6. Flexible Prices and the Self-correcting Economy

6-1 Introduction

Today's aggregate price index or deflator is an economywide weighted average of the prices of goods today compared to the prices of the same goods in a base year, say 1967 or 1972. When most prices rise, P increases; when most fall, P decreases; when some rise and some fall, but the average remains steady, P hovers about the same point.

Throughout chapters 3, 4, 5, our analysis held the price level fixed for simplicity. In this chapter, when we allow P to be perfectly (instantly) flexible, we find that shifts in monetary and fiscal policy that formerly caused real income to vary now cause the price level to vary in the same direction. Increases in gov't expenditure or reductions in tax rates shift the IS curve to the right, and this tends to increase P rather than Q. Similarly, increases in the money supply raise P rather than Q when we allow for price variation.

Will spontaneous price variation hold the economy on a steady course? When monetary and/or fiscal measures are strong, price variation also is strong. But when they are weak, so too is price variation.

As P was fixed in chapters 3, 4, 5, now in ch 6 P will be allowed to vary and Q will be fixed. In chapter 7 both P and Q will be allowed to vary.

6.2 Flexible prices, the real money supply, and the DD curve

The upper frame of fig, 6-1, exhibits a single IS curve intersected by three LM curves in which the money supply is the same in each but the price level is 2, 1, and $\frac{1}{2}$. The higher the price level, the lower is M^s/P when M^s is unchanged.

The aggregate demand curve (DD) shows all possible combinations of P and Q consistent with a nominal money supply of 400 billion and a values of $\bar{A}$ of 600 billion.

Again, DD exhibits the intersection of a single IS curve with the various LM money market equilibrium curves drawn for each possible price level. The IS curve secures the equilibrium of the commodity market; the LM curves secure the equilibrium of the money market; the intersection of the one IS and the many LM curves secure the twofold equilibrium.

(2) The DD curve measues Q horizontally and P vertically. It slopes downward since lower prices raises thex real money supply and require an increase in actual real output to keep the commodity market in equilibrium. The steeper the IS curve, the steeper the DD curve. When the LM curve is steep, the DD curve is flatter.

(3) & (4) An increase in either M^S or $\overline{A}$ will shfift the DD curve to the right; a decrease in either, shift it to the left.

Note that DD shifts upward vertically (fig 6-1) in exactly the same ~~amount~~ as the nominal money supply (for "amount" read "proportion").

6-3 The ~~Self~~-correcting economy: deflation as a cure for recession

Figure 6-2 exhibits flexible prices insulating real output from the impact of a decline in autonomous spending.

The upper frame exhibits an initial IS and LM curve intersecting at a height where the interest rate is 10%; and a subsequent IS and LM curve ~~xxxxxxxxxxxxxxxxxxxx~~ with autonomous spending ($\overline{A}$) dropping from 600 to 500, prices dropping from unity to 0.67, and M^S/P moving from 400 to 600 to restore the initial real income of 1600.

The lower frame exhibits the movement in terms of P (vertical) and Q (horizontkal) with two DD curves with the second to the left of the original one and P dropping from unity to 0.67.

Whenever the initial price level crosses the DD curve to the left of the vertical QQ line (Q/Q*) and is in the region ~~afxthm~~ where P falls, the price level declines and the economy slides down the DD curve to the point where DD crosses QQ. Inversely when the intersection is to the right of QQ, the economy moves up the DD curve to the point where DD crosses QQ.

When the economy is self-correcting, there is no need for monetary or fiscal intervention.

6-4 Flexible prices and fiscal policy: real vs nominal crowding-out.   p.157

See figure 6-3 and suppose the starting point is E_1 government expenditure of 100 billion raises $\bar{A}$ from 500 to 600 billion, the economy moves to the right to B and along IS_0 or DD_0 to E_0.

Real income remains at the initial 1600, prices advance to unity, interest mounts to 10%, and A_p is crowded out of the equivalnt of governemnt expenditure (which under the circumstances has a multiplier of 1).

6-5 The Failure of Deflation in extreme cases: the General Rule Revisited.

When ever $\hat{r}^N$ is less than r_{min}, and the position of the IS curve does not depend on the price level, then the DD curve becomes a vertical line to the left of QQ (fig 6-3, 154). There is no point of intersection between DD and QQ and thus no possibility of a stable-price, full-employment equilibrium in which actual and natural output are equal.

Price deflation can automatically equate equilibrium real output (Q) to its natural level (Q*) in all situations in which a change in the real money supply is capable of raising equil- ibrium output. In chapter 5 we learned a general rule that   p.126 this capability of the real money sumpply requires $\hat{r}^N$, the interest rate at which the IS curve crosses Q*, to be equal or greater than r_{min}, the minimum interest rate along the LM curve.   p. 126

Figure 5-3 examined a case when monetary expansion failed when $\hat{r}^N$ WAS below r_{min}. The case is illustrated again in figure 6-3.

6-6 Two solutions to control $\hat{r}^N$: fiscal policy and the real balance effect.

A collapse of business and consumer confidence will shift a DD curve from ($M^8 = 400$; $\bar{A} = 500$) to ($M^8 = 400$; $\bar{A} = 250$) as in Figure 6-3. Then the price level falls from 0.07 to 0.25.

All problems disappear if $\bar{A}$ can be raised back by enough to make $\hat{r}$ EQUAL OR EXCEed r_{min}. But fiscal policy can increase

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$\overline{A}$ by increasing gov't expenditure and transfer payments
and reduction in tax rates.

But gov't action may not be necessary, for falling
prices increase M^S/P, the real money supply, provided they
fall enough. In figure 6-4 a fall from unity to 0.67
leases the economy only at K with Q at 1100; a further
fall to 0.25 is needed to get DD to cut QQ.

The Keynes effect is the stimulus to aggregate demand
(both consumption and investment) due to a decline in the
rate of interxxest, which in turn is brought about an increase
in the real money supply (M^S/P) whether brought about by
increasing nominal money supply or by deflation.

It is the Keynes effect that is cut off and rendered
ineffective when $\hat{r}$ falls below r_{min}. For then the $\hat{r}$ cannot
fall enough to return actual output (Q) to the natural level (Q^{**})

cf p.130

The Pigou or real balance effect is the direct stimulus
to consumption spending which occurs when price deflation causes
an increase in the real money supply; thisx stimulus does not
require a reduction in the interest rate. The real balance
effect accounts for the curvature of DD in 6-4 as compared
with the vertical drop in 6-3, and it allows the economy to
glide down DD_4 from G to E.

Deflation however has two shortcomings.

The first is the expectations effect. When people realize
that prices are falling, they delay expenditure until thxx prices
fall further. This may preclude the Pigou effect, though most
economists agree that a sufficient fall of prices will cause
so great an increase in real balances as to swmamp expectations
effect.

The second is the redistribution effect which is more
serious. During the great depression (1929-33) the price
deflator fell from 0.329 to 0.251, a decline of 23.7%.
But the interest income of creditors fell hardly at all
from from 4.7 to 4.6 billion a dollars. The ix income of
farmers fell from 6.2 to 2.1 billion, and many farms were
lost to their owners because of foreclosures.

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165 Table 6-1: Summary of Depression Economics: Starting from a low
level of output, can actual real income (Q) be raised back to
equal natural real income (Q*)?

Case 1. $\hat{r}$ is equal to or cexceeds r_{min}.
If prices perfectly flexible, gov't intervention superfluous.[a]
If price level fixed, not without gov't monetary or fiscal action.
See figures 5-1 and 5-6.

Case 2. $\hat{r}$ is less than r_{min}. and real balance effect exists.
With prices perfectly flexible, gov't action superfluous.[a]
With fixed price level, gov't action necessary, fiscal or monetary,
but sufficent; cf. figue 5-5.

Case 3. $\hat{r}$ less than r_{min}, and no real balance effect.
With prices perfectly flesible, not without government fiscal
action; monetary policy ineffectual, cf. figure 6-3.
With price level fixed, not without gov't fiscal action; monetary
action ineffectual, cf figure 5-3.

a   Ignores expectations and redistribution effects.

167   6-8 Case study: Prices and output during the great depression.

165   Table 6-5: the upper frame relates the price level to the
ratio Q/Q*. The lower frame offers an interpretation: the
descent seemms to be along the aggregate supply curve (SS)
168   of a DD curve shifting to the left and downward.
166   Summary of ch 6.