

Comment on Patrick Minford: Deregulation and Unemployment – The UK Experience

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Patrick Minford has for over a decade been articulating a particular and controversial view of the British labour market. According to this view, the prime causes of high British unemployment are excessive union power and overly generous unemployment benefits. The policy implications that follow are obvious: bash the unions and cut the benefits! As is well known, these kinds of policies have also been pursued with persuasion and persistence in Britain throughout the 1980s.

Minford's policy prescriptions are based on the Liverpool econometric model. The theoretical underpinning of this model is less controversial than the particular estimates that have been produced by the econometric work. In fact, the broad theoretical framework has much in common with the well-known and influential Layard–Nickell model of the British labour market (Layard and Nickell, 1986). The difference lies in the numbers. Patrick Minford argues, on the basis of the Liverpool model, that union bashing and benefit cutting can deliver huge reductions in unemployment, much larger than what is implied by other studies. The present paper is a new variation on this theme. Minford argues that the natural rate of unemployment in Britain has been reduced by 10 percentage points since the mid-1980s (from 12 percent to 2 percent). This is surely a remarkable achievement, although the actual unemployment rate has so far been reduced rather little because of long (and variable?) lags.

One might expect that the fact that Minford is somewhat of an outlier in his views on the British labour market would encourage him to try to persuade the reader that he is right, that he has a sensible theory and that his empirical analysis should be taken more seriously than the work of

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others. Yet, Minford does not seem to care about the fact that most other studies of the British labour market differ substantially with respect to estimated parameter values. Minford apparently wants us to take his numbers seriously, but he does not even bother to comment on the magnitude or statistical significance of his key parameters. As an example of rhetoric in economics, the style is hardly effective. I find it amazing that Minford seems to believe that people are more convinced by simulation results from a model that is sketched only briefly than from a careful discussion of the important parameters.

1. Minford's theoretical framework

It is not easy to understand fully the operation of the model from the presentation given in the paper. I am particularly uncertain about how monetary policy works in this natural rate model, where it seems to be very potent in the short and intermediate run. By and large, however, the model has many features in common with the Layard-Nickell model. A streamlined version of the model can be described by means of a few equations.

First, there is a wage equation which relates real consumption wages to unemployment and various "wage push" factors. In logs we have

$$w - p_c = -\alpha u + z_w, \quad (1)$$

where w is the log of the nominal wage, p_c the log of the consumer price, u the unemployment rate and z_w the wage push factors (like union power and unemployment benefits). This is a standard wage equation, and it can be rationalised by different theoretical approaches. (Minford, 1983, provides a detailed theoretical derivation.) It should be noted that the properties of the model, and the policy implications, will be sensitive to what is included or excluded among the wage push factors in z_w .

There is also a price-setting relationship in the model. The price of home goods is taken to depend on nominal wages and the price of competing goods. Thus, in logs,

$$p = \beta w + (1-\beta)p^* + z_p, \quad (2)$$

where p is the log of the domestic price, p^* the log of the foreign price in domestic currency and z_p captures other variables (like productivity). The consumer price is given as

$$p_c = \delta p + (1-\delta)p^*. \quad (3)$$

The real exchange rate is defined as $e = p/p^*$. By using (2) and (3) together with the definition of e we get a relationship between the real exchange rate and the real consumption wage, i.e.,

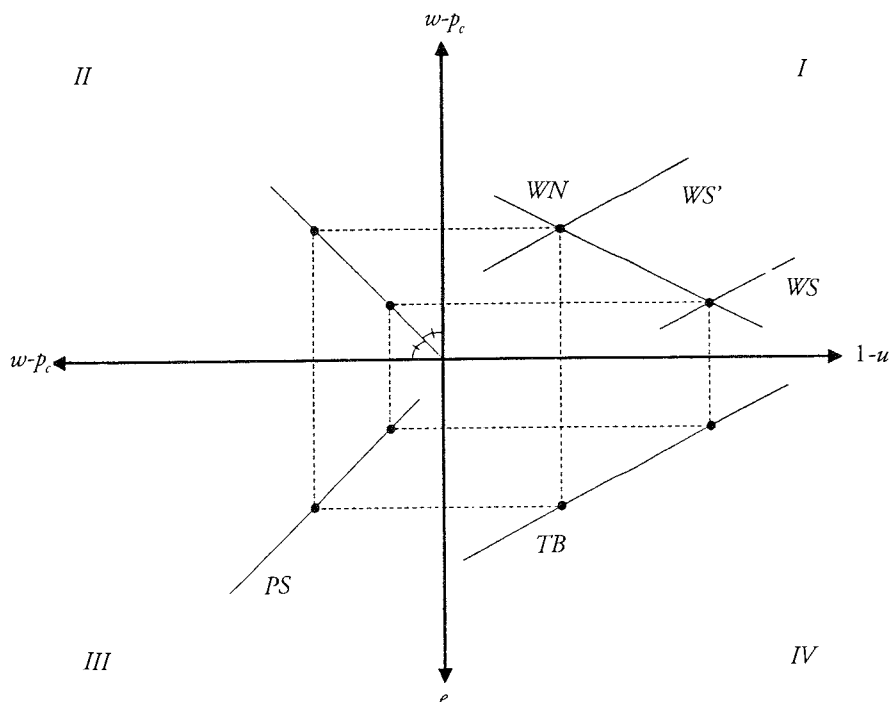
$$e = (1/\theta)(w - p_c) + [1/(1-\delta\beta)]z_p, \quad (4)$$

where $\theta = (1-\delta\beta)/\beta$. The final relationship is an equation for trade balance equilibrium. The trade balance (TB) is taken to be decreasing in the real exchange rate (increasing in competitiveness) and increasing in unemployment (decreasing in the level of activity), i.e.,

$$TB = -\gamma_1 e + \gamma_2 u + z_e = 0, \quad (5)$$

where z_e includes exogenous variables like world trade that improve the trade balance. The key equations of the model are the wage setting relationship (1), the price equation (4) and the trade balance equation (5). These equations determine the three endogenous variables, i.e., the real consumption wage, the real exchange rate and unemployment. A graphical illustration is given in Figure 1. The fourth quadrant contains the equation for balanced trade ($TB=0$), a negative relationship between the employment rate, $1-u$, and the real exchange rate. The price setting relationship (PS), expressed as a relationship between the real exchange rate and the real consumption wage, is given in the third quadrant. These two relationships can be combined to derive a real wage-employment trade-off. This is accomplished via the 45-degree line in the second quadrant. For alternative real exchange rates we can trace out the employment schedule (WN) in the first quadrant. This is the open economy's trade-off between employment and the real consumption wage, given that the trade balance is in equilibrium. It is downward sloping because a higher employment rate requires a lower real exchange rate – and hence a lower real consumption wage – to satisfy trade balance equilibrium.

Where on the WN -schedule does the economy end up? This is determined by the intersection of the WN -schedule and the wage setting relationship (WS). An increase in wage pressure shifts the WS -relationship upwards, thus reducing employment and increasing the real exchange rate. From eqs. (1), (4) and (5) we obtain the natural rate as

Figure 1. Equilibrium in an open economy

$$u^* = \frac{z_w - (\theta/\gamma_1)z_e + (1/\beta)z_p}{\alpha + \theta\gamma_2/\gamma_1} \quad (6)$$

The natural rate is increasing in wage push factors and decreasing in factors that improve the trade balance (like world trade). A unit increase in a wage push factor translates into an increase in equilibrium unemployment by a factor of $1/(\alpha + \theta\gamma_2/\gamma_1)$.

As noted, this model has some similarities with the Layard and Nickell model. The models differ in the restrictions that are imposed, however. The Layard and Nickell model involves a restriction that makes equilibrium unemployment independent of trend productivity; Minford's model has no such restriction. Layard and Nickell also allow for a number of shift variables in the wage equation, i.e., elements of z_w in eq. (1), that Minford excludes *a priori*. The treatment of taxes is a case in point. Whereas Layard and Nickell allow the data to decide how taxes affect

wage behaviour, Minford's specification rules out the possibility that higher taxes may be shifted back on workers as lower real consumption wages. In the model sketched above, a rise in labour taxes is equivalent to an increase in "price push" factors in z_p , which in Figure 1 would imply a downward shift of the *PS*-schedule and hence a downward shift of the *WN*-schedule as well. Employment falls unambiguously in Minford's model, whereas Layard and Nickell allow for a concomitant shift of the wage setting schedule that may partly or completely offset the *WN*-shift.

2. Minford's empirics

A striking feature of the empirical work reported in the paper is how poorly the model performs. In the wage equation, only unemployment benefits seem to enter significantly, although it is unclear to what extent this is an artefact of a restrictive specification.¹ Union density and unemployment do not enter with significant coefficients in the wage equation. In the so-called unemployment (labour demand) equation, there is no significant role for real wage costs. In the reduced form natural rate equation *nothing* is significant (possibly with the exception of some so-called productivity-shift dummies). It takes considerable guts to draw strong policy conclusions from such shaky empirical results.

The most critical part of Minford's model is the wage equation. It implies large effects from benefits and union density on real wages, which in turn translate into huge effects on unemployment. The elasticity of unemployment with respect to the level of benefits is 5, implying that a reduction in benefits by 10 percent would reduce unemployment by 40 percent! This is quite a dramatic effect. If we translate it into the Swedish setting, it would mean that a reduction in the benefit-income replacement ratio from 90 percent to 80 percent, a change carried through in 1993, would reduce equilibrium unemployment by no less than 45 percent. Only small doses of Thatcherism seem to create miracles!

The idea that benefits matter for unemployment is not very controver-

¹ The estimated coefficients on the benefit level and the lagged real wage are 0.20 and -0.20, respectively. This implies that the ("long run") elasticity of real wages with respect to the benefit level is unity. In fact, the standard errors are identical for the two parameters, which indicates that the estimated coefficients are *imposed* to be equal. In other words, the crucial benefit coefficient is not a freely estimated parameter but one that is forced to equal unity.

sial. Indeed, there is a lot of evidence from micro data which suggests that higher benefits tend to increase the duration of unemployment. Layard, Nickell and Jackman (1991) conclude that "the basic result is that the elasticity of expected duration with respect to benefits is generally in the range 0.2–0.9 depending on the state of the labour market and the country concerned". One of the most careful British studies (Narendranathan, Nickell and Stern, 1985) arrives at an estimate of 0.3, i.e., the expected duration of unemployment would increase by 3 percent as a response to a benefit increase by 10 percent. Minford's estimate is roughly 10 times as large as the estimates from micro data.²

Minford's equations also imply huge effects from union power, measured as the number of union members as a fraction of employment. Suppose that the unionisation rate is reduced by one percentage point from, say, 50 percent to 49 percent. According to the estimates in the paper, such a small decline would reduce equilibrium unemployment by 11 percent. During the Thatcher years, union density in Britain fell by roughly 15 percentage points, from over 50 percent to slightly less than 40 percent. There is little doubt that Thatcherite policies have contributed to this decline. It is not an enormous decline, but it will have an enormous effect in Minford's model. In fact, the reduction in union density by 15 percentage points has contributed to a reduction in equilibrium unemployment by 80 percent. The decline in union density is the key variable that drives Minford's conclusions about the drastic fall in British equilibrium unemployment. Again, we should note that there is *no* empirical evidence that supports the conclusions. What we are offered are implausible estimates with large standard errors. The unionisation rate is not significant in the unemployment equation; it is not even significant in the wage equation.

How come that Minford arrives at these huge effects from unemployment benefits and from unionisation? The main reason is the specification of the wage equation. Real wages are upward trended so other trended variables are needed to explain the evolution of real wages. Minford includes real benefits and union density, which have been upward trended for part of his estimation period. Those variables will pick up the trend increase in real wages with large coefficients. The results will, however, be sensitive to the inclusion or exclusion of other trended variables,

² The results from micro data cannot, of course, be translated directly into macro elasticities. There can be no general presumption, however, that the estimated micro elasticities will understate the macro relationships.

like productivity for example. It is therefore an easy task to kill Minford's results by bringing in such variables. One might quibble about the details here, but it is clear that Minford's results are very fragile.³

When Patrick Minford first presented his wage equation more than 10 years ago, he was more successful with the union variable than he is now (see Minford, 1983). Unionisation in Britain exhibited a marked trend increase from the mid-1960s to the late 1970s (from 45 percent to around 55 percent), so it was not difficult to detect a positive statistical correlation between real wages and union density. Union density, however, is no longer significant in Minford's wage equation, the main reason being that union density has been sharply reduced during the 1980s, partly as a result of Mrs Thatcher's policies. Union density in Britain over the past 20 years can be described as an inverted U; there is a rise in the 1970s and a decline in the 1980s. The fact that there is a concomitant rise in real wages and fall in union density during the 1980s explains why it has become increasingly difficult to find a *positive* correlation between the two variables. If the trend decline in union membership continues, I predict that Patrick Minford will soon discover that unions will actually *reduce* wage pressure and hence unemployment.

Mrs Thatcher's policies concerning unemployment benefits have caused similar problems for Minford's wage equation. Remember that it is the *level* of real benefits that enter Minford's wage equation. Real benefits will be upward trended when benefits are indexed to wages, as has been the practice in many countries. This practice was abolished in Britain in the 1980s, and the new system involves indexation to the retail price index rather than to wages. So the benefit variable is no longer upward trended, and it will therefore become increasingly difficult to explain the trend in real wages by the level of benefits. Indeed, a prerequisite for the survival of the Minford wage equation may well be a Labour government that may try to reverse the trend decline in union density and perhaps increase real benefits as well. I do not see how Thatcherite policies can co-exist, in the long run, with Minford's wage equation. The best political environment for the Liverpool model is probably one with a Labour government.

As I noted above, Minford's model does not allow for the possibility

³ For a detailed critique of Minford's wage equation, see Nickell (1984). An example of the fragility of the union effect is provided by Manning (1993). He obtains significant effects from union density in his real wage equation, but once the output-capital ratio is included the union variable loses its significance.

that higher taxes are borne by labour as lower real consumption wages. Higher taxes thus imply higher unemployment, an artefact of the specification of the wage equation. There is, however, quite a lot of evidence on this matter, with somewhat mixed results. Many studies report a positive relationship between taxes and the real *product* wage, thus indicating that higher taxes may contribute to the explanation of the rise in unemployment in Europe (see for example Bean, Layard and Nickell, 1986). Other investigations have found only *transitory* effects from changes in the tax burden (see Newell and Symons, 1987). The issue is not settled, but those who are interested in how taxes affect unemployment will have to consult other studies than the one presented in Minford's paper.⁴

3. Concluding remarks

In conclusion, we have been offered a piece of empirical work that rests strongly on the researcher's priors and rather weakly on the data. The empirical basis for the policy prescriptions is unusually meagre. It should be noted, however, that similar policy prescriptions can find some support from other studies, such as the work of Layard and Nickell. The difference lies in the particular estimates more than in the general approach. The differences in the numbers seem to be largely driven by the fact that Minford favours a more restrictive wage equation.

I personally find it plausible that some of Mrs Thatcher's policies, particularly concerning the benefit system and the unions, have reduced equilibrium unemployment in Britain.⁵ Other policies may in fact have

⁴ Minford may want to exclude labor taxes on employers from the wage equation on the ground that his equation is "identified by the exclusion of current influences of labor demand". This is a misleading statement, however. It is true that estimation of wage equations raises difficult issues of identification, as discussed by Bean (1994) and Manning (1993). The problem is that theory offers no obvious exclusion restrictions, i.e., theory does not (except under special circumstances) provide a rationale for excluding influences from labor demand. Minford may believe in the special case where theory offers exclusion restrictions, but in practice he does not stick to his own rule of excluding influences from labor demand. He includes two productivity shift variables which pick up things like "a rise in union sector productivity" and an increase in "labour's marginal product". The inclusion of labor demand influences implies that Minford's wage equation is vulnerable to the same type of critique as studies that have included productivity in more explicit form.

⁵ There are, however, models as well as empirical evidence that cast some doubt on the conventional wisdom that a rise in wage pressure always increases unemployment. See Manning (1992), who develops a model of multiple equilibria where higher wage pressure may reduce unemployment if the economy is in a high unemployment equilibrium.

had the opposite effect. Patrick Minford notes that there has been a sharp reduction in the progressivity of the tax system; the top marginal tax rates have come down substantially whereas the average tax rate has increased. Both theory and empirical work suggest that such changes would most likely *increase* wage pressure and hence the natural rate of unemployment (see Lockwood and Manning, 1993, for a recent theoretical analysis with evidence for the UK). When wages are determined through union-firm bargaining, a rise in the marginal tax rate lowers wage pressure, whereas a rise in the average tax rate usually has the opposite effect.

There is, finally, a set of deregulation policies that probably have had little effect on unemployment. The complete abolition of minimum wages (through the abolition of the so-called Wages Councils) in 1993 was motivated by concerns for employment. The available evidence, however, does not suggest that UK minimum wages have had any adverse impact on employment (see Dickens, Machin and Manning, 1994, and Machin and Manning, 1994). There is perhaps a more general lesson that emerges from the new research on minimum wages in the UK and the US, which casts doubt on the conventional wisdom that minimum wages necessarily are bad for employment.⁶ An unregulated labour market is unlikely to be well characterised by the textbook model of a competitive market. It is possible and plausible that unfettered labour markets, because of various frictions, are more accurately characterised by monopsony models with wage-setting firms than by the standard competitive models. If this is true, it follows that there are limits to what deregulation can achieve on the employment front. Union interventions in wage setting will therefore not necessarily reduce employment, although it is clear that very powerful unions may well do so.

⁶ New US research on minimum wages are reported in Card (1992a,b), Card and Krueger (1993), and Katz and Krueger (1992). These studies are unable to find negative employment effects of increases in minimum wages.

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