

ROBINSON
Working Paper No. 05-01

**The New View On Monetary Policy:
The New Consensus And Its Post-Keynesian Critique**

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February 2005

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Abstract

This paper seeks to look at the underlying framework of the New Consensus models, providing a post-Keynesian critique. In the light of this critique, the model is reformulated, with its basic structure intact, but with alternate post-Keynesian specifications of the Phillips curve being considered. It is shown that such modifications, either allow a long run trade-off between the rate of inflation and the level of output, the rate of capacity utilization and, therefore, unemployment, or, in our preferred specification, changes in output and capacity have no implications for inflation over a large range of capacity utilization

Keywords: monetary policy, central bank, inflation, capacity utilization, post-Keynesian, New-Keynesian

JEL classification: E12, E40, E52, E58

A New Consensus has arisen among neoclassical economists (or New Neoclassical Synthesis), which has been defined by a number of New Keynesian economists (such as Romer 2000, Taylor 2000, and Woodford 2002). This new view seeks to redefine the application of monetary policy by respecifying the most appropriate monetary rule. In other respects it represents a return to the original Friedman analysis of the expectations augmented Phillips curve. This looks at the underlying framework of the New Consensus model, providing a post-Keynesian critique. In the light of that critique, the model is reformulated, with its basic structure intact, but with alternate post-Keynesian specifications of the Phillips curve being considered. It is shown that such modifications, either allow a long run trade-off between the rate of inflation and the level of output (or the rate of capacity utilization

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and, therefore, unemployment), or, in our preferred specification, changes in output and capacity have no implications for inflation for a large range of capacity utilization.

The “New Consensus”

It seems ironic to call this group “new” consensus, as the underlying view of the economy has not changed, in essence since Monetarism Mark 1 associated with Milton Friedman. Like Friedman, New Consensus authors accept an upwards sloping short run Phillips curve but view the long run Phillips curve as being vertical at NAIRU, or at some similar supply-side determined concept, with monetary policy having no impact on real activity in the long run:

There is substantial evidence demonstrating that there is no long-run trade-off between the level of inflation and the level of unused resources in the economy – whether measured by the unemployment rate, the capacity utilization rate, or the deviation of real GDP from potential GDP. Monetary policy is thus neutral in the long run. An increase in money growth will have no long-run impact on the unemployment rate; it will only result in increased inflation. (Taylor 1999 pp. 29-30)

In other words, the inflation rate falls when unemployment is above NAIRU, and increases when unemployment is below it. This is now most often expressed in terms of output gaps – the spread between actual output and potential output – or in terms of capacity utilization. Expressed in terms of capacity utilization, the supply constraint of New Consensus models is given by equation (1):

$$\Delta\pi = \beta_1 (u - u_n) + \varepsilon_1 \quad (1)$$

where: π is the inflation rate

u is the realised level of capacity utilization,

u_n is the optimal level of capacity utilization, and

all β 's are and will be positive parameters.

ε_1 is a non-recurrent inflation shock

This equation is the basis of the upward-sloping short-run Phillips curve and the vertical long-run Phillips curve, where any deviation of capacity, real GDP or unemployment from their normal levels leads to *changes* in the inflation rate. If capacity utilization is kept above its normal level, this

will quickly lead to accelerating inflation. In other words, there is no long-term trade-off between any given rate of inflation and some measure of the output gap.

Like Friedman, defenders of the New Consensus view believe that monetary policy can have real effects in the short run as summarized in a conventional IS schedule. As in most macroeconomic models, they assume that investment, and hence capacity utilization, are inversely responsive to changes in the rate of interest, so that we have:

$$u = u_0 - \beta_4 r \quad (2)$$

where: u is the actual rate of utilization of capacity (or some similar measure of the output gap);
 u_0 represents an autonomous components of aggregate demand; and
 r is the real rate of interest.

provided we ignore the additional terms that are included in the more sophisticated versions of the equation (which incorporate expected terms and autonomous shocks, as in Woodford (2002)).

Both Friedman and New Keynesian authors strongly argue that this indicates the need for monetary policy rules. The only difference is that, while for Friedman the rule sets optimal money supply growth, for New Consensus authors “the interest rate rather than the money supply is the key instrument that should be adjusted” (Taylor 1999, p. 47). The proposed rule would have the central bank responding to both price and aggregate demand shocks (or expected such shocks). So, interest rates should be changed if inflation deviated from its target (π^T) or if real GDP deviates from potential GDP. There are many variants of these rules, but the best-known is the so-called Taylor rule, which, in terms of rates of utilization, is presented as:

$$i = \pi + \beta_5 (\pi - \pi^T) + \beta_6 (u - u_n) + r_n \quad (3A)$$

where i is now a nominal interest rate while r_n “is the implicit real interest rate in the central bank’s reaction function” (Taylor 1999, p. 50). We can say that, in Wicksellian terms, it is the central bank estimate of the ‘natural’ (real) rate of interest.

This can also be rewritten in real terms by taking note that $i - \pi = r$, so that equation (3A) becomes:

$$r - r_n = \beta_7 (\pi - \pi^T) + \beta_8 (u - u_n) \quad (3B)$$

In the long-term as defined by neoclassical authors, $\pi = \pi^T$ and $u = u_n$, so $r = r_n$. As has been pointed out by numerous authors, the New Consensus central bank reaction function does not guarantee that the target inflation rate will ever be achieved however. This is recognized by Taylor (1999, p. 51) himself, when he says that if the central bank acts on an incorrect estimate of the natural rate of interest, “then the steady state inflation rate will not equal the target inflation rate”. The rate of capacity utilization can converge to its normal level without the steady state inflation rate converging to the target rate set by the central bank. For instance if the implicit real interest rate estimate is too high, the actual steady state rate of inflation will be too low relative to the target, and hence the central bank will need to revise downwards its estimate of the ‘natural’ rate of interest.

This problem can be avoided if the central bank reaction function is expressed in difference terms. Indeed, this is how Setterfield (2003, 2004) identifies the typical New Consensus central bank reaction function:

$$\Delta r = \beta_7 (\pi - \pi^T) + \beta_8 (u - u_n) \quad (3C)$$

Setterfield (2003) shows that a model made up of equations (1), (2) and (3C) is always stable and converges to a normal rate of capacity utilization at the target inflation rate. However, the second term of the central bank reaction function, given by $\beta_8 (u - u_n)$, plays a crucial role in stability analysis. Without it, the economy would run into a limit cycle, circling the target inflation rate without ever achieving it. What happens is that the second term of equation (3C) provides derivative control, a well-known stabilizing feature since, substituting $(u - u_n)$ by its value in equation (1), we obtain the following reaction function:

$$\Delta r = \beta_7 (\pi - \pi^T) + (\beta_8 / \beta_6) (\Delta \pi) \quad (3D)$$

With equation (3D), the central bank reacts to the level of, and the change in, the inflation rate. In other words, for a given current inflation rate, the central bank would impose a more punitive increase in real interest rates when inflation is quickly rising.

In summary, New Consensus authors rely on a vertical long-run Phillips curve that prevents the possibility of any level of economic activity bar that corresponding to potential output or normal use of capacity. Although monetary variables play a role in the determination of the level of economic activity in the short run, they have no real effects in the long run. The basic role of monetary variables is to push the economy to its long run equilibrium, though they play no role in the determination of that equilibrium. In other words, we have the long-term neutrality of money.

The Post-Keynesian Response

Post-Keynesian economists are critical of a number of important features of the New Consensus model described above. We can divide these criticisms into two distinct areas. Firstly, many post-Keynesians are critical of the IS curve which underlies the analysis, and of the related assumption of the efficiency of monetary policy in the short run and monetary neutrality in the long run.. Secondly, all post-Keynesians reject the concept of a vertical long run Phillips curve. Points 1 -3 below deal with the first of these issues, while the second is the subject of the remaining points.

1. Post-Keynesians, following Keynes, reject the simple interest rate/investment relation implied in the IS model, as represented in equation (2) above. They believe, as Keynes (1936, p. 173), that between monetary policy and economic activity, “there may be several slips between the cup and the lip”. There are a number of reasons for this. Firstly, most post-Keynesians believe that the relation between interest rates and investment is more complex than the simple functions (linear or otherwise) assumed in the IS relation. In addition, many economists, following Keynes (1936, pp.

202-8) once again, do not think that there is a one for one relationship between the short term interest rate set by the central bank, and the long term interest rates or the lending rates which affect the components of aggregate demand (see, for example, Pollin 2003 and Villieu 2004 within the context of the new consensus story). In fact, Kalecki argues, partly for this reason, that it is the quantity of credit rather than its price which influences investment (Kriesler 1997). Nevertheless, tight monetary policy associated with increased short term rates will also be associated with increased credit tightening and a corresponding fall in the animal spirit of banks, so that, at least with contractionary monetary policy, it may be reasonable to assume that there will be some effect on aggregate demand (Wolfson 1996).

Empirically, evidence suggests that the interest elasticity of investment is non-linear and asymmetric (Taylor 1999). While an increase in interest rates is likely to reduce investment in times of economic booms ($u > u_n$), the reverse is not true, as is well illustrated by the case of Japan in the 1990s. Reductions in interest rates are unlikely to stimulate investment in times of recession. In the words of the old adage: you can lead a horse to water but you can't make it drink. Many economists think that using monetary policy in a recession is like pushing on string (Nevile and Kriesler 2002).

2. Partly for this reason, post-Keynesians, as do many monetary economists, believe that monetary policy takes a considerable amount of time to have any effect, especially on the inflation rate, unless interest rates are changed by drastic amounts (that may jeopardize the stability of the financial system). Monetary policy is known to be a particularly blunt instrument, with long and variable lags. Monetary policy acts upon inflationary forces by weakening aggregate demand and labour conditions (Arestis and Sawyer 2004). In addition, several post-Keynesians believe that, before high rates take their toll, real interest rate hikes lead to higher inflation rates, through interest cost push (Galbraith 1957, pp. 130-1; Taylor 2004, pp. 88-90). This was first discussed by Tooke, and is often associated with the so-called Gibson paradox, also known in the States as the Wright

Patman effect and in Latin America as the Caravallo effect. It can be shown that this effect may jeopardize the neat converging features of the New Consensus (Hannsgen 2004).

3. In contrast to some New Keynesian authors who believe that “short-run non-neutrality and long-run neutrality are ... as well accepted as any proposition in monetary economics” (Mankiw 1999, p. 72), post-Keynesians reject the so-called neutrality of money in both the short run and the long run.
4. Post-Keynesians deny that logic requires that in the long run the actual rate of capacity utilization ought to converge towards an exogenously given normal rate of capacity utilization. As Amitava Dutt (2003, p. 87) points out, Kaleckian economists “argue in favour of an endogenous determination of capacity utilization even in the long run on the ground that firms may not have a unique level of capacity utilization but be content if it remains within a band, or that ‘normal’ or ‘desired’ capacity utilization itself may be endogenous”.
5. Post-Keynesians reject the notion of a supply-determined natural growth rate. This critique applies equally to the classical model and to the endogenous growth models, where saving leads the way, and to the New Consensus model, where the natural rate is determined by population growth and technological progress, as in the Solow model (Taylor 2000, p. 91). Post-Keynesians believe that if the concept of a natural growth rate is to be of any assistance, it is determined by the path taken by the actual growth rate, as pointed out very early in Kaldor (1960, p. 237). “In sum, the natural rate of growth is ultimately endogenous to the demand-determined actual rate of growth The natural rate is not an attractor in demand-led growth models” (Setterfield 2002, p. 5).
6. Post-Keynesians reject the vertical long-run Phillips curve. In addition, many are even skeptical about short-run trade-offs between GDP/capacity and inflation. There are two reasons for this. First, there is a large range of capacity utilization rates which are consistent with an absence of demand-led pressures, for reasons tied to the absence of decreasing returns over a large range of production levels (Lavoie 2004, p. 24). Second, it is believed that with “co-ordinated wage bargaining a

constant inflation rate becomes compatible with a range of employment levels, and the NAIRU as the short run limit to employment is no longer unique” (Hein 2002, p. 314).

A number of ways of modifying the New Consensus analysis to incorporate explicitly post-Keynesian considerations have been suggested. To start with point 5, Lavoie (2004) identifies a hidden equation in the New Consensus model. This relates to the question of why low inflation is regarded as desirable. There is nothing inherent in the model, as presented so far, which favours one inflation rate over any other. Implicit then must be an additional relation, according to which there is some optimal inflation rate which maximises the economy’s natural growth rate. Deviations from this optimal inflation rate will reduce the natural growth rate of the economy. Lavoie suggests a post-Keynesian modification to this where, instead of the natural growth rate being dependent on the difference between actual and optimal inflation, it will be determined by the path of the actual growth rate. This is due to the assumption that increases in effective demand will lead to increases in the natural growth rate, and vice versa. As a result, despite assuming a vertical Phillips curve, as given by equation (4), the New Consensus model amended by this post-Keynesian feature will exhibit strong path dependency, “with the possibility of multiple equilibria, that make long-run supply forces dependent on short-run disequilibrium adjustment paths induced by effective demand” (Lavoie 2004, p. 26). Multiple equilibria may also arise when normal rates of capacity utilization are endogenous and move with actual rates, as shown by Lavoie (1996) and Dutt (1997).

Setterfield (2004) emphasises another post-Keynesian modification in his critique of the New Consensus. He concentrates on the nature of the Phillips curve, pointing out that demand-type considerations are not the only influence on the inflation rate. Cost considerations, as well as institutional variables reflecting the wage and price setting process will have significant influence on the inflation rate. As a result, he replaces the vertical Phillips curve of equation (1) with one representing these more intricate explanators of inflation:

$$\pi = \beta_9 \pi_{-1} + \beta_{10} u + \pi_c \quad (1A)$$

Where: $0 < \beta_9 < 1$

And π_c “is a vector of institutional variables that affect aggregate wage and price setting behaviour” (Setterfield 2004, p. 40)

Setterfield (2004) shows that with this kind of Phillips curve, as given by equation (1A), added to New Consensus equations (1) and (2), one obtains once more a multiplicity of possible long-run rates of growth and capacity utilization, where $\pi = \pi_{-1} = \pi^T$. Comparisons of long-run positions show that higher inflation targets allow for higher rates of capacity utilization and higher growth rates.

However, further modifications need to be made in order to more fully capture the essence of post-Keynesian analysis. In particular, many post-Keynesians (but not all) are dubious of the notion that inflation needs to rise with increased capacity utilization. As mentioned in point 6, they argue that, for large ranges of output, there seems to be little impact on inflation. This is compatible with post-Keynesian pricing models of mature economies. In these economies, for most sectors, price is determined as a mark-up over costs. Regardless of which notion of cost is used, prime, variable, normal or full, cost pressures will remain constant over a large range of capacity utilization, as long as commodity prices can be held down (as Kalecki and Kaldor would argue). So with labour productivity constant, and with mark-ups also tending to remain constant, there need not be any increased pressure on prices with expansions of capacity over that range.

In other words, changes in capacity utilization need only be inflationary at levels of capacity near full utilization. Similarly, only at very low levels of capacity would we expect some reduction of the inflation rate. In other words, there would only be a tradeoff between inflation and unemployment at very low and very high levels of capacity utilization, with the inflation rate constant for levels of a large intermediate range of capacity. In this case, the Phillips curve would be horizontal for large ranges of output and employment (Freedman, Harcourt and Kriesler 2004).

This would lead to the replacement of the Phillips curve equations (1), or (1A) with an equation of the following type:

$$\pi = \beta_{11} (u - u_m) + \beta_{12} (u - u_{fc}) + \pi_n \quad (1B)$$

Where: u_{fc} represents full capacity utilization

u_m is some low level of capacity utilization, below which the inflation rate falls

$\beta_{11} = 0$ for $u > u_m$ and $\beta_{11} > 0$ for $u < u_m$

$\beta_{12} = 0$ for $u < u_{fc}$ and $\beta_{12} > 0$ for $u > u_{fc}$

π_n represents the rate of inflation associated with the normal range of output, subject to supply side shock.

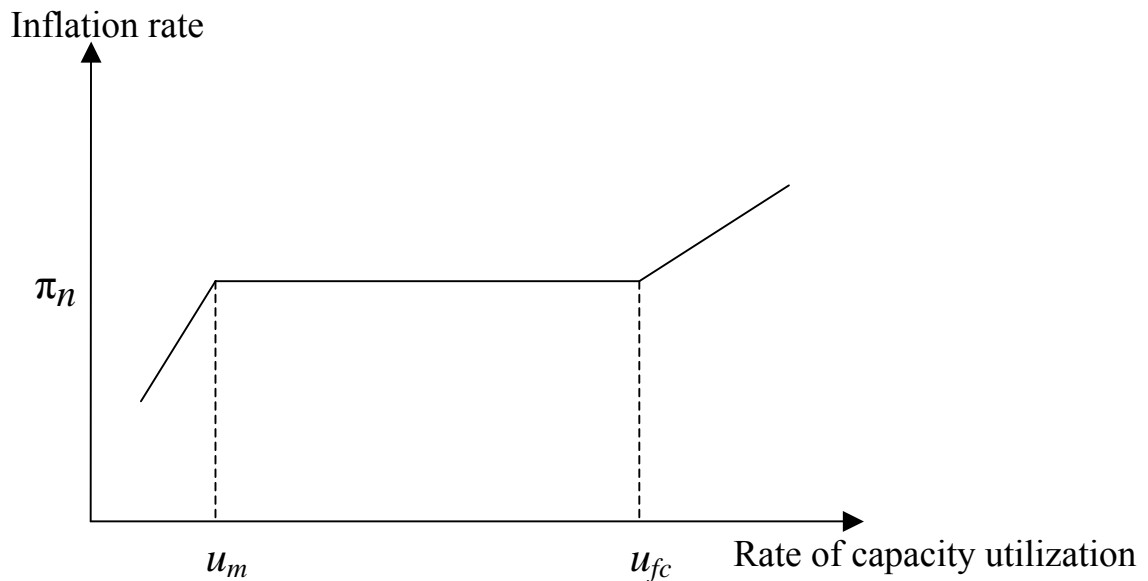


Figure 1: Post-Keynesian Phillips Curve

For a large range of capacity utilization u such that $u_m < u < u_{fc}$, we have that $\Delta\pi = 0$, as shown in Figure 1. In this case, if the current inflation rate is the target rate, central bank policy should set the interest rate at a *fair* rate, based on income distribution considerations, in particular the distribution between debtors and creditors, and allow fiscal policy to set the output/capacity level, as more recently recommended by Arestis and Sawyer (2003); or else its reaction function would be of the Taylor rule

type, so that it would maintain monetary policy as an instrument in manipulating effective demand to acceptable levels. In other words, equation (3B) would become:

$$r = r_n + \beta_7 (\pi - \pi^T) + \beta_8 (u - u_{fc}) \quad (3E)$$

so that if $\pi = \pi^T$, and $u < u_f$, monetary policy would be expansionary.

From the above discussion, we can see that there are at least two ways to modify the vertical (expectations augmented) long run Phillips curve, derived from upward sloping short run curves. The first is in the manner suggested by Setterfield, where the inflation rate of the previous period, (the effects of expectations) is only partially transmitted to the current inflation rate. The second way is to argue that for a large range of output (capacity utilization rates) higher levels of utilization will not lead to higher rates of inflation for given inflationary expectations. In other words, the (short run) expectations augmented Phillips curve is flat for a certain range. As there is no change in actual inflation over that range, there will be no change in inflationary expectations (with the target inflation rate set by the central bank possibly playing a key role).

We can compare both of these with the more complete standard version of the short run expectations augmented Phillips curve:

$$\begin{aligned} \pi^e &= \pi_{-1} \\ \pi &= \pi^e + \beta_{13} (u - u_n) + \varepsilon_1 \end{aligned} \quad (1C)$$

For Setterfield:

$$\pi = \beta_9 \pi_{-1} + \beta_{10} u + \pi_c \quad (1A)$$

Where: $0 < \beta_9 < 1$

This relation yields a series of upward sloping short run Phillips curves which transmit into an upward sloping long run Phillips curve, allowing for the possibility of an inflation/capacity utilization trade-off over the long run.

For our model, from equation (1B), over the normal range of output:

$$\pi = \pi_n + \varepsilon_2$$

which is the same inflation rate as from equation (1C) if we amend the upward sloping short run Phillips curve, i.e. $\beta_{13} = 0$. So over this range of output, increases in the level of capacity utilization will have no impact on the inflation rate in the short run. However, the flat short run Phillips curve means that there is no reason for inflation to change (over this range) in the long run. In other words, the mechanism whereby the upward sloping short run Phillips curve is transmitted to a vertical long run Phillips curve will not hold in the case of a horizontal Phillips curve, as increased output will not, in the short run, be inflationary. In this case, the long run Phillips curve will also be horizontal over the relevant range. In such cases, what is crucial is cost-inflation, as reflected in the rising costs of commodities, as well as the credibility of the target inflation rate set by the monetary authorities.

Conclusion

Most post-Keynesian economists reject key elements of the New Consensus model. In particular, they disagree with the underlying IS curve as well as the vertical long-run Phillips curve. It has been shown that accepting all the basic equations of the New Consensus model amended with the suggested post-Keynesian modifications with respect to the Phillips curve equation, will fundamentally change the model's conclusions. In particular, our specified amended Phillips curve will yield Kaleckian results, with important roles for fiscal and monetary policy in influencing the level of output, capacity utilization and employment.

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Appendix

The New Consensus model, Mark I

$$\Delta\pi = \beta_6 (u - u_n) \quad (1)$$

$$u = u_0 - \beta_4 r \quad (2)$$

$$r = r_n + \beta_7 (\pi - \pi^T) + \beta_8 (u - u_n) \quad (3B)$$

The New Consensus model, Mark II

$$\Delta\pi = \beta_6 (u - u_n) \quad (1)$$

$$u = u_0 - \beta_4 r \quad (2)$$

$$\Delta r = \beta_7 (\pi - \pi^T) + (\beta_8 / \beta_6) (\Delta\pi) \quad (3D)$$

Setterfield's Model

$$\pi = \beta_9 \pi_{-1} + \beta_{10} u + \pi_c \quad (1A)$$

$$u = u_0 - \beta_4 r \quad (2)$$

$$\Delta r = \beta_7 (\pi - \pi^T) + (\beta_8 / \beta_6) (\Delta\pi) \quad (3D)$$

Our Model

$$\pi = \beta_{11} (u - u_m) + \beta_{12} (u - u_{fc}) + \pi_n \quad (1C)$$

$$\beta_{11} = \beta_{12} = 0 \quad \text{if } u_m < u < u_{fc}$$

$$u = u_0 - \beta_4 r \quad (2)$$

$$r = r_n + \beta_7 (\pi - \pi^T) + \beta_8 (u - u_{fc}) \quad (3E)$$