5.3.6 Conclusions: Disequilibrium Dynamics.

Diagram 5.10 summarizes the conclusions of the previous three sections concerning the movements of \( z \) and \( \pi \). It is split into four main areas which can be identified with four phases of a hypothetical abstract business cycle (areas A-D) and two areas \( (A_2, \text{ and } B_2) \) that are associated with two situations of an economy in an underconsumption trap. In part (a) below, we will describe the hypothetical business cycle. In part (b), the underconsumption trap will be examined. In part (c), the no inflation or deflation assumption will be weakened to see if any of the results are changed. In part (d), the \( rr \) curve that we used in chapter 4 will be derived. Finally, in (e), some empirical evidence will be presented.

(a) The Business Cycle.

Consider the abstract cycle. To do so, assume that changes in the rate of capacity utilization swamp contrary changes in the capacity-capital ratio. Thus, only changes of \( n, P, \) and \( z \) are relevant to determining the movement of the rate of profit and \( G_e \). However, we will note the changes in \( h \) because they are relevant to empirical work.

In phase A (the early expansion), the economy has a high level of unemployment, loose raw-material markets, and excess capacity. The economy is growing faster than the medium-term equilibrium rate. A harbinger of things to come is seen in the fall of \( h \), but since \( P, n, \) and \( z \) are rising, the economy continues to grow. Since raw-material and labor-power supplies are relatively elastic here, demand effects (e) dominate. The rates of profit and capacity utilization are rising, so the economy moves to higher rates of economic growth and to phase B.

In transition to phase B, there is a point where \( z = z^* \). However, since \( G_e > G \), the economy doesn't reach medium-term equilibrium. Since
Diagram 5.10: Medium-Term Disequilibrium Dynamics.
\( G_e > 0 \), \( z \) continues to rise while \( h \) continues to fall. \( p \) and \( m \) are momentarily constant.

In phase B (the late expansion), the economy has a low level of unemployment, tight raw material markets, and relatively high use of capacity. The economy is growing faster than \( G \). Now the cost-side factors \( z \) are all falling. Also, they are more important than in phase A, since supplies are relatively inelastic. The rate of capacity utilization is still rising. Eventually cost-side effects swamp demand effects. This is especially true when \( z > 1 \) and \( g_3 > 0 \), \( g_4 > 0 \). Here diminishing returns set in. So the rate of profit falls and with it, the rate of growth. The economy moves into phase C.

In the transition from B to C, there is a point where \( G_e = G \) and \( h \) is momentarily constant. \( m \) and \( p \) continued to fall, however. \( z \) is momentarily constant, about to start falling.

In phase C (the early contraction), the economy still has tight labor-power markets and raw-material markets and high levels of capacity utilization. \( h \) is now rising, while \( z \) is falling. Not only is the short-term equilibrium rate of growth less than \( G \), but it may be negative. Since \( z \) is falling, the economy moves to phase D.

In the transition to D, there is a point where \( z^* = z \) and \( m \) and \( p \) are constant momentarily. However, \( z \) is still falling and \( h \) rising, since \( G_e < G \).

In phase D (the late contraction or stagnation), the unemployment rate is high, raw-material markets are loose, and there is a lot of excess capacity. All of the elements of \( a \) are rising while the rate of capacity utilization is still falling. Since supplies of labor-power and raw materials are relatively elastic (wages and raw material prices
may be sticky downward), the demand-side factors can dominate the deter-
mination of the rate of profit. The economy might get stuck in the
underconsumption trap. Wage cutting might cause an underconsumption
trap, since investment is stagnant. Debts accumulated in the expansion
will hold down both consumption and investment. There is also the
chance that imbalances on the supply side will be purged, so that the
rate of profit will rise, and with it, the rate of growth. Thus, the
economy can also move to phase A.

In the transition to phase A, there is a point where \( G = G_e \). Here
\( z \) and \( h \) are momentarily constant. But since \( m \) and \( P \) continue to rise,
so does the rate of profit, so that the economy moves to phase A and
the cycle begins anew.

Does the economy converge to or diverge from \((G, z^*)\)? Unlike the
standard cyclical growth models (see Allen, 1968, ch. 20) that are
based on the rigid interaction of the accelerator and the multiplier,
the answer is not absolutely clear. The economy will diverge if invest-
ment is very volatile and responds strongly to changes in \( r \) and \( z \). The
cumulative factors discussed in section 4.3 (especially credit expansion)
suggest that the economy will be volatile and will diverge from equili-
brum. If, on the other hand, the economy converges, it will converge
to an unstable equilibrium, so that it will move to disequilibrium again.

If it diverges from medium-term equilibrium, it will not do so
forever. First, there are technological diminishing returns for \( z > 1 \).
Second, there are diminishing returns in machinery production when
\( G > \bar{G} \). These are two ceilings that the economy can "bounce off." This
process is analogous to that of Hicks' (1949) multiplier-accelerator
model except that the mechanism of this "bouncing" is more obvious than
in Hicks' analysis: when the economy hits the ceiling, it has a negative effect on the profit rate and accumulation. There is also a floor on the economy's fluctuations that is equal to some negative-valued \( G_e \) where zero replacement investment is done. There is no real floor on capacity utilization except \( z = 0 \).

On the ceilings, if \( z^* < 1 \) and \( G < \tilde{G} \) (as has been assumed above), the economy is not in medium-term equilibrium; \( \alpha \) and \( z \) are thus not constant and the economy moves away. A similar analysis applies to the floors.

If \( \tilde{G} = G \) or \( z^* = 1 \), then the economy can be on a ceiling and in medium-term equilibrium simultaneously. But this equilibrium is unstable. If \( z^* > 1 \) or \( G > \tilde{G} \), this medium-term equilibrium is not only unstable but unlikely, since it will be in the area of diminishing returns.

(b) The Underconsumption Trap.

As noted above, it is possible for the economy to get stuck in the underconsumption trap, where \( z \leq z_T \). Here, \( G = G_{SA} \) so the above analysis cannot be applied.

Consider first the case where \( z = z_T \) and \( G_e < G \) (the transition from phase D to phase \( D_T \)). Here, \( \alpha \) is rising and \( z \) is falling. Since \( G = G_{SA} \), there is no tendency for \( z \) to change due to changes in \( \alpha \). The short-term equilibrium rate of growth will rise. If the rise of \( G_e \) dominates the fall of \( z \) (due to \( G_e < G \)) the economy will move to area \( A_T \) where \( z < z_T \) and \( G_e > G \). Otherwise, the economy moves to area \( B_T \).

In \( B_T \), \( G_e < G \) and \( z < z_T \), while \( \alpha \) is rising and \( z \) is falling. Here, the rise in \( \alpha \) encourages the fall in \( z \), since \( G_{IA} < G_{SA} \). Also, the growth rate will fall (if the sign of the numerator of (26) is preserved). So the economy will sink deeper and deeper.
It is possible that the economy will end up on the ray between $D_{\frac{T}{k}}$ and $A_{\frac{T}{k}}$ where $G_e = G$ and $z < z^*_e$ (though not if the economy starts in $D_{\frac{T}{k}}$, unless the government intervenes). Here, $z$ and $h$ are constant while $p$ and $m$ are rising. So, $G_e$ and $z$ should fall: the economy should go to area $D_{\frac{T}{k}}$.

In the area $A_{\frac{T}{k}}$ (where $G_e > G$ and $z < z^*_e$), $p$ and $m$ are rising while $h$ is falling. Here, $z$ is rising. Contradictory forces are at work: the rise of $z$ and the fall of $h$ are pushing the economy out of the trap while the rise of $p$ and $m$ are pulling the economy down. The result is indeterminate. The economy could move to region $D_{\frac{T}{k}}$ or to $A$.

On the ray $z = z^*_e$, $G_e > G$ (in transition between $A_{\frac{T}{k}}$ and $A$), changes in $g$ leave $z$ unchanged. It is presumed that the rise in $p$ and $m$ dominate the fall of $h$ so that $G_e$ rises. $z$ is rising because $G_e > G$, so the economy moves to phase $A$.

At point $F$ (where $G_e = G$ and $z = z^*_e$), $p$ and $m$ are rising while $z$ and $h$ are constant. The rise of $p$ and $m$ has no effect on $z$ because $G_{f_{12}} = G_{e_{12}}$. But $G_e$ will rise, so that the economy moves to the case discussed in the previous paragraph.

A special case is that of what might be called the "Baran and Sweezy economy" or the "Deadly Knife-edge." Here, $z^*_c = z^*$. This implies that if $z > z^*$, the economy would fall to $z < z^*$ because costs would rise and squeeze the rate of profit. Then, where $z$ is less than $z^*$, the fall in costs would lead to further decline and stagnation. The economy could never reach a state of even cyclical growth without massive government intervention.
(c) The Effects of Price Changes.

At this point, we should weaken the assumption that there is neither inflation nor deflation. It seems likely that falling costs and excess capacity will put a downward pressure on prices. Chronic inflation, however, will be analyzed in the next chapter. Here, rather than assuming constant prices, we assume a constant ceiling on prices ($p_{\text{max}}$). That is, replace (11) by the assumption that

$$p = \min(p_{\text{max}}, p_{\text{markt}}); \text{ that is, when } p_{\text{markt}} = p_{\text{max}}, p = 0 \quad (11')$$

where $p_{\text{markt}}$ is the "market price" determined by cost and demand-side pressures.

How does this change short-term analysis? Consider an autonomous downward shift in the $G_t$ schedule, so that $I/K$ is lower at each level of the rate of profit. With prices no longer rigid downward, price deflation is a substitute for falls in the rate of capacity utilization in this situation. But since in the short-term cost-side factors do not change (that is, $\alpha$ would be constant if output prices were constant), price deflation has the same effect on the rate of profit as do falls in the rate of capacity utilization. Thus, the effects on the rates of investment and saving ($G_s$ and $G_p$) will also be identical to those of a fall in $z$. In the rarified world of theory, it is possible to imagine a world where all aggregate demand adjustment is done through price changes, so that $z = 1$ at all times. In this case, we would redraw diagram 5.4 (and similar diagrams) with the price level, rather than $z$, on the horizontal axis. We can then posit the existence of a $p_1$ (given costs) below which investors are so disheartened that they believe that any investment will simply cause a fall in prices (if the economy produces...
increases. This brings us to the second aspect of the determination of $P_{mk}:$ capitalists want to raise prices to protect the rate of profit as costs increase. But it is unlikely that they can protect the rate of profit as demand—and the rate of capacity utilization—falls. This behavior is represented by the assumption that capitalists want to maintain a normal rate of profit ($r^0$) at $z = 1$. If $r^0 < r^N$, they will want to raise prices; if $r^0 > r^N$, however, they will not as willingly cut prices, as noted above.

This discussion can be represented formally as follows:

$$P_{mk} = \max(p_{npr} + k \cdot p_{npr}) \quad 1 \geq k > 0 \quad (59)$$

where $p_{npr}$ is the rate of inflation determined by a move from the current price level to a price set assuming $r^N$ is received. The variable $k$ is the adjustment coefficient. Equation (59) implies that when $p_{npr}$ is negative (costs falling), $P_{mk} = k \cdot p_{npr}$ which is of smaller magnitude (and negative). The stickier prices are, the lower is $k$. It should fall as an economy becomes more oligopolistic and less open to foreign competition. If $k = 0$, then we are in a situation like that where we assumed prices constant. Prices will never fall and therefore get stuck on the ceiling ($p = p_{\text{max}}$) if at any time they reach that level.

Now we are ready to reanalyze the medium term. For simplicity, consider only changes in the labor-power and raw-materials markets. In phases A and D, costs are falling. With constant prices, $m$ and $P$ would rise. If prices were to fall at the same rate as, or faster than, costs, then the rate of profit would not rise, and might actually fall, so that imbalances would not be pruned. Thus, the economy would not recover in the way described in part (a) of this section: the fall in the rate of
profit would continue. But when the economy gets into the underconsumption trap region, the fall in the rate of profit as costs fall will cause perverse behavior, that is, a recovery. This "recovery" would push the economy into region A or D, so that the economy would again fall into the trap. The assumption that prices are sticky downward avoids this perverse behavior, so we can employ the discussion of part (a) with only minor modifications, i.e., (1) that prices bear some of the burden of adjustment to aggregate demand changes, and (2) that because prices fall rather than staying perfectly rigid, it will take longer for the recession's purgative effect to raise the rate of profit.

In phases B and C, we see increasing costs, though for phase C, they are increasing at a decreasing rate. For part of the expansion, capitalists will be able to maintain a constant (normal) profit rate. With this pricing behavior, increasing costs are no problem to capitalists. There is no full employment profit squeeze, and no crisis. But since we have assumed that there is a ceiling on prices, the crunch will come eventually. The new assumption simply means that it will be delayed. Unfortunately for capitalism, this delay of the crisis implies that there is a longer time for imbalances to accumulate. This implies that a longer or deeper recession will be needed to purge these imbalances.

Thus, we have two conclusions from the analysis of the effects of price changes. First, they allow the economy to adjust to aggregate demand changes through price changes instead of swings in the rate of capacity utilization. This is as in normal Keynesian analysis. Second, assuming the price behavior represented by equations (11') and (39), price changes allow the economy to accumulate more imbalances in the boom and imply that it will take longer to purge these imbalances from the
system. This conclusion does not follow from static and demand-oriented Keynesian analysis.

How do the basic equations of the model change when price changes are allowed? Consider the short-term first. \( I / K = \frac{\Delta P_I}{P} + \frac{\Delta S}{P} \) while \( S / K = \frac{\Delta S}{P} + \frac{\Delta P}{P} \) where \( \Delta P_I \) and \( \Delta S \) are the rates of growth of the stock of means of production warranted by saving and investment. We are assuming that both saving and investment determine the same \( p_1 \). Thus, in short-term equilibrium:

\[
\frac{\Delta P_I}{P} = \frac{\Delta S}{P} = \frac{\Delta c}{P} - \frac{\Delta P}{P} = \frac{\Delta c}{P} - \Delta p_1 \quad (2')
\]

Since \( pQ^P = h \cdot p_1 \cdot MP \) and since \( h \) and \( p/p_1 \) are constant in the short term,

\[
\dot{Q}_P = MP_e \quad (61)
\]

With a constant \( z \),

\[
\dot{Q}_e = \dot{Q}_P = MP_e \quad (62)
\]

Finally, with given \( z\).

\[
\dot{Q}_e = \dot{p} + \dot{Q}_e \quad (63)
\]

Next consider the medium-term equations. The medium-term equilibrium rate of growth is

\[
G = \dot{q} = \Delta N + \dot{Q}_e = \dot{p} + \dot{Q}_P \quad (12')
\]

In medium-term equilibrium,

\[
G_e = G \quad \text{or} \quad \frac{\Delta P_I}{P} + \frac{\Delta S}{P} = \frac{\Delta P}{P} + \frac{\Delta S}{P} \quad (13')
\]

This implies that if \( G_e < \overline{G} \), \( \frac{\Delta S}{P} = \frac{\Delta P}{P} \). For the labor-power market,
\[ m' = \dot{p} + q(U) - w(U) - \delta_{3} z \tag{36'} \]

For raw materials,
\[ \dot{p} = p - p_{m}(T) - P_{m} \tag{64} \]

For the capacity-capital ratio, we use formula (56). Assuming that \( C_{e} \) is less than \( C_{o} \), so that \( p/p_{1} \) is constant, the formulas determining \( U, T, \) and \( z \) can simply be restated by replacing \( (G_{e} - G) \) with \( \delta_{e} - \delta_{p} \).

(d) The \( rr \) curve.

In chapter 4, we utilized the "\( rr \) curve" which showed that as \( y_{1} \) rises, the rate of profit first rises (as aggregate demand effects dominate) and then falls (as aggregate cost effects dominate). This curve can be derived given the analysis above.

We are considering a number of given investment rates \( (C_{1}^{2}, \ldots, C_{1}^{5}) \), where \( C_{1}^{3} = G \). That is, investment is assumed to be determined independently of the rates of capacity utilization and profit. The actual rate of profit that results is determined by the interaction of investment and saving. Thus, the shape of the \( rr \) curve depends on the nature of the saving function. Assume initially that the \( G_{e} \) curve goes through the medium-term equilibrium point \( (G, z^{*}) \) as in diagram 5.11. Also assume that this curve does not shift as \( y \) changes. We can then see that for a series of investment-warranted growth rates, there results a series of short-term equilibrium rates of capacity utilization \( \{z_{1}^{*}, \ldots, z_{5}^{*}\} \), where \( z_{3}^{*} = z^{*} \) and short-term equilibrium rates of profit \( \{r_{1}^{*}, \ldots, r_{5}^{*}\} \), where \( r_{3}^{*} = r^{*} \). These rates of profit are shown on the \( rr \) curve in the lower quadrant of diagram 5.11. While the curve labelled "\( z^{*}\)" is drawn assuming that \( \delta_{e} \) is constant, the \( rr \) curve (which includes \( r_{1}^{*}, \ldots, r_{5}^{*} \) is
Diagram 5.11: Derivation of the rr Curve.
drawn incorporating medium-term influences. That is, the \( rr \) curve shows the effects on a when \( z \neq z^* \).

For \( z > z^* \), costs rise as costs rise (since given the saving function, the economy is in phase A) and since there is a ceiling on output prices. In the shorter term, the \( rr \) curve is closer to the \( r \) curve. As imbalances accumulate, the \( rr \) curve will rotate: the rate of profit at \( z^4 \) will become lower, closer to the horizontal axis, while the rate of profit at \( z^4 \) will fall to a smaller extent.

For \( z < z^* \), costs will fall. But they will not fall as quickly as they rise in phase A; markets are more "elastic" here. At the same time, for \( z < z^* \), prices will fall, so that the upward pressure on \( a \) resulting from falling costs are in part negated. Thus, though the \( rr \) curve (showing medium-term effects) is farther from the horizontal axis than is the \( r \) curve (which is drawn for constant \( a \)) it is much closer to the \( r \) curve than it is for \( z > z^* \). That is, aggregate demand effects dominate cost-side effects; the rate of capacity utilization is the key determinant of the rate of profit.

Cost-side effects react back on the saving function. Thus, we see a different saving function \( G_3^4 \). Above \( z^* \), it is lower than \( G_3^4 \) because the profit rate squeeze leads to lower saving rates. Below \( z^* \), the slight rise in \( r \) means a higher \( G_3^4 \) at each \( z \). In the former case, the decline of \( G_3^4 \) to \( G_3^4 \) implies that \( z \) is further from \( z^* \) due to multiplier effects. For example, for \( G_3^4 \), the result of \( z^{4'} \) rather than \( z^4 \) rather than \( z^4 \). For the latter case, that of \( z < z^* \), saving rises relative to \( G_3^4 \) as \( rr \) moves away from the horizontal axis. For a given investment level, \( G_3^4 \), we get \( z^{2'} \) rather than \( z^2 \) and \( r^{2'} \) rather than \( r^2 \).

The \( rr \) curve (drawn in the \( r, z \) space) does not shift. Rather, the point
on this curve that corresponds to each $G_t$ changes as we introduce the effects of profit rate changes on $G_0$. The greater the magnitude of $G_t - G$, the greater will be the magnitude of $\pi_e - z^*$ and $f_e - r^*$. This is the rr curve (drawn in $r, G$ space).

Shifts in the rr curve can occur for two reasons. First, there are cost-side imbalances that depress the rate of profit at each rate of capacity utilization. These move both the rr curve and the r curve toward the horizontal axis. This should also mean a move of the $G_0^r$ curve toward that axis (and so that it no longer intersects the medium-term equilibrium point). (For a given $G_t$, this implies a higher $\pi_e^*$.) Second, there are demand-side imbalances. These shift the $G_0^r$ curve but not the r curve and not the rr curve if it is drawn in $r, z$ space. An increase in workers' debts, for example, should shift up the $G_0^r$ curve since workers will want to consume less. For a given $G_t$, this implies a lower $\pi_e^*$.

If the $G_0^r$ curve does not intersect the medium-term equilibrium point, this implies that medium-term equilibrium is not possible until the imbalances are purged from the system. This implies that the economy must stay in a slump period to accomplish this task.

(e) Some Empirical Evidence.

While it is probably impossible to empirically verify the theory of over-investment, it is possible to show the reasonableness of the general picture of economic growth presented above. That is, we can attain an empirical sketch of the rr curve. Note that to the extent that we discover that cost-side effects determine the rate of profit when the economy is expanding, we are moving beyond the post-Keynesian tradition.
The dynamics of the model of this chapter rely on the assumption that output prices vary less than costs. If not, the story of a stagnation period purging imbalances from the system does not apply, nor does the story of costs squeezing profit rates in the expansion. One indication of the empirical verity of the model is Kahn's (1980) study. He shows that, just as in the above model, real wages rise (relative to the trend) when unemployment falls and fall when unemployment rises. Even if productivity \((q)\) is unaffected by the unemployment rate (and so is affected by only the rate of utilization) this indicates that \(m\) falls in the expansion and rises in the stagnation.

Weisskopf (1978c, 1979) examines the general determinants of the rate of profit over the cycle for the U.S. nonfinancial corporate business sector. He examines these movements over business cycles that are divided much the same as the one described above. For him, phase A is dated from the trough of net domestic income to the peak in the rate of profit. This is the same as our phase A, during which both the economy and the rate of profit grow. For Weisskopf, phase B is from the peak of the profit rate to the peak in net domestic income (when the economy stops growing), essentially the same as in this study. He merges our phases C and D into a single contraction phase C, from the peak to the trough of income. The main difference between the two periodizations is that we would utilize investment rather than income to denote peaks and troughs. Total income can be used, however, since it measures the progress of the entire process of capitalist accumulation.

Weisskopf considers five cycles. Dating them by the peak in the rate of profit (the beginning of phase B), they are 1950/4, 1955/2, 1959/2, 1966/1, and 1972/4, where the number after the slash indicates the quarter.
Weisskopf utilizes a different formula for the rate of profit:

$$\tau = \frac{R}{K} = \left(\frac{R}{p_0}\right) \left(\frac{p_0}{p}\right) \left(\frac{p_0^2}{K}\right)$$

$$= \frac{x}{z} \cdot h$$  \hspace{1cm} (2.14')

where \(x = f/z\) = capital's share of actual (rather than potential) income. \(x\) reflects movements of \(m, z,\) and \(P.\)

Using Weisskopf's periodization, we expect \(h\) to fall in phases A and B and rise in phase C. The rate of utilization should rise in phases A and B and fall in C. The profit margin should rise in phase A and fall in phase B. If the latter phase of phase C (our phase D) is dominant, \(m\) should rise in phase C. The same behavior should be seen for the terms of trade. In the crisis theory elaborated above, the rate of profit falls when the falls in \(m, P\) and \(h\) swamp the rise in \(z.\) We should thus see \(x\) fall in phase A (since \(m\) and \(P\) are falling while \(z\) is rising) and fall in phase B (since \(m\) and \(P\) falls swamp the rise in \(z\).) Finally, \(x\) should rise in phase C if capacity utilization effects are primary.

Weisskopf's data (1978c, p. 37, table 3; 1979, p. 352, tables 4 and 5) show that the U.S. economy in general fits this picture in the post World War II period. On average, the capacity-capital ratio fell for phases A and B and rose in phase C. There are exceptions, however: \(h\) rose in the A phase of the 1950/4 and 1959/2 cycles and the B phase of the 1959/2 cycle. There are no exceptions for the C phases. Note that Weisskopf estimates the quarterly values of the denominator of \(h\) (that is, \(K\)) by using a linear interpolation and extrapolation of annual data. A linear interpolation damps fluctuations in \(K\) and thus \(h,\) biasing the data analysis against any thesis that predicts fluctuations of \(h.\) This bias is most important when we consider shorter business cycles. This may be the case for the 1959/2 cycle, which has the shortest of all post-World War II contraction periods.
It is useful to decompose changes in $h$ into real and price components. Weisskopf's tables 11 and 12 (1979, p. 369) show that the real capacity-capital ratio on average rose in phases A and C and fell in phase B. It fell in all B phases except those of 1959/2 and 1966/1. The price component on average fell in phases A and B and rose in phase C. It fell in all the B phases. Weisskopf's figures indicate that price effects are more important than the real effects over the cycle.

The rate of utilization rose for all A phases and fell for all C phases. On average, it rose for the B phases, but this result was ambiguous since $z$ fell for the 1955/2, 1959/2 and 1966/1 cycles. The ambiguity of this result is not as important as it seems at first, since the key aspect of the theory is the "swamping" of the movements of $z$ by falls of $x$ and $h$.

The variable $x$ rose in all A phases and fell in all B and C phases, just as predicted. For the 1955/2, 1959/2, and 1966/1 cycles, this fall in the B phase was to some extent the result of declines in the rate of capacity utilization. Weisskopf (1979, p. 365, tables 7 and 8) adjusts for the effects of utilization changes. $x^a$ (the variable $x$ adjusted in this way) is affected only by wages, productivity measured at full capacity, and changes in relative prices. As predicted, it on average rose in the A and C phases and fell in phase B. If fell for all B phases.

We can further adjust $x^a$ to account for changes in the terms of trade and other relative prices. We can thus approximate $m$. Weisskopf's tables 11 and 12 (1979, p. 369) show that this variable on average rises in phase A and C and falls in phase B, as predicted. It falls for all the B phases. (This measure of $m$ is the inverse of Weisskopf's
"offensive labor strength" though that variable represents the strength of the accumulation process as much as that of labor.)

The same tables show that the terms of trade on average fell in phases A and B, rising in phase C. It fell in all of the B phases except the 1955/2 one. The anomaly of the falling terms of trade in phase A may be because shortages in the raw materials market precede those in the labor-power market (that is, $z^*$ is not the same for the two markets) or because of the downward trend of the terms of trade in the post-World War II period.

The dominant theme of this chapter is that the rate of profit falls in the crisis (approximated by phase B) because of cost-side factors. In phase B, on average, cost-side factors ($m, p$, and $h$) more than explain the changes in the rate of profit. In the other phases, changes in the rate of utilization more than explain the changes in the rate of profit. (Weisskopf, 1979, p. 365, table 7.) We can conclude that the above model is by and large plausible.

Further empirical work is of course necessary. One subject that would be of special interest is the underconsumption trap. The data for the 1930s should be examined.