investment demand would be weak. But continuation of high-wage policies may be inappropriate at higher levels of capacity utilization, as

profit prospects stimulate capitalists to high levels of investment demand. Economists whose imaginations were formed and limited by the background of depression from which Keynesian theory emerged might easily fail to see that the theory transcends its background. Temperamentally, economists as well as generals are better equipped to fight the last war than the next one.

Cooperation and Conflict

So far we have emphasized the distinction between stagnationist and exhilarationist regimes, but we have also had occasion to distinguish between cooperative and conflictual regimes, regimes in which workers and capitalists have a common interest in expansion and regimes in which one class or the other loses from an increase in the level of capacity utilization. If the class interest of workers is identified with the size of the wage bill and the class interest of capitalists with the profit rate (or equivalently--since the capital stock is fixed in the short run--with aggregate profits)[9], then the exhilarationist as well as the stagnationist regime is a cooperative one provided the IS schedule is sufficiently flat. That is, a flat IS schedule, whether upward or downward sloping, will exhibit a positive relationship between capacity utilization and both the wage bill and the profit rate.

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[9] There is an element of arbitrariness in identifying the class interest of workers with the wage bill, as against the wage rate. In effect, we are attaching no social utility to the involuntary unemployment that accompanies excess capacity. But there is, or may be, an important "insider" vs. "outsider" problem here: the gains of expansion accrue to the newly employed workers, the losses to the already-employed.

The case for identifying the interests of the capitalist class with the profit rate rather than the profit share is less problematic: we need only assume that idle capacity depreciates as rapidly as utilized capacity.

For the stagnationist regime, this result has already been demonstrated: the wage rate and employment, as well as the profit rate, increase as capacity utilization increases--provided the IS schedule is flatter than the isoprofit curve described by rectangular hyperbolae of the general form $r = s\pi z\bar{a}^{-1}$, in other words, provided the elasticity restriction described by Condition (15) is met. Condition (15), we have seen, is guaranteed by Keynesian and Robinsonian Stability Conditions, or by the first of these conditions along with the Strong Accelerator Condition. In other words, sufficient conditions for a cooperative and stagnationist regime are the "standard" stability condition that saving responds more strongly to changes in capacity utilization than does investment and the "innocuous" assumption that the response of investment to capacity utilization, holding the rate of profits constant, is positive.

A similar elasticity restriction applies to the exhilarationist regime. By the very definition of exhilaration, the profit share increases with capacity utilization, so it only remains to establish the conditions under which the wage bill does too. Denote the wage bill by Ω and write

$$\Omega = (1 - \pi)\, z\bar{a}^{-1}\, K.$$

Then we have

$$\frac{\partial \Omega}{\partial z} = \left\{ -z\bar{a}^{-1} \frac{d\pi}{dz} + (1-\pi)\, \bar{a}^{-1} \right\} K$$

$$= \left(1-\pi - z \frac{d\pi}{dz} \right) \bar{a}^{-1} K.$$

For positive $d\pi/dz$, $\partial\Omega/\partial z$ is also positive provided

$$\frac{1-\pi}{z} > \frac{d\pi}{dz}. \qquad (17)$$

In short, the distinction between cooperative and conflictual regimes refers to the elasticity of the IS schedule. By contrast, the distinction between stagnationist and exhilarationist regimes refers to the slope of the IS schedule.

Together these two characteristics of the IS schedule characterize wage-led and profit-led growth regimes. A flat and downward sloping schedule--the intersection of cooperative and stagnationist regimes--describes a wage-led growth regime, a result which follows immediately from the definition of wage-led growth as one in which a higher wage share is associated with a higher rate of accumulation. In a world where accumulation depends on profits, this requires a higher rate of profit. Such a conjuncture is at once stagnationist (since under present assumptions the only way a higher wage share can induce a higher rate of profit is by increasing the rate of capacity utilization) and cooperative (since the wage share and the profit rate move together). Every other combination of elasticity and slope corresponds to profit-led growth. The stagnationist/conflictual regime is exceptional in that higher growth and profit rates are achieved at lower rates of capacity utilization. The other two profit-led regimes, which correspond to an exhilarationist IS schedule, are like the stagnationist/cooperative regime in that higher profit and growth rates go along with higher capacity utilization rates.

Enough of taxonomy: it must be recognized that all discussion of the shape of the IS schedule is necessarily hypothetical. The truth is that we know relatively little about its shape even in the neighborhood in which the economy has actually been operating and even less about its global shape; it is a matter of pure conjecture what investment and saving propensities would

be at levels of profit and capacity utilization far removed from those that have obtained in recent history. Nevertheless, we believe that the historical experience of the golden age suggests some general conclusions about the shape of the investment function at least during the 1960s and early 1970s. The key is that wage pressure squeezed profit rates as well as profit margins, a fact inconsistent with a wage-led growth regime. To explain profit squeeze within our framework compels the conclusion that the IS schedule was highly inelastic or upward sloping (or both), that is, either that the economy was in a conflictual-stagnationist regime, as in Figure 8a, or in an exhilarationist regime, as in Figure 8b. The first possibility seems the more likely if we assume that the immediate postwar period was a time in which the assumptions of wage-led growth held, for the IS schedule need only have shifted from being relatively flat to being relatively steep in order to bring about the conditions of profit squeeze.

Profit Squeeze in a Keynesian Perspective: From Cooperation to Conflict

Here, we believe, is how investment demand evolved over the period 1945-1980. In our formulation of $i(r^e(\pi,z))$, there are two steps in the mapping from $\langle z,\pi \rangle$ to I^d/K; investment demand depends on r^e, and r^e depends on z and π. To recapitulate, the step from $\langle z,\pi \rangle$ to r^e reflects the idea that expected profitability depends both on the likelihood of additional capacity being justified by demand conditions, and, assuming the output can be sold, on the profit margin. The step from r^e to I^d/K reflects pure "animal spirits," which according to Keynes, "urge to action rather than inaction" (See Keynes 1936, ch. 12).

It is difficult if not impossible to make a strict separation between the factors which influence one component or the other of the overall mapping from $\langle \pi, z \rangle$ to I^d/K. Some variables, like the cost of capital, the fiscal structure (particularly profit taxes and depreciation allowances), and perhaps the full capacity capital:output ratio, may be analyzed more in terms of their effect on the mapping from $\langle \pi, z \rangle$ to r^e than in terms of their effect on the mapping from r^e to I^d/K. But factors of a more political, social, and cultural character, like the state of class relations or the state of confidence in the international financial system, cannot be neatly compartmentalized.

All these and other considerations were important to the evolution of investment demand over the post-war period. As has been observed, those who embraced Keynes and saw aggregate demand as the key to prosperity were deeply influenced by the depression of the 1930s. Many Keynesians saw the Great Depression as the direct consequence of the unevenness of prosperity in the 1920s. In the United States, for example, profits grew much more rapidly than wages over the '20s, and even Keynesians not completely given over to the gospel of wage-led growth believed that the decline in the wage share had led to a shortfall of demand, which in turn led to the pre-war crisis.

In general Keynesians thought it extremely unlikely that private investment demand would play a very active role in the postwar economy. Even if prosperity were "artificially" maintained by deficit spending, as Keynesians urged, the memory of the Depression and the fear of another would inhibit business from responding to a high profit share with heavy spending on plant and equipment, at least in the short run. Once burned, twice shy.

The remedy for the postwar period was seen as lying in a distributional balance tilted towards wages. In short, stagnationist and cooperative logic were coupled to produce a policy of wage-led growth, particularly in the United States.

This may have been a correct diagnosis of the situation immediately after World War II. Profit margins were high practically everywhere in the capitalist world, higher than before the war broke out. In the United States the productivity gains of the better part of a decade had yet to be translated into higher real wages, and in war-torn Europe and Japan real wages had declined much more than had productivity. Profit margins improved well into the 1950s.

But lacking confidence in the future, fearing that depression, which was widely predicted as the "natural" aftermath of war, would make additional capacity redundant, capitalists were initially reluctant to commit themselves to new plant and equipment. Investment, in short, was not very responsive to the current profit margin; in our terminology pre-war history had an adverse impact on the mapping from the current level of the profit share to the anticipated profitability of investment. Under these circumstances, the IS schedule may well have sloped downward and been relatively flat; the strategy of wage-led growth may have been the best--indeed, the only--game in town.

Wage-led growth would have benefited capital as well as labor. The same history that made the prospective rate of profit and hence investment demand unresponsive to π would increase responsiveness to z, the more so if a high level of capacity utilization could be maintained for a substantial period of time. At the very least, increasing wages would allow capitalists

to earn the same rate of profit--if the increase in volume only made up for the reduction in unit profits.

It is a plausible conjecture that the gospel of cooperative capitalism was a sensible one for the particular circumstances of the immediate post war period. But as time passed, profit margins remained high and even improved; more important, the anticipated depression never materialized. The consequence was that prospective profits increased even more than actual profits: the mapping from $\langle z,\pi \rangle$ to r^e shifted outward. And the derivative i_π increased more than did the derivative i_z. Finally, even if the Strong Accelerator Condition held initially, it need not have continued to hold. And once the prospective rate of profit became sufficiently responsive to the profit share to reverse the inequality of the Strong Accelerator Condition, that is, once

$$i_\pi \pi \quad > \quad i_z z,$$

the IS schedule no longer was consistent with a cooperative regime, even if stagnation remained the order of the day[10].

That is what we believe happened over the first phase of the Golden Age, over the 1950's and into the early 1960's. The shift in the IS schedule is pictured in Figure 9. The 1960's were by and large a period of great prosperity, but beginning in the late 1960's, when real wage pressure began to displace the PE schedule downwards, the equilibrium moved down the

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[10] Dimunition of the fear of depression could produce not only a shift in the IS schedule, but a change in the sign of its slope as well. If anticipated profitability becomes sufficiently responsive either to the actual profit margin or to the actual rate of capacity utilization, the regime can change from stagnationist to exhilarationist.

new, conflictual IS schedule, as in Figure 10. The result was a modest increase in the rate of a capacity utilization, but a fall rather than a rise in the rate of profit.

If this were all that happened, the rate of growth of the capital stock should have fallen as well; given our formulation of saving, capital-stock growth is directly proportional to the profit rate. In fact, the share of profit devoted to saving rose after the golden age began to tarnish (see below, the section headed "Profit Squeeze and Investment Resilience"). If investment demand had not continued to increase, the result would have been to shift the IS schedule downward and to the left. In fact the IS schedule appears to have moved relatively little at this time, so we can infer that investment demand continued to increase, to offset the increase in the propensity to save.

This characterizes the situation into the 1970's. But then new elements enter the picture. First, the cost of energy increases dramatically and the full capacity capital:output ratio increases. Second, aggregate demand management is pursued less aggressively. Finally, towards the end of the 70's, the very integrity of the international financial system begins to play an increasingly important role. The shift in the position of the PE schedule against a steep IS schedule no longer summarizes the demise of the golden age; the part of the story that deals with the capital:output ratio, demand management, and the international financial system must be told in terms of a downward shift in the IS schedule and a decline in the rate of growth associated with a given equilibrium. This is the part of the story represented in Figure 11.

Profit Squeeze and Investment Resilience

Observe that the share of investment in output fell very little over the period we have been considering, except in Japan. Indeed given that the profit share fell markedly, the propensity to save out of profits must have risen--if we assume capitalist economies were operating on or near their IS schedules. But this resilience of the investment share to the fall in profitability should not suggest that profits are irrelevant for accumulation. If the profit margins of the 1950s and early 60's had been maintained in the 1970s and 80's, then investment demand might have continued to increase, perhaps by enough to offset the decline in the full-capacity capital:output ratio caused by the increase in the price of energy. Moreover, to the extent that restrictive demand-management policies were themselves a response to profit squeeze and an attempt to restore profit margins, the case for restrictive policies would have been weakened considerably. In short, no accumulation crisis need have occurred.

This argument does not however imply that a restoration of profit margins would, in the current business climate, produce immediate benefits in terms of growth. It is one thing to maintain the momentum of a long period of high profits and high growth. It is quite another to restore that momentum after a long interlude of desultory performance. If the relatively robust performance of investment over the post-war period is traceable ultimately to a gradual diminution of depressionary fears, then the resurgence of such fears--at present focusing on the weakness of the international financial system--may inhibit the responsiveness of prospective profitability to actual profit margins. Even a substantial

improvement in actual profitability might fail to stimulate an investment boom because of fears that the improvement is only temporary. As at the beginning of the golden age, the stagnationist game of wage-led growth could turn out to be the only game in town!

By Way of Summary

The primary purpose of this chapter has been to release the Keynesian theory of the capitalist economy both from the stagnationist/cooperative straitjacket that has dominated Left Keynesian thought and from the marginal role that the mainstream has accorded Keynesian theory as a theory of no relevance to understanding the functioning of the capitalist economy apart from the short period. In our view neo-Keynesians at Oxford and Cambridge like Roy Harrod and Joan Robinson were developing an important insight of Keynes and Kalecki when they argued that aggregate demand plays a central role in the capitalist economy, in the long run as well as in the short. Furthermore, at least for a large country like the United States or for a large unit like the European Economic Community, for which the small open economy model is of little relevance, investment demand is the centerpiece of the story, both because it is likely to be the most variable and elusive element of aggregate demand, and because of its direct role in the accumulation of capital.

More specifically, this chapter has focused on the dual role of profits in a capitalist economy. Today's profits are, on the one hand, a primary source of saving for the accumulation of business capital. Tomorrow's profits, on the other hand, are the lure which attracts the investor. Under

existing institutions, capital accumulation requires high profits, and a squeeze on profits generally leads to a squeeze on capital-stock growth.

Wages also have a dual character under capitalism. On the one hand, wages are costs to the capitalist. On the other hand, wages, or more precisely, the wages of the employees of other businesses, are a source of demand. High wages are bad for the capitalist as producer but good for the capitalist as seller, especially when demand from other sources is weak.

The Social Democrats and their academic allies, the Left Keynesians, put forward the political and intellectual case for the view that high capacity utilization would resolve the contradiction between high wages and high profits. Emphasizing the demand side, neglecting the cost side, they believed that high wages would contribute not only to high levels of output and employment but also to high levels of profits and accumulation. Capitalists would make up in larger volume what they lost on each unit because of higher wage costs.

The illusion that a new era of "cooperative capitalism" had replaced the antagonistic class relations of an earlier period persisted until a profit squeeze developed in the late 1960s. At this point, the cooperative interpretation of Keynes became increasingly inconsistent with the facts. One could of course deny the facts. Or deny the theory. Or, as a compromise, relegate the theory to the short period, perhaps a period in which economic agents are surprised by government actions.

Our approach has been different. We believe that the problem has been the way a basically sensible conception of the economy was cast into a misleading model of the economy. Our purpose here has been to recast the model so that it retains the sense and the insight of Keynesian theory--

particularly its insistence on profit as the engine of capitalist accumulation.

But the present malaise is not a problem of profits alone. Restoration of profit margins would probably not, at least not very quickly, restore the high levels of investment demand that obtained throughout the golden age and even after its demise. As Schumpeter is reputed to have remarked, one no more restores economic health by simply revising bad economic policies than one restores the health of someone who has been run over by a truck by simply backing the truck off. A healthy capitalism requires profitability, but in circumstances like the present profitability may follow from wage-led rather than from profit-led growth policies. Over the longer run profit-led growth may once again be feasible, but the transition will surely require active demand management, presumably a possibility only after a successful reform of the international financial system.

The alternative is a much more radical break with the past, a new institutional structure that would decouple accumulation from profitability altogether, as was presumably the ultimate intention of the Meidner Plan (Meidner, 1978) of a decade ago. We question the timeliness of such a radical rupture, but we would hasten to add that the two alternatives, restoring profitability and freeing accumulation from dependence on profitability, need not be altogether disjoint. In fact, in our view the essential elements of any left alternative to mainstream policies for restoring growth are 1^{o} to recognize the present need for profitability, 2^{o} to recognize the ultimate desirability of making accumulation independent of profitability, and 3^{o} to provide a bridge from here to there.

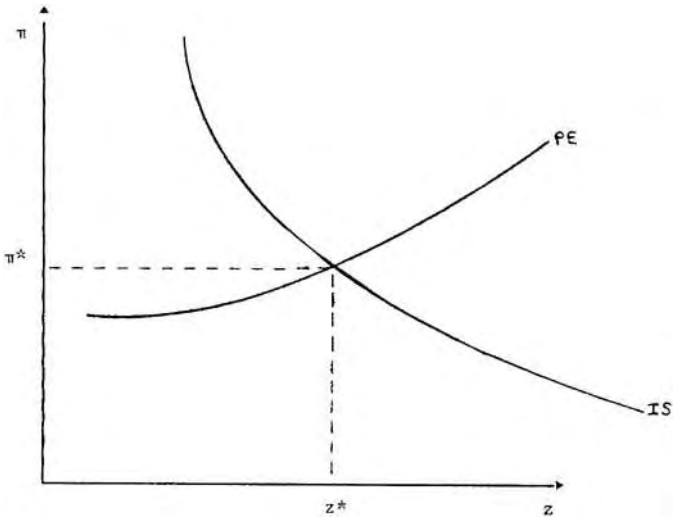


Figure 1. Macroeconomic Outcome Jointly
Determined by Aggregate Demand (IS) and Aggregate Supply (PE).

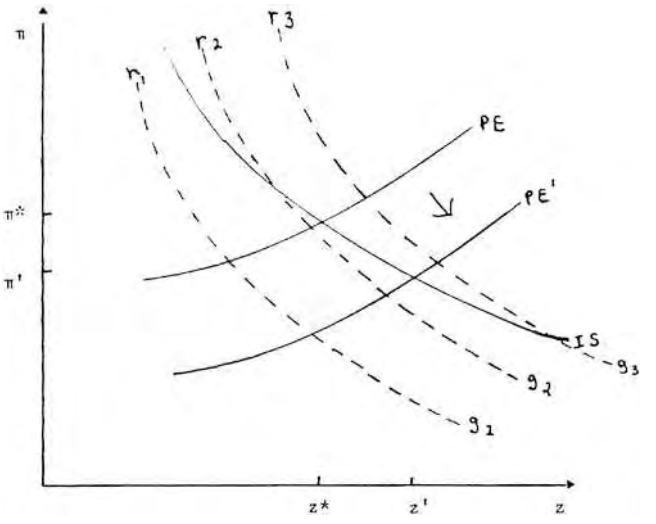


Figure 2.
Displacment of Equilibrium
by an Increase in Real Wages

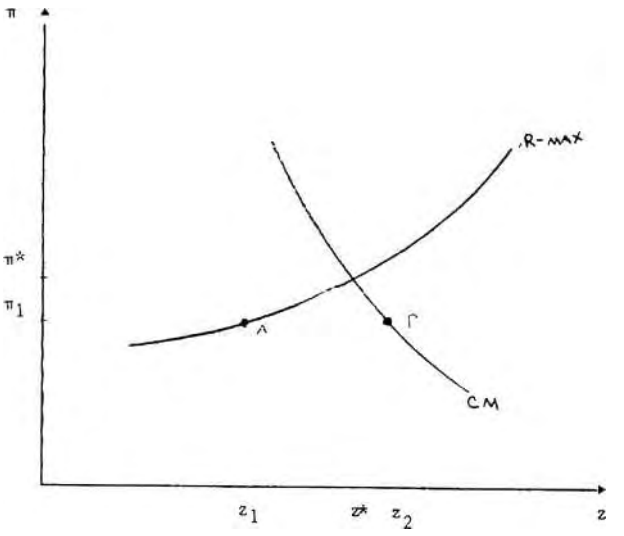


Figure 3. Long Run Neoclassical Equilibrium.

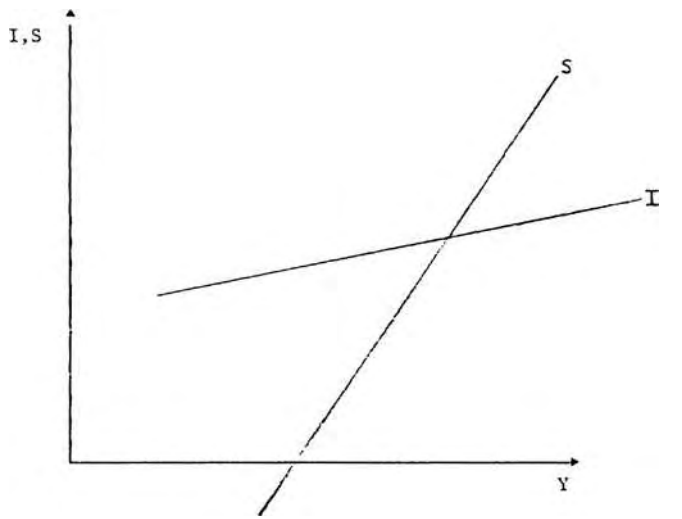
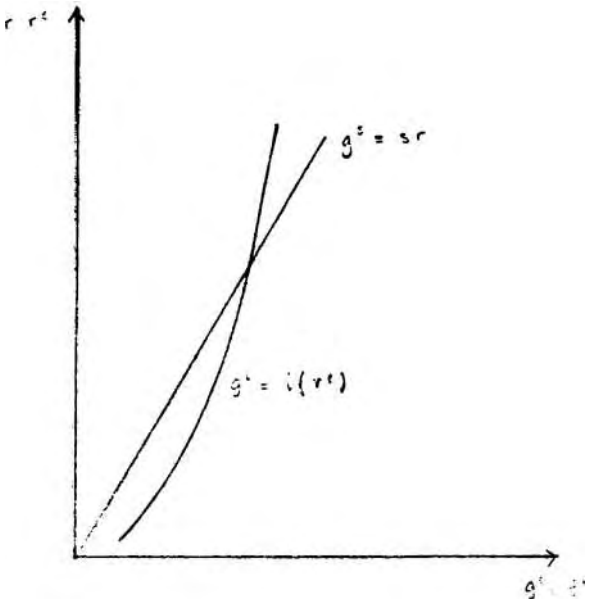
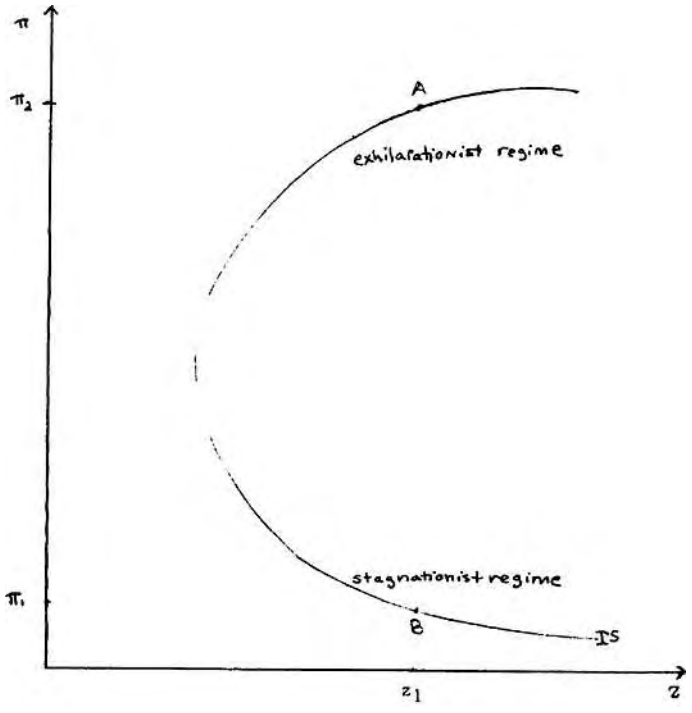


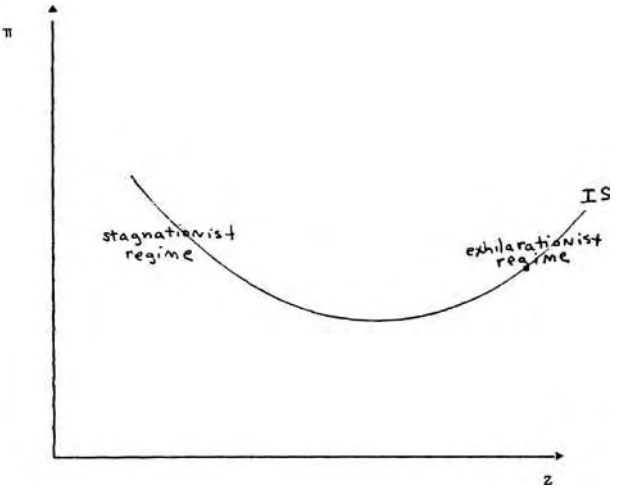
Figure 4. A Stable Equilibrium Assured by Saving (S) Being More Responsive than Investment (I) to Changes in Output.



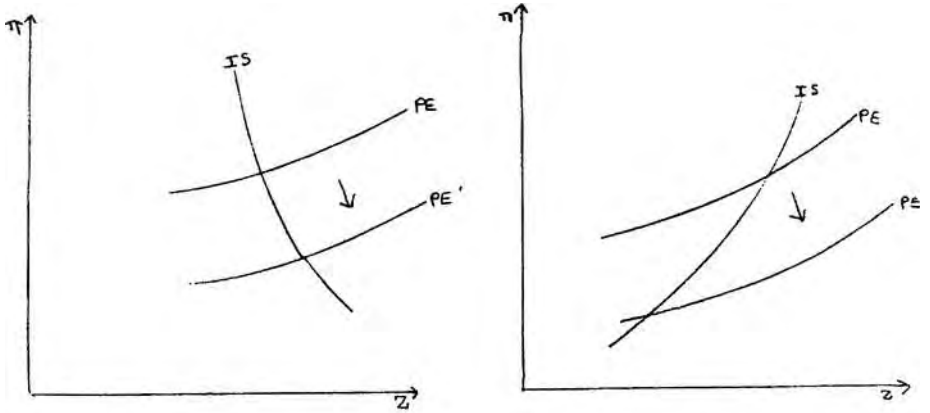
5. Robinsonian Equilibrium Assured
by Saving Being more Responsive than Investment
to Changes in Profitability.



A "C"-Shaped
Figure 6. IS Schedule with Stagnationist and Exhilarationist Branches.



A "U"-Shaped
Figure 7. IS Schedule with Stagnation and Exhilaration Dependent on Capacity Utilization.



(a) A steep, downward sloping, IS schedule.

(b) An upward sloping IS schedule.

Figure 8. High Employment Profit Squeeze.

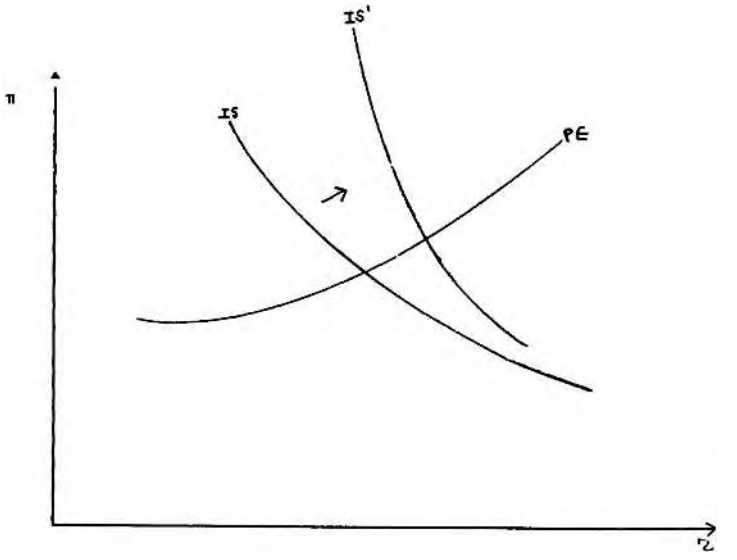


Figure 9. Movement of the IS Schedule
Over the 1950s and 1960s

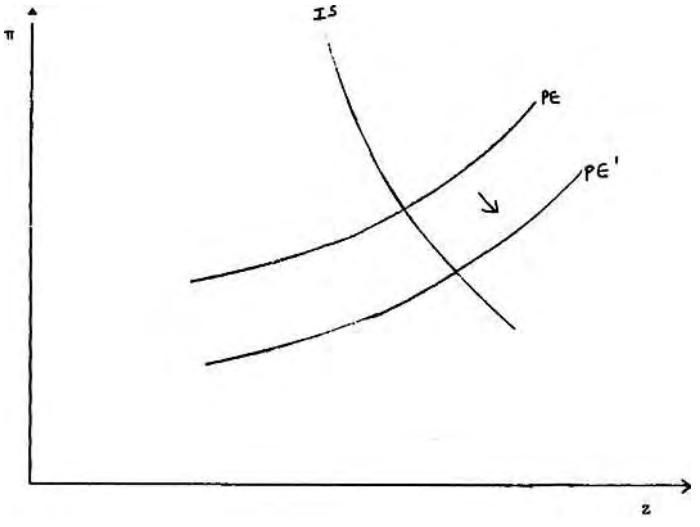


Figure 10. A Crisis in Two Parts:
Movement of the PE Schedule
in the late 1960s and early 1970s.

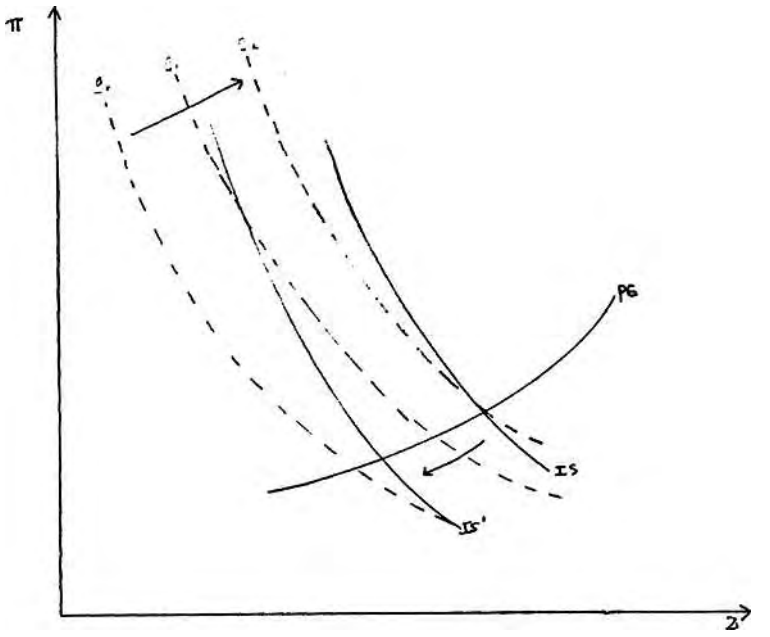


Figure 11. Crisis, Part Two.
Both the IS schedule and the Growth Isoquants
Shift Adversely

Appendix

Accumulations and Profits in the Industrialized Economies

Source: "Accumulation, Profits and Saving: Data for Advanced Capitalist Countries 1952-1983"

Assembled by Philip Armstrong and Andrew Glyn

Computed by Gillian McNamara

Oxford Institute of Economics and Statistics, 1986.

21) e CORPORATE BUSINESS NET PROFIT SHARE *
percentages.

YEAR	ACC	ACC-USA	EUROPE	CANADA	FRANCE	GERMANY	ITALY	JAPAN	UK	USA
1951	24.7	26.0	25.5	23.2	27.5	26.9	27.3	30.6	22.2	23.8
1952	23.0	25.8	25.5	23.4	25.4	29.7	24.5	28.6	22.7	21.0
1953	21.9	25.1	24.3	22.3	22.9	28.2	22.4	31.3	22.9	19.6
1954	21.5	24.5	24.2	19.3	22.5	27.8	22.9	28.7	23.1	19.2
1955	23.8	25.5	24.9	25.7	21.8	29.6	21.7	28.2	24.4	22.4
1956	22.2	25.3	24.0	28.3	20.9	29.2	21.6	30.4	22.7	19.9
1957	22.2	26.1	24.4	23.2	22.2	29.6	21.2	35.7	22.5	18.9
1958	20.9	25.0	23.6	22.3	21.0	28.5	21.4	33.1	21.7	17.4
1959	22.8	26.0	24.3	22.9	20.1	29.7	22.4	35.0	22.9	20.1
1960	22.8	27.6	25.2	22.4	21.7	29.4	23.1	40.0	24.5	18.4
1961	22.5	26.6	23.3	23.0	20.9	27.3	22.3	40.5	21.5	18.6
1962	22.4	24.9	21.9	24.0	18.4	25.7	20.2	36.3	20.6	20.0
1963	22.7	24.6	21.3	25.0	19.0	24.5	17.0	35.8	22.5	21.0
1964	23.3	24.9	21.7	26.3	20.0	25.7	14.8	34.5	23.2	21.9
1965	23.6	24.2	21.8	24.8	20.1	25.2	17.3	31.8	22.3	23.0
1966	23.3	24.0	21.1	24.0	20.6	23.8	18.4	32.9	20.2	22.5
1967	22.9	24.9	21.3	24.7	21.3	23.8	18.4	35.2	20.5	21.0
1968	23.5	26.6	22.0	25.8	21.4	25.0	19.3	38.9	20.8	20.5
1969	22.4	26.2	22.2	25.0	22.4	24.6	20.1	36.4	20.6	18.4
1970	20.8	25.6	20.4	23.5	21.6	22.6	18.7	38.4	17.5	15.5
1971	20.4	23.8	19.6	23.1	21.6	21.5	15.8	33.6	18.1	16.6
1972	20.7	24.0	19.9	24.7	21.8	21.0	16.4	32.8	19.0	17.0
1973	20.0	23.0	18.9	27.4	21.1	19.8	14.8	30.4	18.8	16.7
1974	17.3	20.0	16.1	27.8	18.8	17.6	14.3	26.2	12.6	14.3
1975	17.0	17.2	12.7	23.8	15.7	16.5	6.5	25.0	9.3	16.7
1976	17.7	18.1	13.9	23.0	13.7	18.3	10.0	25.6	11.5	17.3
1977	18.6	19.1	15.4	22.4	15.3	18.6	8.3	25.6	17.3	18.0
1978	19.0	20.2	16.0	24.4	15.2	19.8	8.7	27.7	17.8	17.5
1979	18.4	20.7	16.7	29.2	15.5	20.8	13.2	26.6	15.3	15.7
1980	18.0	21.1	18.0	30.4	14.3	18.7	15.6	28.6	14.5	14.4
1981	18.0	20.0	14.9	26.7	12.4	17.9	12.0	27.6	16.5	15.7
1982	17.0	19.7	15.5	22.2	11.8	18.4	11.4	26.7	19.7	13.7
1983	18.2	20.1	16.3	24.3	12.4	20.3	7.1	25.8	23.5	18.0

* Net profits divided by net value added of private sector and public enterprises.
Series for Canada, Germany and Italy are approximations to non-agricultural, non-financial business including imputed profits of self-employed;
Series for UK includes North Sea Oil.

22) 7 CORPORATE BUSINESS NET PROFIT RATE *
percentages.

YEAR	ACC	ACC-USA	EUROPE	CANADA	FRANCE	GERMANY	ITALY	JAPAN	UK	USA
1951	17.5	14.6	14.8	12.4	10.3	21.7	15.0	15.2	12.9	20.2
1952	15.9	14.8	15.1	12.6	9.0	24.8	13.7	14.2	12.6	17.0
1953	15.4	14.9	15.0	11.5	8.6	24.0	13.2	18.9	13.0	15.9
1954	14.7	15.0	15.3	8.4	9.0	23.3	14.3	19.9	13.6	14.5
1955	14.4	16.0	16.2	12.9	9.3	25.8	14.2	18.3	13.9	13.0
1956	15.6	15.6	15.8	13.2	9.5	24.9	14.3	18.3	12.7	15.5
1957	14.7	15.7	15.8	10.8	10.8	24.4	13.8	22.5	12.3	13.8
1958	13.1	14.8	15.1	9.1	10.5	22.5	14.3	20.3	11.6	11.6
1959	15.0	15.3	15.7	9.4	9.8	23.2	15.5	20.4	12.3	14.7
1960	14.9	16.3	16.5	8.8	11.2	22.9	16.6	25.7	13.5	13.5
1961	14.4	15.2	14.9	8.9	11.0	20.2	16.2	26.4	11.2	
1962	14.9	14.1	13.6	9.3	10.2	18.0	14.6	24.3	10.4	[illegible]
1963	15.2	13.7	13.0	9.9	10.4	16.2	12.6	23.3	11.4	16.9
1964	16.0	14.1	13.3	10.7	11.4	17.0	10.4	23.3	11.8	18.2
1965	16.7	13.8	13.2	10.0	11.6	16.5	11.9	21.4	11.2	20.0
1966	16.4	13.5	12.6	9.7	11.9	15.1	12.8	23.0	9.8	19.8
1967	15.6	13.8	12.5	9.6	12.6	14.3	13.4	26.3	9.5	17.6
1968	16.2	15.4	13.4	10.2	13.2	15.9	14.9	31.6	9.6	17.2
1969	15.4	15.6	13.8	9.7	14.8	15.8	15.6	30.5	9.3	15.1
1970	13.5	15.0	12.8	8.6	14.3	14.5	15.0	32.0	7.5	11.8
1971	12.9	13.4	11.7	8.2	14.6	13.3	11.7	24.8	7.4	12.4
1972	13.1	13.2	11.7	8.9	14.7	12.8	12.0	22.7	7.7	13.0
1973	12.9	12.7	11.3	10.7	14.2	12.2	11.0	19.8	8.0	13.1
1974	10.4	10.5	9.3	10.7	12.2	10.4	10.2	15.2	4.6	10.2
1975	9.5	8.3	8.9	8.3	9.4	9.2	4.1	13.5	3.3	10.9
1976	10.2	9.1	7.7	8.1	7.9	10.7	6.6	14.5	4.0	11.6
1977	10.8	9.6	8.5	7.7	9.2	11.0	5.3	14.4	6.3	12.4
1978	11.0	10.2	8.9	8.0	9.3	11.7	5.6	15.8	6.5	12.2
1979	10.6	10.5	9.4	9.4	9.5	12.2	9.2	14.7	5.4	10.7
1980	9.9	10.3	8.8	9.6	8.5	10.5	11.4	15.4	4.9	9.3
1981	9.6	9.3	7.8	8.5	7.2	9.8	8.3	14.4	5.5	10.0
1982	8.7	9.1	8.0	6.8	6.8	9.6	7.7	13.7	6.9	8.1
1983	9.5	9.2	8.4	6.9	7.1	10.7	4.5	12.9	8.6	9.8

* Net profits divided by net fixed capital stock (mid-year)
of private sector and public enterprises.
Series for Canada, Germany and Italy are approximations to non-agricultural,
non-financial business including imputed profits of self-employed;
Series for UK includes North Sea Oil.

651 26 BUSINESS FIXED INVESTMENT *
percentages of GDP,current market prices.

YEAR	ACC	ACC-USA	EUROPE	CANADA	FRANCE	GERMANY	ITALY	JAPAN	UK	USA
1952	10.0	10.5	9.9	13.8	12.1	11.9	13.1	13.3	5.3	9.5
1953	10.3	10.8	9.7	14.7	11.3	12.2	12.7	13.7	5.1	10.0
1954	10.4	11.0	10.1	14.1	10.9	12.8	12.4	13.7	6.2	9.9
1955	10.8	11.8	11.3	14.4	11.6	14.6	12.5	12.7	7.3	10.1
1956	11.8	12.9	11.7	16.7	12.0	14.9	12.6	16.4	7.9	11.0
1957	12.2	13.6	12.0	17.8	12.7	13.9	13.2	19.0	8.8	11.0
1958	11.2	13.2	12.0	15.5	12.6	14.0	12.3	17.3	9.2	9.5
1959	11.3	13.3	12.0	14.7	12.2	14.1	12.6	18.0	9.2	9.6
1960	12.1	14.2	12.4	14.3	12.2	14.2	13.9	21.2	9.7	10.2
1961	12.6	15.2	13.1	12.2	13.4	14.6	14.3	24.0	10.5	10.1
1962	12.5	14.9	13.0	11.8	13.3	14.7	14.3	23.3	9.9	10.1
1963	12.3	14.8	12.8	12.1	13.5	14.1	14.4	21.9	9.8	10.1
1964	12.4	14.4	12.3	13.5	12.9	14.2	11.9	21.7	9.9	10.5
1965	12.6	13.9	12.0	14.5	12.6	14.3	10.2	19.5	10.1	11.4
1966	12.9	14.0	11.9	15.8	13.1	13.7	10.2	19.8	9.8	11.8
1967	12.8	14.2	11.6	14.6	13.2	12.2	11.2	21.5	9.7	11.3
1968	12.8	14.3	11.4	12.9	12.4	11.8	11.4	22.3	9.9	11.3
1969	13.3	15.0	11.9	12.8	12.8	13.0	11.5	23.4	9.8	11.6
1970	13.7	15.8	12.5	13.1	12.8	14.3	11.8	24.1	10.4	11.3
1971	13.2	15.4	12.7	12.8	13.1	14.5	11.9	22.4	10.6	10.7
1972	13.1	14.8	12.3	12.5	13.1	13.5	11.4	21.2	10.4	11.1
1973	13.6	15.3	12.3	13.0	13.3	12.5	12.5	22.4	10.8	11.7
1974	13.6	15.0	12.1	13.4	13.3	11.2	13.3	21.8	11.1	12.0
1975	12.7	14.0	11.3	14.7	12.2	10.9	11.5	19.5	10.7	11.2
1976	12.5	13.7	11.6	13.5	13.0	11.1	11.5	18.3	10.8	11.1
1977	12.8	13.5	11.6	13.4	12.6	11.3	11.1	17.4	11.3	11.6
1978	13.0	13.5	11.7	13.3	12.3	11.8	10.5	17.2	12.0	12.5
1979	13.6	14.1	11.9	14.4	12.1	12.2	10.7	18.3	12.3	13.0
1980	13.7	14.5	12.2	15.3	12.7	12.5	11.1	18.9	12.0	12.7
1981	13.6	14.3	11.8	16.1	12.3	12.1	10.9	18.6	11.4	12.7
1982	13.0	13.8	11.3	15.0	12.0	11.7	9.7	18.0	11.5	12.0
1983	12.3	13.2	10.9	12.6	11.4	11.9	8.6	17.4	10.9	11.3

* Total fixed investment less government investment less housebuilding
It is therefore understated by extent (substantial in U.K. for example)
of government housebuilding.

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