Monetary policy and wage bargaining in the EMU: restrictive ECB policies, high unemployment, nominal wage restraint and inflation above the target [*]

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1. Introduction

With the introduction of European Monetary Union (EMU) in 1999 the institutional framework for monetary policies and wage bargaining, and indeed for their interaction, has changed profoundly. Since then monetary policies for the euro area as a whole have been conducted by the Euro System with the European Central Bank (ECB) at its head. According to the Maastricht Treaty, the ECB's primary goal is price stability. Only when price stability has been achieved is the ECB to support the economic policies of the European Union. In choosing its precise goals and instruments the ECB is independent: it is free to define price stability and to apply the appropriate means to achieve it (Bean 1998 and Bibow 2002). This institutional design is based on the conviction that politically, economically and personally independent central banks are the solution to the 'time inconsistency problem' of monetary policy. According to this view, elected governments tend to increase money supply in order to surprise the pri-

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vate sector and to achieve higher employment, given some nominal and real rigidities in the economy. The private sector, however, will rationally anticipate increasing money supply and incorporate it into its wage and price setting behaviour. Therefore, increasing money supply will only increase inflation but will have no impact on output or employment. Unlike elected politicians, independent central banks have no incentives to generate and exploit 'surprise inflation'. According to this position, a higher degree of central bank independence will be associated with a higher degree of conservatism *vis-à-vis* price stability and a higher degree of credibility in pursuing low inflation.[1] Thus central bank independence is seen as a means to guarantee price stability as a 'free lunch', without real costs in terms of output, employment or growth.[2]

There are, however, major doubts as to whether time inconsistency is the true cause of inflation, and whether the role of independent central banks is adequately assessed in this approach (Bibow 1999 and Forder 1998). From the perspective of a 'monetary theory of production' originating from Keynes and elaborated in Post-Keynesian economics, monetary variables controlled by the central bank determine the real equilibrium of the economic system and hence the level of employment.[3] Inflation is not a monetary phenomenon but is mainly caused by conflict over distribution in the private sector. In the face of high inflation caused by incompatible distribution claims, a higher degree of conservatism associated with central bank independence should therefore have real effects. There should be losses of employment, at least in the short run, and effects on income shares in the long run.[4] These losses could be avoided if distribution conflict, and

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[1] For theoretical foundations see Kydland and Prescott (1977), Barro and Gordon (1983) and Rogoff (1985).

[2] The surveys on empirical studies by Eijffinger and de Haan (1996) and Berger, de Haan and Eijffinger (2000) confirm a robust inverse relationship between the index of central bank independence and inflation. There remain major doubts, however, as to whether central bank independence should really be considered a cause of low inflation. Low inflation and central bank independence could rather be seen as mutual effects of a third factor, i.e. inflation aversion in the society as a whole or the dominance of those social groups interested in stable nominal wealth (Epstein 1992, Pivetti 1996, Posen 1993 and 1998, Schürz 2001).

[3] See Arestis (1996), Davidson (1994) and Lavoie (1992) for comprehensive surveys on Post-Keynesian approaches to economics.

[4] In empirical studies Cornwall and Cornwall (1998), Jordan (1997), Gärtner (1997) and Posen (1998) have shown that low inflation generated by central bank in-

hence inflation, could be contained by institutional arrangements, i.e. incomes policies. These arrangements should not only aim at nominal wage and price restraints in periods of full employment, but also at stable unit wage costs and stable prices in periods of recession, in order to avoid devastating macroeconomic effects of disinflation and deflation, and debt deflation in particular.

That the nominal and real effects of conservative monetary policies conducted by independent central banks will depend on the institutional and structural features of the labour and the product markets has also emerged from research conducted by institutional political economists on the strategic interaction of central banks and wage bargaining.[5] The degree of wage bargaining co-ordination and the sector composition of bargaining will in particular be of the utmost importance for macroeconomic performance under the condition of independent and conservative central banks. A high degree of horizontal and vertical co-ordination of wage bargaining led by bargaining in export sectors will be conducive to low inflation and low unemployment according to this view. The focus in this kind of analysis is, however, limited to the institutional conditions for nominal wage restraint. Neither the macroeconomic risks arising from decreasing nominal wages or falling unit wage costs in periods of high unemployment nor the effects of unemployment determined by aggregate demand on the non-inflationary level of unemployment are considered.

As a starting point for my analysis of monetary policies and wage bargaining in the EMU I will outline a Post-Keynesian model on the interaction of central banks and wage bargaining, which will then be amended on the basis of some insights of institutional political economists into the interaction of independent central banks and wage bargaining institutions in Section 2 of the paper. In the Post-Keynesian view, the level of employment is determined by effective demand, upon which monetary policy has an inverse but probably asymmetric impact in the short run. The NAIRU (Non-Accelerating-Inflation-Rate-of-Unemployment) can therefore be considered as a

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dependence is not a 'free lunch' but is associated with considerable disinflation costs in the form of higher unemployment and slower growth in the short run as well as in the long run.

[5] See Franzese (2001a and 2001b) for surveys on theoretical and empirical issues of the interaction between central bank independence and wage bargaining.

limit to employment in the short run given by distribution conflict and enforced by conservative monetary policies. This limit, however, may not be reached by actual employment due to insufficient aggregate demand since I assume neither a real balance effect nor symmetric effects of monetary policies to be at work. In the long run, the NAIRU follows actual unemployment determined by aggregate demand and is therefore affected by the forces dominating demand, including monetary and fiscal policies. Restrictive monetary policies may therefore be an inappropriate method for reduction of the NAIRU in the long run. But the NAIRU can also be influenced by effective wage bargaining co-ordination through its capacity to generate stable unit wage costs. These will not only prevent monetary interventions in periods of falling unemployment but will also prevent devastating effects of deflation on the macro-economy in periods of rising unemployment.

In Section 3 of the paper I will use the results derived from the theoretical discussion to assess the implications of institutional change for the interaction of monetary policy and wage bargaining in the EMU. It is argued that the development of employment and inflation will depend on wage bargaining co-ordination across the EMU on the one hand, and on the monetary strategy chosen by the independent ECB on the other hand. Different scenarios are derived, and it is shown that the first three years of the EMU seem to display the features of the worst case scenario. Under the conditions of uncoordinated wage bargaining across the EMU and a restrictive ECB monetary policy – imitating the asymmetric Bundesbank strategy rather than the symmetric strategy of the Federal Reserve – the euro area is plagued with high unemployment considerably above the NAIRU, a tendency towards nominal wage deflation with restrictive effects on employment and growth, but also with inflation above the ECB's target rate. It is concluded in Section 4 that macroeconomic performance in the euro area will improve if the ECB is forced to choose the symmetric and hence more expansive strategy of the Federal Reserve, and if cross-country wage bargaining co-ordination makes real progress. Although fiscal policies are not explicitly discussed in this paper, I may add that a less restrictive stance in fiscal policies than the one enforced by the Maastricht Treaty and the Amsterdam Stability and

Growth Pact would also improve macroeconomic performance in the EMU.

2. Monetary policy and the effects of wage bargaining co-ordination: an amended Post-Keynesian view

2.1. *Conflicting claims inflation and monetary policy: the NAIRU as a short run limit to employment*

In order to facilitate the analysis of the effects of a changing institutional framework on monetary policy and wage bargaining in the EMU, I will draft a simple Post-Keynesian model of wage bargaining, inflation and monetary policy which will then be amended using some results found by institutional political economists on strategic interaction between wage bargaining institutions and independent central banks.

In an open economy without economic activity by the state, the level of employment is determined by the effective demand expected by entrepreneurs when labour productivity is given or following an exogenous trend. The effect of foreign demand on domestic employment is given by the current account surplus, which is in turn determined by the real exchange rate – if we assume the Marshall-Lerner condition to hold – and by the growth differential between the domestic and the foreign economies. With the propensity to save out of profits exceeding that out of wages and both propensities given, private investment is the main domestic determinant of effective demand. Investment depends positively on the expected rate of profit and negatively on the monetary interest rate.

The interest rate in a monetary economy is an exogenous variable for the income generating process and is determined by the central bank, whereas the volumes of credit and money are endogenously given by effective demand financed by credit.[6] With the technical

[6] For the sake of simplicity I assume that the central bank controls the base rate, and that the market rates are determined by mark-ups of commercial banks according to risk and the duration of credit. If the mark-ups are constant, the central bank directly affects the market rates of interest in financial markets which are important for

conditions of production given, the expected rate of profit depends on the development of the profit share and of capacity utilisation. Capacity utilisation reflects the development of aggregate demand. The profit share is determined by firms' mark-up pricing on unit variable costs in incompletely competitive markets, i.e. by the mark-up and by the relation of costs of intermediate products to wage costs.[7]

The mark-up is determined by the degree of domestic and foreign competition in the goods market. As the mark-up has to cover the firm's actual and imputed interest payments, the minimum mark-up is also affected by the interest rate. For the same reason, the rate of interest determines the minimum rate of profit on real investment in the long run. In the short run, however, there need not be an immediate positive impact of interest rate variations on the mark-up, the profit share and the profit rate, but I can rather suppose an inverse effect on investment and employment.[8] The short-run effects of interest rate variations on investment may be asymmetric. Permanently rising interest rates will, at a certain point, choke investment and hence employment. Falling interest rates may not be able to stimulate investment and employment, however, if entrepreneurs' expectations are depressed and firms do not expect to realise a potential rate of profit above the rate of interest. If changes in the interest rate generated by monetary policy are lasting, mark-up and profit share may change in the same direction because, in the long run, firms can only sustain those production processes which yield the minimum rate of profit determined by the interest rate.[9] Changing mark-ups and income shares have, however, no unique effects on investment and employ-

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investment decisions (Smithin 1994). On endogenous money in Post-Keynesian theory see Lavoie (1984, 1992 and 1996), Cottrell (1994), Hewitson (1995), Moore (1989), Rousseas (1998) and Smithin (1994).

[7] See Bhaduri and Marglin (1990) for a Post-Keynesian open economy model of distribution and investment in which different regimes for the effects of distribution on capacity utilisation and capital accumulation are derived for the closed as well as for the open economy.

[8] As is shown in Hein (1999), the inverse effects of interest rate variations usually assumed in Post-Keynesian models need qualification. In order to have an inverse effect of interest rate hikes on investment and capacity utilisation, and hence on employment, investment has to be very interest rate elastic and the propensity to save out of interest income has to be quite high.

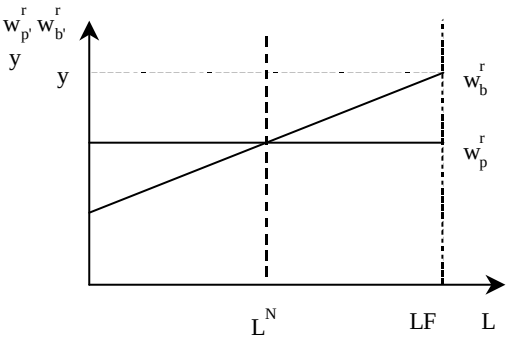
[9] As in Post-Keynesian models of distribution and growth, the rate of profit need not be equal to the rate of interest in equilibrium; rising interest rates may also compress profits of enterprise (Hein 1999).

ment. Rising mark-ups mean rising unit profits but also falling consumption demand and perhaps falling export demand, if increasing mark-ups are associated with rising domestic prices and hence decreasing international price competitiveness of domestic producers. The overall effects of changing income shares on investment and employment, therefore, depend on the savings propensities out of wages and out of profits, on the elasticities of investment with respect to interest rates, unit costs and capacity utilisation, and on the effects exerted through foreign demand.[10]

Having so far sketched the determinants of distribution and aggregate demand in my Post-Keynesian approach, I may now discuss the interaction of wage bargaining and monetary policy. Figure 1 displays a 'conflicting claims' model of employment and inflation assuming constant production coefficients.[11]

FIGURE 1

EMPLOYMENT AND DISTRIBUTION CONFLICT



Although wage bargaining is concerned with money wage rates, it is assumed that the labour unions intend to achieve a certain real wage rate – and a certain wage share with labour productivity (y) given and anticipated. The labour unions' target real wage rate (w_b^r) depends positively on the volume of employment (L) determined by

[10] See Bhaduri and Marglin (1990) for a non-monetary model of distribution and accumulation with different accumulation regimes, and Bowles and Boyer (1995), Hein and Krämer (1997) and Sawyer (1997) for empirical applications of the approach. See Lavoie (1993) and Hein (1999) for monetary extensions of the Bhaduri and Marglin approach, and Hein and Ochsen (2002) for an empirical assessment.

[11] For 'conflicting claims' models of inflation see Rowthorn (1977), Carlin and Soskice (1990), Layard, Nickell and Jackman (1991), Lavoie (1992) and Sarantis (1994).

effective demand and, with the working population (*LF*) given, on the employment rate, because the rate of unemployment has a negative impact on union bargaining strength:

$$w_b^r = w_b^r\left(\frac{L}{LF}, y\right). \tag{1}$$

At this stage I assume that the unions do not consider the macroeconomic effects of their nominal wage demands. There is co-ordination neither between unions in different firms or industries nor between wage bargaining and monetary policy. Full employment is therefore associated with a union target real wage rate equal to labour productivity (y). Therefore, unemployment has the function to curtail distribution claims of labourers, a view already held by Marx (1867) and Kalecki (1943).

The feasible real wage rate (w_p^r) is given by mark-up pricing of firms. In incomplete markets firms set prices (p) according to a constant mark-up (m) on constant unit variable costs consisting of wage costs and costs for intermediate products which are assumed to be imported:

$$p = (1 + m)\left(\frac{w}{y} + \alpha e p_f\right), \tag{2}$$

where w is the nominal wage rate, α the input-output coefficient of imported intermediates, e the exchange rate and p_f the price of imported intermediates in foreign currency. The feasible real wage rate given by firms' pricing is therefore determined as:

$$W_p^r = \frac{w}{p} = \left(\frac{1}{1+m} = \alpha e \frac{p_f}{p}\right) y. \tag{3}$$

With the simplifying assumptions of a constant coefficient technology, a constant mark-up up to full capacity output and a constant real exchange rate (ep_f/p), the feasible real wage rate curve in Figure 1 is simply a horizontal line.

The unions' target real wage and the feasible real wage only coincide by accident. Only if aggregate demand in the goods market generates a volume of employment of L^N will the distribution claims of domestic firms, domestic labourers and foreign countries be compatible, with no acceleration or deceleration in inflation. The rate of

unemployment [(LF–L^N)/LF] associated with this volume of employment may therefore be termed the 'Non-Accelerating-Inflation-Rate-of-Unemployment' (NAIRU), which defines a distribution equilibrium between the claims of domestic labourers, domestic firms and foreign countries. If the actual level of employment given by effective demand in the goods market exceeds L^N, there will be increasing inflation rates due to escalating conflict. If employment falls short of L^N, inflation rates will be falling because high unemployment enforces nominal wage moderation on labour unions. Deflation may be an eventual outcome.

In a model with endogenous money and with investment dominated by expectations related to profitability and aggregate demand, the NAIRU cannot be considered a strong attractor of actual unemployment determined by aggregate demand in the short run, because there is no 'real balance' effect. If unemployment exceeds the NAIRU, inflation rates will be decreasing and, with some price rigidities, wage shares will be falling as well.[12] Falling domestic consumption demand but rising foreign demand due to improved price competitiveness will have an undetermined impact on capacity utilisation and hence investment. But slowing and eventually falling output prices will dampen profit expectations and exert a negative impact on investment, possibly exacerbated by debt deflation (Fisher 1933). If unemployment falls short of the NAIRU and the central bank accommodates increasing inflation, rising prices will stimulate investment demand due to improved profitability expectations and debt inflation. Domestic consumption demand will also be accelerated as soon as unanticipated inflation rates make physical goods the only form to secure wealth for households. Foreign demand, however, will decline due to deteriorating international price competitiveness.

But accelerating inflation rates originating from unemployment falling short of the NAIRU will be halted by monetary policies already effective in the short run, especially under the conditions of an independent and conservative central bank. The central bank's policy instrument is the short-term nominal interest rate, variations in which will have lagged effects on the long-term rate in the financial markets.

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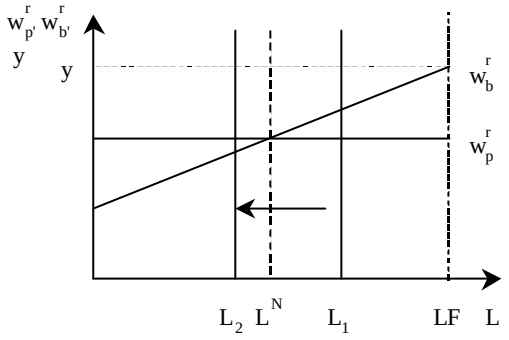
[12] This constellation of falling inflation rates and falling labour income shares has prevailed in the advanced OECD countries since the 1980s, whereas the 1970s saw rising inflation rates accompanied by rising labour income shares (Hein and Ochsen 2002).

Figure 2 shows the short run effects of restrictive monetary policies on investment demand, effective demand and hence employment.

FIGURE 2

SHORT-RUN EFFECTS OF RISING INTEREST RATES



As already mentioned above, the capacities of the central bank to adjust inflation to target inflation are asymmetric. Accelerating inflation caused by an unemployment rate falling short of the NAIRU can be brought to a final end by central banks permanently increasing interest rates, whereas decelerating inflation and deflation caused by an unemployment rate exceeding the NAIRU cannot be converted by the central bank in either case. Therefore, in our model the NAIRU is only a limit to employment enforced by central banks reacting to conflict inflation.[13] The NAIRU is not the equilibrium rate of unemployment originating from labour market imperfections, as in New Keynesian models. In these models either a real balance effect or symmetric reactions and effects of monetary policies have to be assumed in order to neglect long-term effective demand impacts on unemployment and to interpret the NAIRU as the equilibrium rate of unemployment given by supply conditions.[14]

Although there are no market forces adjusting unemployment to the NAIRU in the short run, there may be some forces making the NAIRU move in the direction of actual unemployment in the long

[13] See also Sawyer (1997, 1999 and 2002) for the interpretation of the NAIRU as an 'inflation barrier'.

[14] See Layard, Nickell and Jackman (1991), Gordon (1997), Blanchard and Katz (1997), Staiger, Stock and Watson (1997) and for a critique Galbraith (1997) and Sawyer (1997, 1999 and 2002).

run, thus rendering it endogenous to the development of aggregate demand. These forces may cause a shift either in the target real wage curve of the labour unions or in the feasible real wage curve given by firms' pricing. If unemployment persistently exceeds the NAIRU, dequalification and stigmatisation will reduce the number of unemployed competing effectively for jobs, shift the unions' target real wage curve upwards and increase the NAIRU (Layard, Nickell and Jackman 1991). If rising unemployment has been caused by a persistent increase in interest rates the mark-up may have to increase too, shifting the feasible real wage curve downwards and adjusting the NAIRU to the actual unemployment rate. This process will be reinforced if the dampening effect of slow investment growth on productivity growth, and hence the feasible real wage rate, is considered as well.[15] If slow domestic growth causes domestic currency depreciation on the international financial markets, rising import prices will also contribute to a downward shift in the feasible real wage curve and an increasing NAIRU.[16]

If unemployment determined by aggregate demand falls short of the NAIRU, excess demand for qualified labour will lead to qualification and re-integration of marginal groups into the labour market, increase effective competition for jobs, shift the unions' target real wage curve downwards and reduce the NAIRU. This reduction may be amplified if the increase in employment is accompanied by a persistent decline in interest rates, which may reduce the mark-up and shift the feasible real wage curve upwards. Accelerating effects of high rates of capital stock growth on productivity growth will support this tendency. Also the effects of high GDP growth on currency appreciation on the financial markets causing declining import prices will contribute to a falling NAIRU.

From the endogenous nature of the NAIRU outlined above, it follows that the distribution and growth effects of rising interest rates designed to stem accelerating inflation in the short run may have ad-

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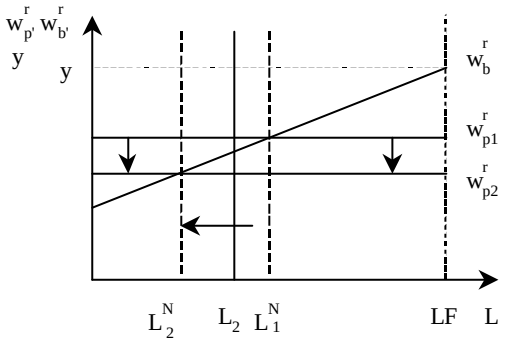
[15] See Sawyer (1999 and 2002) for a discussion of the effects of productive capacity and productivity growth on the NAIRU. In order to achieve these effects, it has to be assumed that labour unions target a certain real wage rate and not a certain wage share.

[16] Slow domestic growth (imposed by excessively restrictive monetary policies) may cause currency depreciation because assets in domestic currency may be less attractive to monetary wealth holders due to curtailed prospective returns associated with slow growth prospects (Bibow 2001b and 2002).

verse effects on inflation in the long run. As a persistent increase in interest rates may lead to a higher mark-up, the feasible real wage curve will shift downwards and trigger a higher NAIRU, as shown in Figure 3. A negative impact of high interest rates on productivity growth through dampened capital stock growth may also contribute to a rising NAIRU. The same is true if slow domestic growth causes domestic currency depreciation on the international financial markets and hence rising costs of imported intermediates. The increase in unemployment generated by the short-run inverse effect of restrictive monetary policies on investment, aggregate demand and output may therefore be insufficient for long run inflation stability; rather, the economy will be plagued with stagflation. Unemployment will therefore have to increase again through even more restrictive monetary policies in order to reduce inflation. This downward spiral reveals that containing inflation by means of increasing interest rates may be not only harmful for production and employment but also ineffective in achieving stable inflation rates.

FIGURE 3

LONG-RUN EFFECTS OF RISING INTEREST RATES



In my model the NAIRU, as a short run limit to employment, on the one hand depends on those factors which have an impact on distribution claims of labour unions and their capacities to enforce nominal wage hikes while, on the other hand, the NAIRU is affected by the determinants of the feasible real wage, especially the mark-up and the real exchange rate. Given that independent and conservative central banks will prevent unemployment from falling short of the

NAIRU, the sustainable degree of employment will be affected by the ability of wage bargaining institutions to anticipate and internalise the effects of wage hikes on inflation. But the sustainable degree of employment also depends on the actual path of employment and growth upon which the monetary policies of independent and conservative central banks have a major – but possibly asymmetric – impact.

2.2. *The beneficial effects of wage bargaining co-ordination*

The impacts of wage bargaining institutions on macroeconomic performance have been coming under discussion since the well known work by Calmfors and Driffill (1988), but without taking strategic interactions of wage bargaining and monetary policies into account. Calmfors and Driffill postulated a hump-shaped relation between the degree of centralisation of wage bargaining and unemployment in international comparison.[17] Highly centralised wage bargaining at the national level and highly decentralised systems of bargaining at the firm level both perform better than intermediate systems with wage bargaining at the industry level. Calmfors (1993), assuming an inverse relationship between real wages and employment, relates this result to the different abilities to moderate real wages at the different levels of centralisation. Soskice (1990), however, has shown that it is not centralisation but, rather, the degree of formal and informal co-ordination of wage bargaining (for instance pattern bargaining) and the degree of 'local pushfulness' of unions, determined by the strength of local unions and their tendency towards short run results, that really count for macroeconomic performance. Contrary to the 'hump-shaped' hypothesis by Calmfors and Driffill, he derives a linearly inverse relationship between the degree of co-ordination and unemployment and a positive connection between 'local pushfulness' and unemployment. The Calmfors and Driffill hypothesis is also rejected in a comprehensive OECD study (1997). Here (p. 64), in fact, the authors find, although not statistically significant in each case, "some tendency for more centralised/co-ordinated bargaining systems

[17] See Calmfors (1993), Flanagan (1999) and OECD (1997) for comprehensive surveys of the relevant studies and their conceptual and empirical problems in assessing the impact of labour market institutions on macroeconomic performance.

to have lower unemployment and higher employment rates compared with other, less centralised/co-ordinated systems". Traxler (1999) and Mesch (2000), who also found a positive impact of the degree of co-ordination on employment, make the valuable distinction between horizontal and vertical co-ordination. A high degree of horizontal co-ordination between industries, through pattern bargaining, state imposed co-ordination, intra-associational co-ordination by the peak association, inter-associational co-ordination or state-sponsored co-ordination, is a necessary but not sufficient condition for wage setting to take its macroeconomic effects into account. In order to translate and implement the results of horizontal co-ordination and to prevent wage-drift or wage-dumping, a high degree of vertical coordination within industries also is needed, through a high level of union and bargaining agreement coverage, legal enforceability of collective agreements and peace obligations.

The view that effective co-ordination of wage bargaining is able to internalise negative wage externalities has recently been applied to the analysis of strategic interaction between independent central banks and wage bargaining institutions by some institutional political economists.[18] Evaluating the joint macroeconomic effects of central bank independence and the degree of wage bargaining co-ordination, Hall (1994) and Hall and Franzese (1998) find that a higher degree of central bank independence is associated with a lower inflation rate. Comparing countries with a similar degree of central bank independence they derive that a higher degree of co-ordination of wage bargaining is associated with a lower 'misery index', taken as the sum of the inflation rate and the rate of unemployment. From this it follows that in economies with a high degree of wage bargaining co-ordination the reduction of inflation rates by independent central banks is accompanied by fewer employment losses than in economies with a low degree of co-ordination. Franzese (2001a) extended this analysis to show that successful internalisation of wage externalities depends not only on co-ordinated wage bargaining but also on the dominance of the private over the public sector in wage bargaining co-ordination and on a major impact of export industries in economy-wide bargain-

[18] For studies on central bank independence and wage/price bargaining institutions see the surveys by Franzese (2001a and 2001b).

ing. There is an incentive for wage moderation in export industries in order to maintain international price competitiveness, and also for the private sector as a whole in order to avoid restrictive monetary policies fighting accelerating inflation fuelled by excessive nominal wage hikes. Under the condition of independent and conservative central banks a high degree of co-ordination of wage bargaining led by bargaining in export sectors will therefore be conducive to low inflation and low unemployment. Kittel and Traxler (2001) support the conclusion of beneficial effects of wage bargaining co-ordination for employment and inflation and demonstrate that the successful anticipation of real effects of restrictive monetary policy following excessive wage hikes rests largely on effective vertical co-ordination in the labour market which solves the problem of implementing horizontally co-ordinated bargaining agreements.

The focus in the institutional political economists' analysis is, however, restricted to the institutional conditions for nominal wage restraint in order to avoid restrictive monetary policies by independent and conservative central banks, and to maintain high levels of employment as well as low inflation. Neither the macro-economic risks arising from decreasing nominal wages or falling unit wage costs in periods of high and increasing unemployment nor the long run effects of aggregate demand on non-inflationary employment are considered.

These omissions can only be justified, however, if a real balance effect or symmetric monetary policy effects can be assumed to be at work making actual employment always equal to the non-inflationary level of employment, but such assumptions must be rejected in a Post-Keynesian model as outlined above.

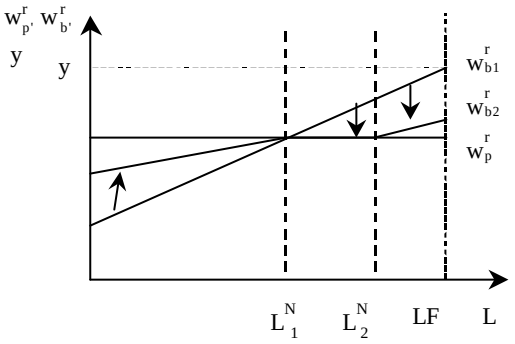
The influence of 'effective' co-ordination of wage bargaining (successful vertical and horizontal co-ordination dominated by the private sector – and led by export industries especially in small open economies) on sustainable employment are shown in Figure 4.

With an increasing degree of effective wage bargaining co-ordination, the labour unions' target real wage rate changes in comparison with non-co-ordination. The target real wage curve shifts from w^r_{b1} to w^r_{b2}. Between L^N_1 and L^N_2 the bargaining parties are able to accept the feasible real wage and exhaust the scope for distribution taking into account the inflation objective of independent central banks. If employment falls short of L^N_1, the unions will be too weak to

exhaust the scope for distribution. If employment exceeds L_2^N, union members will press for higher wages and a higher wage share, and either the unions will demand redistribution in favour of wages or wage drift due to excess demand for labour in some sectors may arise. This will accelerate inflation and prompt central bank intervention forcing employment down to L_2^N.

FIGURE 4

EFFECTIVE CO-ORDINATION OF WAGE BARGAINING



By means of effectively 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.[19] As an increasing degree of effective wage bargaining co-ordination decreases the NAIRU, a higher level of employment can be achieved without contradicting the inflation objective of an independent central bank. Contrary to prevailing propositions, a reduction of the NAIRU can be attained by means of organising the labour market and co-ordinating the bargaining parties, and does not require decentralisation of wage bargaining and deregulation of labour markets. A high degree of effective wage bargaining co-ordination also has the additional virtue that increasing unemployment will not cause immediate disinflation or deflation with its negative impacts on effective demand and employment. Effective wage bargaining co-ordination is therefore not only a superior method to contain inflation in

[19] This fact may explain the difficulties in estimating the NAIRU with sufficiently small confidence intervals, especially for economies with co-ordinated wage bargaining (Staiger, Stock and Watson 1997).

an economic upswing, as compared with restrictive monetary policies, but is also able to stabilise the economy in an economic downswing.

3. Monetary policies and wage bargaining in the euro area

3.1. *Potential scenarios*

The 1999 transition to European Monetary Union has caused major changes for the institutional framework and the interaction between monetary policy and wage bargaining.[20] The personally, politically and economically independent European Central Bank with its primary objective of price stability has since then been faced with different national wage bargaining systems without effective co-ordination across the euro area. According to my arguments developed above, under the conditions of an independent and conservative central bank the perspectives for employment and inflation in the euro area depend on the development of effective wage bargaining co-ordination, on the one hand and, on the other hand, on the central bank's monetary policies. The development of effective wage bargaining coordination affects the short run limit to employment given by the NAIRU and the stability of actual unemployment determined by effective demand which may feed back on the NAIRU as well. The monetary policies of the central bank have an important immediate impact on actual unemployment through their short run effects on aggregate demand and, furthermore, an indirect impact on the NAIRU through their long run effects on the mark-up, on capital stock and productivity growth, on the real exchange rate and hence on the feasible real wage rate. Each determinant of macroeconomic performance in EMU as well as their interaction will be discussed in the following paragraphs.

When the EMU was launched the member countries' wage bargaining systems differed substantially. Since then systems with a high degree of national co-ordination (Austria, Germany, Finland, the

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[20] For a more detailed treatment of the potential developments within EMU see Hein (2002).

Netherlands) have coexisted with systems of low co-ordination on the national level (France, Italy, Ireland, Portugal, Spain).[21] This situation has seen a number of attempts by labour unions to co-ordinate wage bargaining across borders.[22] In the Declaration of Doorn (1998), the trade union federations of Germany and the Benelux-countries agreed to aim at real wage increases according to productivity growth in order to prevent wage dumping. At the sector level, the German IG Metall districts installed cross-border collective bargaining networks. The European Metalworker Federation (EMF) was the first to develop concepts of European co-ordination of bargaining demands based on productivity growth rates and inflation. This line has now been followed by most of the European industry federations and by the European Trade Union Confederation (ETUC). Nevertheless, transnational wage bargaining co-ordination still faces serious obstacles, rooted in the different national wage bargaining systems and the different degrees of national co-ordination. These basic problems are aggravated by certain overall trends in the development of wage bargaining institutions. According to Calmfors (2001) and Pichelmann (2001) there has, on the one hand, been a general trend towards decentralisation of wage bargaining since the 1970s because of decentralisation of business decisions, keener international competition and capital seeking to limit union power. On the other hand, since the 1980s there has been a tendency towards national social pacts aiming at nominal wage moderation in order to maintain or improve the international price competitiveness of national business under the conditions of slow growth.[23] Although these two tendencies might contradict each other, they are both detrimental to wage bargaining co-ordination across the EMU countries.[24]

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[21] For the differences between national wage bargaining systems at the start of EMU see Mesch (1999) and Traxler (1999).

[22] On the state of co-ordination of wage bargaining in the EMU see Hoffmann and Mermet (2000), Mesch (2000), Pichelmann (2001), Schulten and Bispinck (2001), Schulten (2001b and 2002) and Traxler (1999).

[23] Also Crouch (2000), Pichelmann (2001) and Schulten (2001a) identify a major tendency towards 'competitive corporatism' in EMU member countries. According to Calmfors (2001), there are pacts for competitiveness in Belgium, Germany, Greece, Finland, Italy, Ireland, the Netherlands, Portugal and Spain.

[24] Calmfors (2001) projects that the prevailing tendency towards decentralisation will not only impede transnational co-ordination of wage bargaining in the EMU but

The lack of effective wage bargaining co-ordination within some EMU countries and especially across the EMU countries, together with tendencies towards decentralisation of wage bargaining and 'competitive corporatism', may have harmful effects on macroeconomic performance. When employment is generally increasing or when there are exogenous shocks limiting the national scopes for distribution, major problems will arise for those economies without effective wage bargaining co-ordination. With no nominal wage moderation, small countries with only minor impacts on inflation in the euro area will suffer losses in market shares and employment. A lack of wage moderation and increasing inflation in the intermediate or bigger countries with major impacts on inflation in the euro area will bring on ECB intervention and lead to overall losses in output and employment in the euro area. The economies with effective wage bargaining co-ordination will, however, be able to contain inflation when employment is increasing or when they are hit by exogenous shocks.[25] With persisting and increasing unemployment, these countries may also make active use of their co-ordination advantage and keep their bargaining agreements below those of their competitors in the euro

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will also undermine national co-ordination within competitive corporatism. If transnational co-ordination develops, it is most likely to occur within multinational firms, according to his view. See also Pichelmann (2001) for a similar view. Crouch (2000), however, identifies some tendencies towards 'organised decentralisation' within corporatist systems, as in Austria, the Netherlands or in Denmark.

[25] Soskice and Iversen (2001), however, assume that the transition to EMU will also relax the constraints imposed by the former Bundesbank on the highly co-ordinated German wage bargaining and increase the NAIRU in Germany and in the euro area as a whole. If the ECB does not consider German wage bargaining as inflation setter for EMU, the German labour unions lose the incentive for wage moderation, according to their view. If the ECB considers German wage bargaining as inflation setter for the EMU, but the German labour unions do not expect the other unions in the EMU to follow, there is again no incentive for wage moderation in Germany, because the German unions may fear that their relative wage position will be weakened. Only if German wage bargaining is targeted by the ECB and if the German labour unions can be sure of acting as wage setter in co-ordinated European wage bargaining, will there be an incentive for wage moderation in Germany. But these considerations may only apply to periods of low and decreasing unemployment. In periods of high and increasing unemployment, like the present one, also German wage bargaining may be tempted to take advantage of its superior co-ordination and to keep unit wage cost growth and inflation below that of competitors in the euro area in order to improve export performance. This is what indeed seems to have happened during the first three years of EMU: unit wage cost growth and inflation in Germany remained below that of the euro area as a whole and Germany's export surpluses exploded.

area. This competitive corporatism does not destabilise macroeconomic development as long as its introduction is confined to small countries (such as the Netherlands or Ireland). A 'beggar thy neighbour' policy will, however, become a major macroeconomic problem and may trigger a deflationary race to the bottom in the EMU as soon as it is pursued by some major economies.[26]

The risks of accelerating inflation in phases of falling unemployment as well as the dangers of disinflation and deflation in periods of high and rising unemployment could be avoided with increased effective wage bargaining co-ordination across the EMU. With the labour unions' wage demands related to national productivity growth and the target inflation rate of the ECB, the corridor for stable inflation levels of employment could be widened. In this way, the European NAIRU could be reduced, destabilising monetary interventions with long run increasing effects on the NAIRU could be avoided, and the risks of deflationary spirals caused by increasing actual unemployment could also be contained. A potentially viable road towards co-ordination of wage bargaining across the euro area could be the metal sector developing the core of pattern bargaining across the EMU led by the German IG Metall, because in this sector the conditions for efficient horizontal and vertical co-ordination seem to be developing. Centralised, top down wage bargaining at the EMU-level is apparently impossible under present conditions.[27]

The development of inflation and employment in the euro area is not only determined by wage bargaining co-ordination but also by the ECB's monetary policy through its effects on aggregate demand and on the scope for distribution. Under the conditions of uncoordi-

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[26] Simulations with the Oxford Economic Forecasting Model by Fritsche *et al.* (1999) show that nominal wage reductions in Germany improve international competitiveness and hence production and employment in Germany, but at the same time reduce output and employment in the other EMU countries by a considerable amount. The reduction of interest rates made possible by German wage moderation does not have sufficiently compensating effects. If the Netherlands follow a 'beggar thy neighbour' strategy, however, there are neither effects on output and employment in the other EMU economies nor on the interest rate.

[27] See Kittel and Traxler (2001), Mesch (2000), Soskice (2000) and Traxler (1999) for similar views on the perspectives of wage bargaining co-ordination in the euro area. Wage bargaining co-ordination within multinational enterprises, seen as the most likely form of transnational co-ordination in the euro area by Calmfors (2001), will, however, not be sufficient for macroeconomic stabilisation.

nated wage bargaining and possible further deregulation of labour market institutions, together with decentralisation of wage bargaining, reduction of social benefits and hence the reservation wage rate, and through active labour market policies increasing the qualifications of labour supply,[28] the NAIRU may be reduced, as the US experience in the 1980s and 1990s showed (Gordon 1997). The success of this strategy relying on weakened union wage bargaining power, however, crucially depends on central bank policies matching with the deregulation of labour markets and rewarding deregulated markets with symmetric reactions to deviations from target inflation. A reduction of the NAIRU by means of deregulation has therefore to be accompanied by expansive monetary policies (Allsopp and Vines 1998) which, if successful, not only increase actual employment but also contribute to further reductions in the NAIRU through the channels illustrated above. It should be noted, however, that symmetric monetary policy reaction may have asymmetric effects on investment, output and employment. Decreasing interest rates by means of central bank interventions may not be sufficient to convert a recession, with unemployment considerably above the NAIRU, into an investment boom if investors' expectations have taken a downturn. In this case, matching fiscal policies and/or increasing world demand for goods will also be needed.[29] If these conditions are not given, the central banks may not be able to stand in the way of falling unemployment and deflation.

There is, however, not only the symmetric strategy of the US Federal Reserve as an option for the ECB, but also the asymmetric strategy of the German Bundesbank, which raised interest rates whenever inflation climbed above the target rate but did not immediately relax monetary policy when inflation rates fell below its target.[30] The

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[28] This is the strategy recommended by those authors who view European unemployment as predominantly 'structural' (see Calmfors 1998).

[29] As has been shown by Flassbeck *et al.* (1997), Kalmbach (2000), Palley (1998) and Solow (2000), the superior performance of the US economy compared to Germany and Europe in the 1990s was due rather to co-ordinated macroeconomic policies than to labour market deregulation.

[30] This strategy was therefore associated with higher sacrifice ratios than the Fed strategy (Horn 1999, Debelle and Fischer 1994). Bibow (2001a) shows that the asymmetric Bundebank strategy, compared to the symmetric strategy of the Federal Re-

Bundesbank strategy supposed powerful strategic actors in the labour market as causes for inflation, to be disciplined with appropriate monetary policies, whereas the Fed strategy supposes powerless actors and attributes inflation to the market constellation in the labour market (Franzese 2001a). Contrary to the Fed, the Bundesbank also had to take into account the higher degree of openness of the German compared to the US economy and was very successful in its strategy of 'stability oriented under-valuation' of the D-Mark, which persistently combined current account surpluses with currency appreciation tendencies. Finally, the Bundesbank was (as is the ECB today) primarily responsible for price stability, whereas the Federal Reserve has a dual mandate including price stability and full employment (Meyer 2001).

Summing up, the development of inflation and employment in the EMU is determined, on the one hand, by the ECB's choice of monetary policies and, on the other hand, by the development of effective wage bargaining co-ordination, as can be seen from Table 1.[31] With simple distinction between, on the one hand, effective co-ordination of wage bargaining and non-co-ordination, which may be associated with further deregulation in the labour market, decentralisation of wage bargaining and national 'social pacts', and, on the other hand, between a symmetric reaction function of the ECB imitating the Fed and an asymmetric approach following the Bundesbank four scenarios can be derived, which show the medium-to-long-run perspectives for inflation and employment in the euro area.

If effective co-ordination of wage bargaining is attained and the ECB follows the Bundesbank strategy, the euro area will achieve price stability and an intermediate rate of unemployment (scenario 1). The short run potentials for stable inflation rates of unemployment will

TABLE 1

POTENTIAL SCENARIOS FOR MACROECONOMIC PERFORMANCE IN THE EURO AREA DETERMINED BY WAGE BARGAINING CO-ORDINATION AND BY ECB MONETARY POLICY

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serve, accounts for a major part of the growth differentials between the USA and Germany in the 1990s.

[31] Of course, fiscal policies in the EMU will also have a major impact on demand and hence on employment and inflation. But here is not the place to attempt detailed discussion.

		ECB's monetary policy	
		German Bundesbank (asymmetric)	Federal Reserve (symmetric)
Effective co-ordination of wage bargaining	yes	1: Price stability, intermediate rate of unemployment, constant NAIRU	2: Price stability, low rate of unemployment (stable), falling NAIRU
	no	3: Downward nominal wage pressure, high rate of unemployment, rising NAIRU, inflationary pressures	4: Price stability, low rate of unemployment (unstable), falling NAIRU

not be exhausted, because the ECB will react asymmetrically to deviations from its inflation target. This will also prevent the NAIRU from falling in the long run. Under the conditions of co-ordinated wage bargaining better employment performance in the short run together with reduction of the NAIRU in the long run will be achieved, if the ECB follows the Fed strategy (scenario 2). If wage bargaining remains uncoordinated at the EMU level, and if further deregulation in the labour market is introduced, the choice of the Fed strategy will also lead to a high level of employment in the short and a reduction in the NAIRU in the long run (scenario 4). But high employment will be far more unstable than in the case of effectively co-ordinated wage bargaining. If unemployment exceeds the NAIRU, there will be the immediate threat of disinflation and deflation, which will be especially pronounced if there are no stabilising fiscal policy interventions in this situation. As fiscal policies in the EMU are restricted by the Stability and Growth Pact of Amsterdam and orientated towards consolidation by means of expenditure cuts, there rather have to be expected pro-cyclical policies (Arestis, McCauley and Sawyer 2001). If the ECB chooses the Bundesbank strategy under the conditions of uncoordinated wage bargaining across the EMU, the degree of unemployment will remain below the stable inflation rate of unemployment and there will be permanent pressure on nominal wages which might be exacerbated by pro-cyclical fiscal policies (scenario 3). This stagnation scenario may be associated with inflationary pressures as well: a rising NAIRU may be caused by increasing mark-ups due to high interest rates, slow productivity growth due to weak investment, and depreciation of the currency and hence rising import prices due to

slow growth prospects and the diminished attractiveness of assets denominated in euro for monetary wealth holders.

3.2. *What has happened since 1999?*

Since the introduction of EMU in 1999 the ECB has been faced with uncoordinated wage bargaining across the euro area. Although the labour unions have been pressing for co-ordination, a contradictory tendency towards decentralised wage bargaining and towards national social pacts for wage moderation has prevailed. Whether scenario 4 or the worst case, scenario 3, is to be considered the more appropriate description of macroeconomic performance in the euro area is therefore to be decided by assessment of the ECB's monetary policies. Although final judgements should not be made after only three years of experience, some tendencies have already become obvious.[32]

When the ECB started operations in 1999, inflation rates and nominal short-term interest rates in the euro area had come down in the course of the convergence process (Figure 5). Nominal unit labour cost growth had also slowed down and had been substantially below consumer price inflation. Hence it follows that the wage share in national income had been decreasing during the 1990s. But a high price had to be paid for disinflation and increased profitability through redistribution at the expense of labour: real GDP growth slackened and unemployment increased in the first half of the 1990s and remained at a high level during the second half.[33]

This weak performance of the countries that were to form the euro area is especially apparent when compared to the performance of the US economy during the 1990s (Figure 6). The USA experienced low inflation, which had been decreasing until 1998 and was then increasing until 2000, high real GDP growth rates, especially from the mid-1990s until 2000, and an unemployment rate constantly falling to 4% in 2000. Unit labour cost growth had been below consumer price inflation until 1997 and has increased above the inflation rate since

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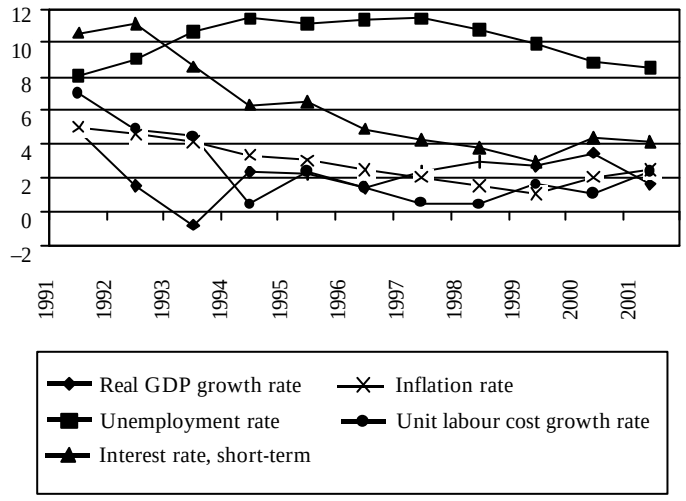
[32] For a more detailed assessment of the ECB's monetary policies during its initial period, also focussing on internal contradictions and insufficiencies in the monetary strategy, see Bibow (2001b and 2002) as well as Heine and Herr (2001).

[33] See Bibow (2001a) and Lombard (2000) for a detailed account of the restrictive macroeconomic effects of the EMU convergence process.

then. The expansive character of the Federal Reserve's monetary strategy accounts for the sustained boom in the second half of the 1990s, when the Fed refrained from monetary contraction although the unemployment rate fell below 6%, then considered to be the US NAIRU. Nor was the federal funds rate – which has a direct impact on the short-term interest rate displayed in Figure 6 – increased when unit labour cost growth began to accelerate in 1998. It was only when, in 2000, unit labour cost growth exceeded 3%, consumer price inflation approached 3% and the stock market price exaggerations had to be contained, that the Fed began to tighten, contributing to the growth slowdown in 2001. Between November 1999 and May 2000 the federal funds rate was mildly increased by 1.25 percentage points (Table 2). When growth slowed down in 2001 and unemployment began to rise, however, the Fed reacted promptly and decreased the federal funds rate from 6% in January to 1.75% in December, al-

FIGURE 5

REAL GDP GROWTH, UNEMPLOYMENT RATE, INTEREST RATE, INFLATION RATE AND UNIT LABOUR COST GROWTH IN THE EURO AREA (EU-12), 1991-2001 (in %)

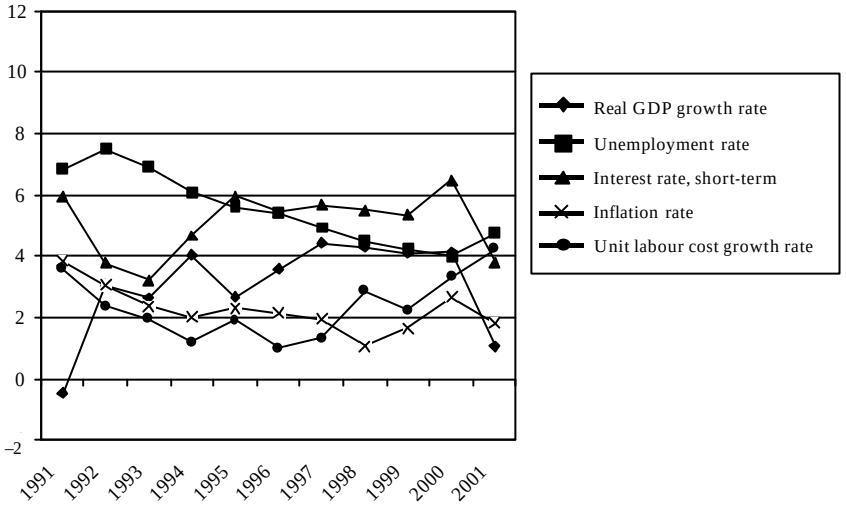


Source: OECD (2001).

though annual unit labour costs growth continued to rise in 2001. The real effects of expansive monetary policies, however, have yet to appear.

FIGURE 6

REAL GDP GROWTH, UNEMPLOYMENT RATE, INTEREST RATE, INFLATION RATE AND UNIT LABOUR COST GROWTH IN THE USA, 1991-2001 (in %)



Source: OECD (2001).

How has the ECB performed compared to the Fed? Under conditions of slow European growth, high unemployment, nominal wage restraint and low inflation, the independent ECB defined its primary goal, price stability, as achieved when annual growth of the Harmonised Index of Consumer Prices (HICP) remains below 2% in the medium term (ECB 1999). This is quite a restrictive interpretation of price stability since it undercuts the 3% medium term inflation record of the former core economy of the EMS, Germany (Bibow 2002), and disregards the fact that sustained upswings in OECD countries have usually been associated with inflation rates considerably above 2% (Heine and Herr 2001). The potentially restrictive stance of the ECB also becomes clear in its 'two pillar strategy', which consists of a reference value for the growth of M3, on the one hand, and, on the other hand, a broadly based assessment of the outlook for future price de-

velopment and risks to price stability in the euro area as a whole.[34] The reference value for M3 growth was set at 4.5% and was based on the assumption of a trend decline of velocity of 0.5 to 1%, an inflation rate of 1 to 2% and a trend rate of real GDP growth of 2 to 2.5%. Here it is neither the place to discuss the sensibleness of using monetary quantities as target or reference values for monetary policy – which, however, certainly does not make sense in an endogenous money approach – nor to point up the potential inconsistencies which may arise from the simultaneous use of monetary aggregates and inflation prospects as guidelines for monetary policies.[35] Rather, the implications of the assumed low trend rate of real GDP growth underlying the reference value for M3 are of interest in my context. With its modest assumption for potential GDP growth the ECB simply extrapolates the modest growth experience of the 1990s without recognising that European growth in this period was itself a result of restrictive monetary and fiscal policies. Hence a more expansive monetary policy than the one enforced by the Bundesbank on the EMS during the 1990s could hardly be expected at the very start of EMU. The ECB did not seem to mean "to give growth a chance" (Bibow 2002). The fall in the European NAIRU associated with falling nominal and real interest rates and with increasing competition in goods markets due to greater market transparency could not be expected to be utilised by the ECB in order to promote employment, growth, and hence a further decline in the NAIRU.

These somewhat pessimistic expectations were fulfilled by the ECB during the first three years. Although in 1999 HCPI growth remained considerably below the ECB target of 2% (Table 2) and annual unit labour cost growth also failed to cause any inflation pressure (Figure 5), the ECB refused to lower significantly its interest rate on main refinancing operations. The minor reduction of the ECB's key rate from 3 to 2.5% in April was reversed in November under the impression of a continuous decline in the euro exchange rate (Table 2). GDP growth remained modest and although employment in-

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[34] This assessment is based on the outlook of the development of wages, exchange rates, bond rates, term structures of interest rates, real economic activity, fiscal indicators, price and cost indicators, industry and consumer expectations.

[35] See Heine and Herr (2001) for a comprehensive critique of the ECB strategy on these points.

creased, the potentials for substantial reduction of unemployment were not fully exploited.

In 2000 inflation rates continued to increase, exceeding the ECB's target in the second half of the year. This acceleration in inflation was not, however, fuelled by excessive wage hikes. On the contrary, nominal wage moderation caused by high unemployment, uncoordinated wage bargaining across the euro area and social pacts for wage moderation brought about a decline in unit labour cost growth and kept it below the inflation rate. Rising inflation in the euro area was, rather, caused by import price hikes (crude oil and derivatives) and the continued devaluation of the euro. However, although the labour unions refrained from demanding compensation for rising consumer prices, and although the wage bargainers in Germany – by some perceived to be the European wage setters – agreed on two-year contracts with moderate nominal wage increases, the ECB raised its key interest rate by 1.75 percentage points from November 1999 to October 2000. With these interest rate hikes the ECB set out to prevent second round effects of rising consumer price inflation – which the labour unions already had abstained from – and sought to bring a halt to euro decline. But this attempt was in no way successful: the euro exchange rate determined on the international financial markets continued to depreciate while the inflation rate accelerated until June 2001 (Table 2).[36] GDP growth increased slightly because of rising world demand and the improved price competitiveness of European exports and unemployment was reduced, although the level remained high.

The euro area dilemma of nominal wage restraint, tight monetary policies, slow growth, high unemployment, a weak euro and inflation above the ECB's target also dominated in 2001. When world economic growth stumbled and the Fed started to lower interest rates in January, as far as 4.25 percentage points by the end of the year, the ECB hesitated until May when the downswing could no longer be ignored and reduced interest rates in four small steps by 1.5 percentage points (Table 2). HCPI (Harmonised Consumer Price Index) growth, remaining above the target throughout the year, did not seem to allow for more expansive policies. But again, nominal wage growth put

[36] As Arestis *et al.* (2001) and Bibow (2001b and 2002) have shown, the euro declined because euro area assets became less attractive to international monetary wealth holders due to curtailed prospective returns associated with slow growth caused by the ECB's monetary policies.

TABLE 2

FEDERAL FUNDS RATE, ECB INTEREST RATE ON MAIN REFINANCING OPERATIONS, EURO EXCHANGE RATE, AND GROWTH OF HARMONISED CONSUMER PRICE INDEX, 1999-2001

	Date of change in federal funds rate	Fed: Federal funds rate (%)	Date of change in ECB's main refinancing interest rate	ECB: Main refinancing operations, interest rate (%)	Euro exchange rate (US$/E)	Annual growth of HCPI (%)
1999		4.75	Jan. 1	3.00	1.161	0.8
2					1.121	0.8
3					1.088	1.0
4			April 9	2.50	1.070	1.1
5					1.063	1.0
6	June 30	5.00			1.038	0.9
7					1.035	1.1
8	Aug. 24	5.25			1.060	1.2
9					1.050	1.2
10					1.071	1.4
11	Nov. 16	5.50	Nov. 5	3.00	1.034	1.5
12					1.011	1.7
2000					1.014	1.9
2	Feb. 2	5.75	Feb. 4	3.25	0.983	2.0
3	March 21	6.00	March 17	3.50	0.964	2.1
4			April 28	3.75	0.947	1.9
5	May 16	6.50			0.906	1.9
6			June 9	4.25	0.949	2.4
7					0.940	2.3
8					0.904	2.3
9			Sept. 1	4.50	0.872	2.8
10			Oct. 6	4.75	0.855	2.7
11					0.856	2.9
12					0.897	2.6
2001	Jan. 3/31	6.00/5.50			0.938	2.4
2					0.922	2.6
3	March 20	5.00			0.910	2.6
4	April 18	4.50			0.892	2.9
5	May 15	4.00	May 11	4.50	0.874	3.4
6	June 27	3.75			0.853	3.0
7					0.861	2.6
8	Aug. 21	3.50	Aug. 31	4.25	0.900	2.4
9	Sept. 17	3.00	Sept. 18	3.75	0.911	2.3
10	Oct. 2	2.50			0.906	2.4
11	Nov. 6	2.00	Nov. 9	3.25	0.888	2.1
12	Dec. 11	1.75			0.892	2.0

Sources: ECB (1999-2002) and Federal Reserve Bank of New York (2002).

no pressure on inflation. Increasing growth of unit labour costs (Figure 5) was, rather, caused by slow productivity growth in a period of economic stagnation. The main causes for rising inflation lay in increasing prices for oil derivatives and rising food prices caused by animal diseases. These exogenous shocks, however, would only cause problems for the stability of the aggregate price level and justify restrictive monetary policies if relative price changes were to trigger second round effects of nominal wages, which was not the case in 2001. The rather restrictive ECB reactions were conducive neither to European growth and employment nor to the internal and the external value of the euro: the inflation rate exceeded the ECB's target and the exchange rate continued to deteriorate after some improvements around September 11 (Table 2).

This brief review reveals a profound "anti growth bias" (Bibow 2002) in the ECB's monetary policies during the first three years of operation. The ECB did not follow the Fed's symmetric strategy but instead focused asymmetrically on the short-term outlook of upward price risks without providing the support for growth and employment one might have expected when the absence of any accelerating inflation risk allowed it. In this sense the ECB followed the Bundesbank's monetary strategy, but under different conditions and therefore with less success than the Bundesbank. Whereas in Germany, as 'a small open economy', the effects of restrictive Bundesbank policies on domestic demand could be offset by increasing export surpluses, this compensation was less effective in the euro area – 'a large closed economy' where, moreover, no relief through more expansive fiscal policies could be expected under the conditions of the Amsterdam Stability Pact. And whereas the Bundesbank was confronted with coordinated wage bargaining and strategic actors in the labour market that had to be disciplined in order to stabilise the internal and external value of the currency as well as export performance whenever wage bargaining failed to take the Bundesbank's inflation target into account, the ECB faced uncoordinated wage bargaining across the euro area which, under the conditions of high unemployment, did not exert any inflationary pressure but, rather, delivered nominal wage restraint through labour market mechanisms and national social pacts, which then accelerated the restrictive effects of monetary policies on domestic demand, growth and employment.

Dominated by uncoordinated wage bargaining across the EMU and an 'anti growth bias' in the ECB's monetary policy (together with restrictive fiscal policies dominated by the Stability and Growth Pact), the performance of the euro area from 1999 to 2001 did indeed display the main characteristics of my worst case scenario 3. Within connected vicious circles, high unemployment and social pacts for international competitiveness caused nominal wage restraint, which was not rewarded by the ECB's asymmetric monetary policy (nor by restrictive fiscal policies). Nominal wage restraint and tight monetary policies then caused slow growth, which was insufficient to reduce actual unemployment substantially and relieve pressure on nominal wages. High and rising interest rates associated with restrictive monetary policies and the negative effects of slow GDP growth on productivity growth and on the exchange rate increased the inflation rate and prevented the NAIRU from falling substantially. This induced asymmetric monetary policies either to hold tight, or to become even more restrictive. The ECB became a victim of its own strategy.

Improvement in euro area performance will only be achieved if the ECB changes its monetary strategy and abandons its 'anti growth bias'. As conditions are now very different from those faced by the Bundesbank, there is no need for the ECB to imitate the Bundesbank. More symmetric and hence more expansive monetary policies will be facilitated by improvement in wage bargaining co-ordination across the EMU. Co-ordinated wage bargaining, targeting nominal wage hikes determined by national productivity growth and the ECB's inflation target will stabilise the price level whenever employment increases or decreases. The NAIRU will be reduced and deflationary processes prevented. This would allow the ECB to accept responsibility for employment and growth without neglecting its primary goal. More expansive fiscal policies will also be needed whenever the economy slides into recession. This kind of co-ordinated macroeconomic policy may, however, require major institutional reforms in the euro area.[37]

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[37] See for example Arestis, McCauley and Sawyer (2001) for a proposal of an alternative stability pact for the European Union.

4. Conclusions

Starting from the observation that the literature on 'time inconsistency' and 'central bank independence' may be able neither to capture the true causes of inflation in a monetary production economy nor to provide adequate assessment of the effects of independent and conservative central banks on inflation, employment, distribution and growth, in this paper I have outlined a Post-Keynesian model with endogenous money, in which inflation is caused by conflict over distribution and not by 'time inconsistency' of monetary policy. With labour unions' wage demands propelled by the rate of employment, this model generates a NAIRU as a short run limit to employment given by distribution conflict and enforced by conservative monetary policies of independent central banks. It is shown that the NAIRU is not a strong attractor for actual unemployment determined by effective demand in the short run, and that in the long run the trend of the NAIRU is, rather, influenced by the development of actual unemployment determined by aggregate demand through different channels. These are the effects of actual unemployment on effective labour supply and hence on the labour unions' bargaining power. Further there are the effects of capital stock growth on labour productivity, the effects of the domestic economy's growth prospects on the real exchange rate, and the effects of interest rate variations on the mark-up, each of which influences the feasible real wage rate given by mark-up pricing. Hence it follows that restrictive monetary policies will not be effective in containing inflation in the long run. Amending the Post-Keynesian model of conflict inflation on the basis of some insights of institutional political economists concerning the interaction of central bank independence and labour market institutions, it is concluded that effective co-ordination of wage bargaining, i.e. successful vertical and horizontal co-ordination dominated by the private sector, may considerably reduce the NAIRU.

Applying the theoretical considerations to the development of unemployment and inflation in the EMU from 1999-2001, in the first step four potential scenarios are derived which depend on the development of wage bargaining co-ordination across the EMU and on the monetary policy strategy chosen by the independent ECB. Although various attempts have been made by European labour unions to im-

prove wage bargaining co-ordination, the trends towards decentralisation of bargaining and towards national social pacts for competitiveness have been major obstacles to effective bargaining co-ordination. Under conditions of uncoordinated wage bargaining, the macroeconomic performance of the EMU has therefore been dominated by the monetary policy choice of the ECB. In the second step the monetary policies of the ECB are then analysed. It is shown that the ECB followed an asymmetric strategy in achieving its primary goal – price stability. Although conditions for monetary policies have changed considerably, the ECB imitated the more restrictive Bundesbank strategy rather than the more symmetric and expansive strategy of the Federal Reserve. This meant that the reduction in the European NAIRU made possible by decreasing interest rates and increasing competition in the goods markets could not be exploited by more expansive aggregate demand. Dominated by uncoordinated wage bargaining across the EMU and an 'anti growth bias' in the ECB's monetary policy (and restrictive fiscal policies prescribed by the Stability and Growth Pact), from 1999 to 2001 euro area performance displayed the main characteristics of my worst case scenario. High unemployment and social pacts for international competitiveness caused nominal wage restraint, which was not rewarded by the ECB's asymmetric monetary policy. Nominal wage restraint and tight monetary policies then caused slow growth, which fed back on the NAIRU through the effects of low capital stock growth on productivity growth and of modest GDP growth prospects on the exchange rate. Currency depreciation and inflation above the target then induced the ECB either to keep a tight hold or to become even more restrictive.

It is finally concluded that improved performance in the euro area in terms of employment and inflation will require the ECB to give up its 'anti growth bias'. More symmetric and hence more expansive monetary policies will be facilitated by the improvement of wage bargaining co-ordination across the EMU, stabilising the price level whenever employment increases or decreases. This would allow the ECB to accept responsibility for employment and growth without having to neglect price stability. More expansive fiscal policies will also be needed whenever the economy slides into recession. However, this kind of co-ordinated macroeconomic policy may require major institutional reforms in the euro area.

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