Wage developments in Euroland or: the Failure of the Macroeconomic Dialogue

By

Stefan Collignon

Sant'Anna School of Advanced Studies, Pisa

Centro Europa Ricerche, Roma

www.stefancollignon.eu

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Abstract

European monetary union is unique. Monetary policy is centralised at the supranational level, but many other policies with macroeconomic impact remain at the national level. Because price stability is driven by unit labour costs, wage bargaining has become Europeanized with the creation of the euro. While the experience of the last 10 years has shown that wage bargaining on aggregate has supported monetary policy, national wage settlements have diverged and there is only very weak evidence of convergence to the euro average. The reasons are found in insufficient consideration of the euro-wide macroeconomic environment in national wage bargaining and the absence of European-wide public debates on wage setting.

This poses the problem of how to remedy the situation. Classical indicators of labour market flexibility do not seem to be relevant. The Macroeconomic Dialogue was instituted to facilitate macroeconomic stability. It has failed, largely because of its confidential nature, which prevents the emergence of European-wide policy deliberation. It is suggested that the MED should be transferred from the Council to the European Parliament.

Wage developments in Euroland or: the Failure of the Macroeconomic Dialogue

Stefan Collignon[1]

The institutional set-up of European monetary union is unique. Monetary policy is centralised at the supranational level, but many other policies with macroeconomic impact remain at the national level. This decentralized decision making produces externalities, which are not correctly internalised in the decision making procedures. The problem is not new and has received some attention with respect to fiscal policy (Collignon, 2003; 2004, 200a). It is much less regarded in the field of wage bargaining, presumably because markets are supposed to work efficiently. But experience reported in this paper shows that labour markets remain local markets and wage bargainers behave as if they are unaware of the fundamental regime change that took place with the introduction of the euro. In 1999 the German EU presidency set up the Macroeconomic Dialogue, also called Cologne Process, which was an attempt to focus policy makers minds on the issue of wage bargaining externalities. But, I argue, it has failed, because it has remained an exclusive, secretive and confidential elite process. In order to prevent the risk of unsustainable tensions in the monetary union, wage bargaining must become part of the European public sphere.

Judged against the initial promise, the first decade of European monetary union has been a success: price stability has been maintained, the aggregate budget deficit reduced, and even if economic growth has been lower than in the previous decade, over 18 million new jobs have been created with unemployment falling from 10% to 7.1%. However, these favourable developments stand on week foundations. In June and July 2008 inflation has risen to 4%. Subsequently, the world-wide financial crisis has pushed European monetary union into its first recession and inflation was down to 1.6 percent in December. But the effects of the recession have hit member State economies unequally because of different positions of competitiveness and relative unit labour costs. High public debt and current account deficits, which are re-enforced by low competitiveness, restrain the margins for discretionary macroeconomic

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[1] Professor Sant'Anna School of Advanced Studies, Pisa, and president of the Scientific Committee of Centro Europa Ricerche (CER), Rome. I thank my colleagues at CER, notably Francesca Pancotto and Filippo Pericoli for research assistance and Ulrich Fritsche for useful comments. All mistakes are mine.

policies. Wage increases in the Euro area have been moderate overall, but national divergences in unit labour costs (ULC) remain an important and underestimated factor for the long term success of Europe's single currency.

The ECB is rightly concerned with *aggregate* wage and price developments in the Euro Area. It has frequently warned that temporary price shocks must not spill over into higher wages. The peak organisations of European social partners have agreed with the ECB on this point, but they have also insisted that the central bank must respond to voluntary wage restraint with growth-accommodating monetary policies (ETUC, 2006). Yet, wages are not negotiated by peak organizations, but in firms or industries at the national level and actual wage bargains pay attention not to European guidelines but to local economic conditions. Some countries – primarily Germany – exercise competitive wage restraint, others increase salaries to compensate for national inflation. As a consequence, unit labour cost levels diverge, and competition is distorted in the single market.[2] The European Central Bank (ECB) cannot prevent these developments, as it has a mandate to maintain price stability for the *Euro area as a whole*. High-cost countries are, therefore, able to free-ride on the wage restraint of others, because monetary policy cannot sanction them. But enduring divergences in ULC are unsustainable. In a non-cooperative environment, adjustment will ultimately take place through loss of market share, de-localisations and higher regional unemployment, although it will take a long time until these effects will have corrected existing distortions (Blanchard, 2006). In a cooperative framework, these welfare costs could be reduced by making agreements that keep national wages in line with the ECB's inflation target and taking into account initial disparities. In order to correct distortions in the Euro Area, these agreements ought to be symmetrical between member States: countries with excessive wage restraint must raise nominal wages, while high wage cost countries must bring them down.

We will look at the evidence for such nominal adjustment. Section 1 will cover the "vertical" interaction between aggregate wage costs with monetary policy. Section 2 deals with the "horizontal" developments in relative unit labour costs with respect to

[2] In a confidential report to the ECOFIN Council, the European Commission has expressed concern about unsustainable divergences in competitiveness and current account balances. See Financial Times Deutschland, 07.01.2009

different member States. Section 3 seeks to find evidence for a long run tendency of unit labour cost convergence to the European inflation target. Finally, we discuss policy issues. A loose framework for coordinating wage bargaining and monetary policy exists at the European level in the form of the Macroeconomic Dialogue (MED). It is based on the principle that macroeconomic policy makers (finance ministers and ECB) and those responsible for wage formation (employers and trade unions) should have a proper understanding for each others positions and constraints, so that the interaction between wage developments, fiscal and monetary policies are conducive to non-inflationary growth (European Commission, 2008). But has it worked? I will discuss problems of the European the wage bargaining system in section 4 and draw some conclusions for the necessary reform of the Macroeconomic Dialogue.

1. The interaction between aggregate unit labour costs and monetary policy

The Golden Rule of wage bargaining

European monetary union is founded on the principle that good money reflects stable prices. The ECB has redefined price stability in 2002 as a rate of inflation measured by the Harmonised Index of Consumer Prices (HICP) "below but close to 2% over the medium term" (ECB, 2008). The HICP combines data from national consumer price indices. Above-average price increases in one country must, therefore, be mirrored by below-average inflation elsewhere.

Price stability implies stable unit labour costs. One of the most widely accepted models for explaining inflation is the expectation-augmented Philips-curve model, whereby stable inflation corresponds to some equilibrium in the employment level (Gordon, 1982; 1985; 1988; Stockton and Glassman, 1987; Ghali, 1999). It can be represented by a system of equations,[3] where the price level is determined by a markup over unit labour costs (i.e. productivity-adjusted wage costs) and supply and demand shocks. The NAIRU model makes the price and wage setting equations explicit and explains inflation by inconsistent claims to income shares for wages and profits (Layard, et alt. 1994). Note, however, that the wage share is identical to real

[3] For reasons of space, I do not reproduce the equations here. Ghali 1999 gives a good synthesis.

unit labour costs, from where nominal price and wage setting targets can be derived.[4] Assuming that the markup is stationary and demand and supply shocks have zero means, the price level will in the long run reflect developments in unit labour costs (for empirical evidence see Ghali, 1999). In most models nominal wages are set as a function of expected inflation plus labour productivity, adjusted by a variable for labour market tightness, and monetary authorities manage inflation expectations. The central bank's success in keeping prices stable then depends largely on its reputation and credibility with wage setters. An independent and conservative central bank will not accommodate price inflation, and wage bargainers take this into account, so that unit labour costs and prices conform to the inflation target. In this section, I will look at the underlying tendencies behind aggregate unit labour cost developments in the Euro Area.

With the advent of monetary union, a number of authors have focussed on the interaction between wage bargaining and monetary policy (Sievert, 1993; Hall and Franzese, 1998 and 2001; Soskice and Iversen, 2001; Mooslechner and Schürz, 2001; Cukierman and Lippi, 2001; Collignon, 1999 and 2002).[5] There is now some sort of "overlapping consensus"[6] that in models with perfectly competitive labour markets, low inflation is achieved by stable money supply. In oligopolistic markets, where firms have market power, an independent, conservative central bank is needed in order to proactively resist pressures from wage and price setters. The tension of inconsistent wage claims by workers and firms is then resolved by changes in unemployment. If monetary authorities would accommodate higher wages claims, the adjustment variable would be inflation.

Calmfors and Driffill et alt. (1988) have argued that inconsistent claims depend on labour market structures. Inconsistencies are less likely in highly decentralised or highly centralised labour markets, so that an inverted U-shape curve relates inflation

[4] $ULC=wL/y$, where w is the wage rate, L the hours worked and y is output. Because productivity is y/L, nominal ULC are equal to nominal wages divided by productivity. Real unit labour costs are nominal wages deflated by the price level $RULC=wL/Py$ which is the same as the share of wages in GDP.
[5] Mooslechner and Schürz (2001) explain that these theories do not form a unified paradigm.
[6] Overlapping consensus is a term coined by John Rawls (1987). It refers to how supporters of different comprehensive doctrines can agree on a specific form of political organization. I use it here to emphasize that different economic schools have come to a similar conclusion.

and unemployment to an index for centralised wage bargaining.[7] Subsequently, the argument was extended to other institutional arrangements. Coordinated sectoral wage bargaining can lead to the same economic outcome as centralized bargaining (Soskice, 1990; Teulings and Hartog, 1998). Hall and Franzese (1998) showed that coordinated wage bargaining will produce Pareto-superior forms of equilibrium behaviour, provided that the central bank signals credibly to wage bargainers that it will maintain price stability and that wage bargainers integrate this message into their settlements. These models would explain good performances in economies with highly decentralized and highly centralized wage bargaining. But they announce potential trouble in Euroland, because national wage setting is far from the competitive ideal, and the degree of coordination for the Euro Area as a whole is lower than in most member States. However, I will show below that the standard indicators for labour market conditions are not very significant in explaining diverging unit labour costs in the euro Area.

Unit labour costs depend on nominal wages, productivity and variations of economic growth. The European Central Bank has frequently warned against nominal wage settlements leading to inflation.[8] Even more frequently social partners and politicians demand monetary authorities to do more for growth. Both demands are linked by productivity. If the ECB's inflation target is 2% over the medium term, nominal wages must not increase by more than 2% plus the rare of productivity growth. This is the "Golden Rule" of wage bargaining in Europe that allows the ECB to support growth. The Rule was adopted by the Macroeconomic Dialogue as a formal policy guideline for social partners (European Commission, 2005). Yet, the Golden Rule is not without problems. Productivity varies with economic growth and between different sectors or countries. It is generally higher in manufacturing than in services or in the public sector. It can be expected to grow faster in countries with low per capita income as they are catching up with more advanced countries. If regional productivity in less developed regions is catching up with leading ones, money wages in Europe's poorer regions can rise rapidly without unit labour costs rising and becoming inflationary. This logic has supported the European social model in the

[7] Freeman (2007), however, argues that the inverse U relation was a transitory historic phenomenon and has now disappeared.
[8] See for example, Trichet (2008).

past, when productivity was growing rapidly, but it is now undermined by stagnating productivity in several member states, notably Italy and Spain.

So, which measure of productivity is to be used for the Golden Rule? Aggregate or sectoral or regional productivity? If sectoral rates are used, low productivity sectors would see their nominal wages stagnate relative to the high performing sectors. The Golden Rule would increase nominal wage dispersion and inequalities across sectors and regions, posing problems of economic and social cohesion. If aggregate productivity is the reference for wage setting, low productivity sectors would loose competitiveness and ultimately disappear. This may be a form of Schumpeterian "creative destruction", but if the differences are too large, the social costs would be very high.

With flexible labour markets these distortions would be temporary and labour mobility would ensure that workers are employed where their marginal productivity is highest. The demand for labour depends on unit labour costs, for they determine the relative competitiveness of firms. The supply of labour depends on the purchasing power of nominal wages, because people work for what money can buy. If the supply side of the labour market is sufficiently flexible, workers will move to the highest wage on offer and a single wage (per skill group) will prevail in the economy. Thus, nominal wage convergence is a sign of labour market flexibility on the supply side, but a similar result could be obtained by centralized wage bargaining. On the demand side, the convergence of unit labour cost is a sign of competitive goods markets. If firms operate in a competitive environment, they can only offer a nominal wage that takes into account their relative productivity levels. If labour and goods markets are both competitive, low-productivity firms will disappear, and productivity will converge. However, this convergence process can be painful, particularly if low productivity firms are regionally clustered. Nominal wage dispersion can then keep less productive firms alive and contribute to unit labour cost convergence without productivity adjustment.

In the European Union labour mobility and social cohesion and solidarity are generally higher *within* nations than *between* them (Krieger and Fernandez, 2006). Nominal wages have therefore a higher degree of homogeneity at the national level.

Given the different levels of economic development, European wage bargaining is dominated by national productivity and inflation rates, and significant wage differentials persist. Economic cohesion in the EU requires therefore the convergence of productivity, and nominal wages can only converge as a consequence of this process. National policies are the main driver in this catch-up development, although they will benefit from the support of European cohesion policies. But because mobility is imperfect, deviations from the Golden Rule often reflect some degree of sectoral and skill differentiation. On the other hand, if wages are not sufficiently differentiated by skills or regions, the mismatch between labour supply and demand may increase and push up the unemployment rates in specific regions and skill groups (Du Caju et alt, 2008).

It follows that the Golden Rule is a general benchmark rather than a strict formula for setting wages. In reality few countries adhere to it. Table 1 shows annual data over the 1999-2007 period. Six Euro Area countries out of 16 have remained below the rule, while 10 have exceeded it. Germany, Austria and Finland have shown wage restraint significantly below the Golden Rule. The Southern countries Portugal, Greece, Spain and Italy all have exceeded it. But *aggregate* wage increases in the Euro Area have remained half a percentage point behind the Rule and this has helped the ECB's policy to maintain price stability.

Table 1. Nominal Wage Gap

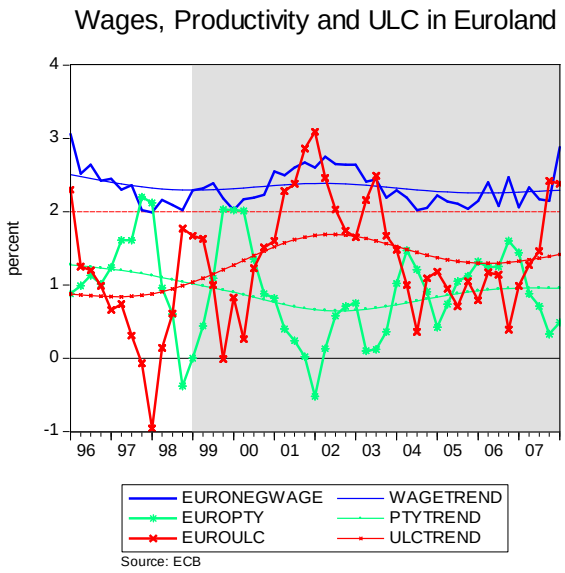
avg. growth p.a.1999-07	Productivity	Golden Rule	actual wages	Gap
Germany	1.57%	3.57%	1.89%	-1.68%
Austria	1.45%	3.45%	2.04%	-1.41%
Finland	1.98%	3.98%	3.13%	-0.85%
Belgium	1.26%	3.26%	2.64%	-0.62%
Euro area (15 countries)	**1.08%**	**3.08%**	**2.58%**	**-0.50%**
France	1.01%	3.01%	2.75%	-0.27%
Malta	1.30%	3.30%	3.21%	-0.09%
Netherlands	1.49%	3.49%	3.69%	0.20%
Italy	0.45%	2.45%	2.83%	0.38%
Luxembourg	1.36%	3.36%	3.80%	0.44%
Spain	0.44%	2.44%	2.97%	0.53%
Greece	3.28%	5.28%	6.06%	0.78%
Cyprus	1.11%	3.11%	3.90%	0.79%
Portugal	0.91%	2.91%	3.73%	0.82%
Ireland	2.53%	4.53%	5.72%	1.19%
Slovakia	4.15%	6.15%	7.62%	1.48%
Slovenia	3.31%	5.31%	7.77%	2.46%

Source: AMECO, 2007

Determining unit labour costs

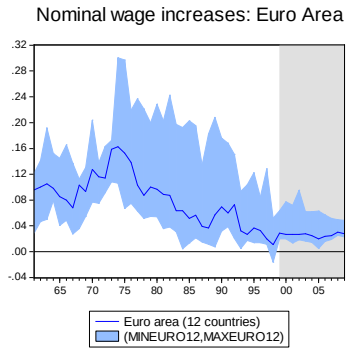
To understand unit labour cost dynamics in Europe, we need to look at their components. Figure 1 presents the evolution of quarterly data for wages, productivity and unit labour cost growth in the aggregate Euro Area over the last decade.

Figure 1.



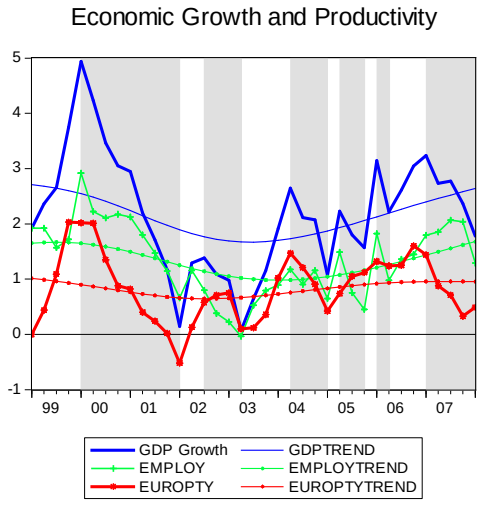
The first observation is that since the late 1990s negotiated nominal wages have remained remarkably stable. They moved in a range of 2-2.9% with a mean of 2.3% and show the lowest standard deviation of all variables.[9] Second, productivity growth has been more volatile. It rose during the early Euro-boom and fell after the dot-com bubble crisis. It then became negative in the first quarter of 2002. The standard

[9] Long run annual data from the European Commission's AMECO data base reveal that nominal wage stability started with European monetary union. The chart below shows the range between minimum and maximum wage increases in the Euro-12 group and the aggregate growth rate in between.



deviation was twice as high as for nominal wages. Third, as a consequence, unit labour costs have varied more than nominal wages. They have been the closely matching mirror image of productivity. But on average, ULC have increased only by 1½ % per annum over the first decade of EMU. *Thus, nominal wage restraint has contributed to the overall price stability of the euro, while changes in unit labour costs are largely driven by variations in labour productivity.*

Figure 2



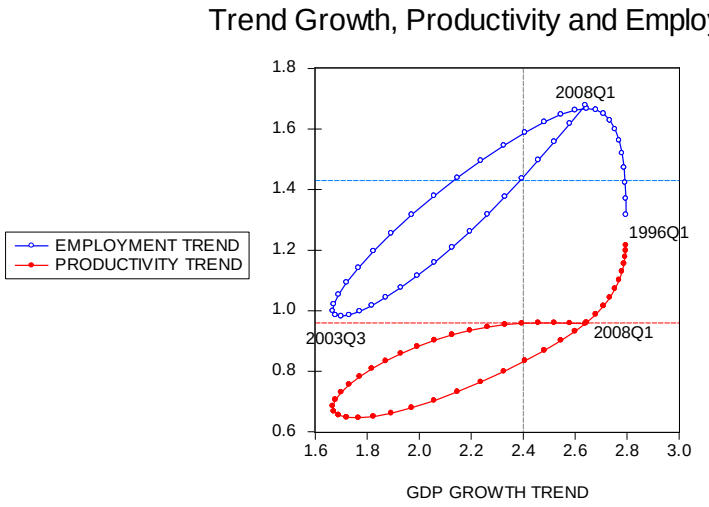
If productivity affects ULC, the slowdown in productivity trends has narrowed the scope for nominal wage increase and reduced the margins for monetary policy, because structural changes in the labour market have reduced the long-run non-inflationary growth rate. According to a widely held belief, "rigid" job-protecting labour laws in Europe used to make it difficult for firms to "hire and fire" staff. They resisted reducing employment when growth slowed down. Since the mid-1990s, labour market reforms have made the labour market more flexible and the long-term relationship between economic growth and productivity has been severed.

Figure 3 shows the correlation between long term trends for employment, productivity and GDP growth. The top line represents the evolution of the long term elasticity for employment, the lower series shows the same for productivity.[10] Both employment and productivity trends are positively correlated with potential output

[10] The variables are expressed as logarithmic value and this allows us to interpret the slope of the curves as the long run elasticities between economic growth and the two other variables.

(the two curves are upward moving). In the mid-1990s (1996Q1) labour market reforms shifted the employability of workers structurally up and productivity down. After EMU started in 1999, a new stable trade-off developed. During the period of economic weakness (1999-2003), employment responded less to GDP trend growth, than in the second phase when economic growth improved (the curve was flatter in the downturn than in the upturn). The fact that the slope is much flatter for productivity than for employment between 1999 and 2003 is a sign for labour hoarding. This would correspond to the "rigid labour market" story. But soon after growth started accelerating again, the productivity curve became horizontal. This low elasticity of productivity therefore imposes a "speed limit" for economic growth around the 2.4 percent mark.

Figure 3.



At that point productivity growth stagnates at a rate just below 1 percent. According to the Golden Rule, nominal wages should then increase by 3 percent, employment will grow at 1.4 percent. Higher economic growth will accelerate job creation, provided nominal wages do not increase by more than 3 percent. However, this is unlikely. Economic growth beyond 2.4 percent would rapidly tighten labour markets[11] and wages would go up, unless some European wage mechanism existed that ensured adherence to the Golden Rule. The ECB is then obliged to raise interest rates to quell inflation and abort further economic growth. This analysis poses two

[11] Because the Euroland's labour force has grown by 1%, unemployment has in fact started to come down in recent years, but ULC have not increased for reasons explained below.

questions: first, how can trend productivity be increased? The Lisbon Strategy was Europe's political response, but it has failed. I have dealt with this issue in Collignon (2008) and will not pursue it here. Second, how can nominal wage increases be tied to the Golden Rule permanently? In a flexible labour market, where wages rise as unemployment falls (the Phillips curve logic), the Rule is unsustainable. Nevertheless, our data show that ULC increases have remained below the inflation target of 2 percent. We will see below that the benign developments of recent years are the unintended consequence of compensating national wage strategies. There is no policy mechanism that guarantees adherence to Golden Rule. What we will observe in the next section is that aggregate realisations of the Golden Rule are achieved by regional divergences and "rotating slumps" (Blanchard, 2006a), whereby unit labour costs in booming economies overshoot the average and will get corrected subsequently by drawn out slumps.

This analysis has important policy consequences. Although monetary policy is not neutral with respect to economical growth and employment, the range within which it can affect real variables is very limited: *cutting interest rates to stimulate growth and reduce unemployment is not a viable long term strategy for Europe.Cutting taxes neither. Instead the focus must be on improving labour productivity by raising the capital-labour ratio and total factor productivity in order to improve growth, employment and wages in the long run.* This is a more complex analysis than the *dialogue de sourds,* where the ECB exhorts social partners to avoid "second round effects", while trade union complain that wage moderation has not sufficiently been rewarded by expansionary monetary policies (Watt, 2005).

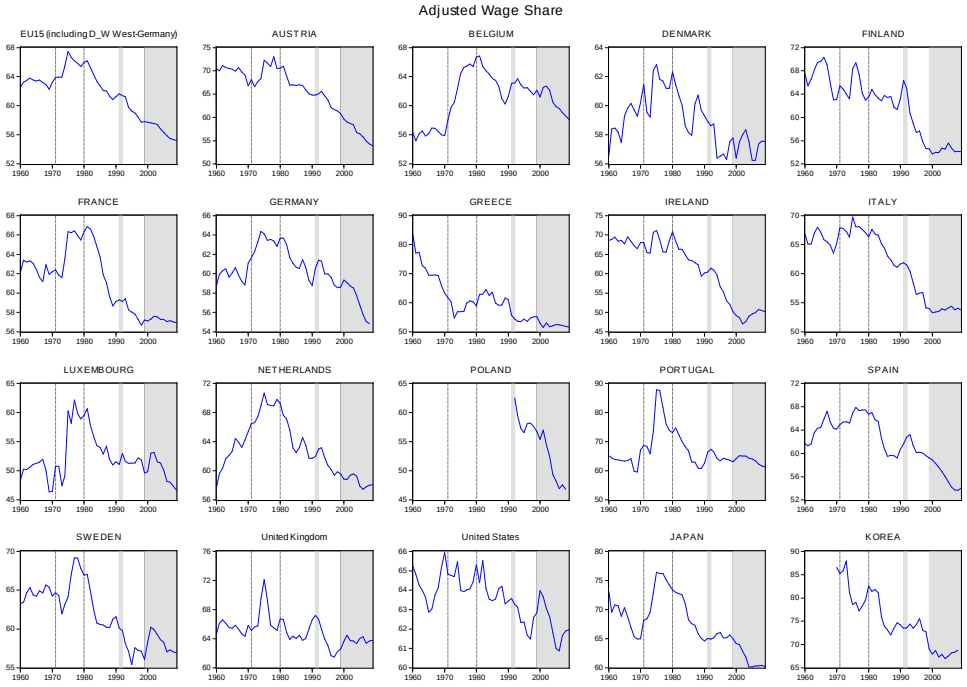
2. **The dynamics of relative unit labour costs**

Regional divergences

Figure 1 and footnote 9 show evidence for remarkable nominal wage restraint in Euroland, but the phenomenon has been widespread across OECD countries. Some authors have called it the "Great Moderation" (McConnell and Perez-Quiros, 2000; Blanchard and Simon, 2001). One explanation for this stability is the effect of globalisation and Europeanization on wages (Bean, 2006; Borio and Filardo, 2007), which has driven down the wages of unskilled relative to skilled workers. The

opening of markets has simultaneously increased the rate of substitution between goods produced in different countries. This makes it difficult to raise real wages for unskilled workers in the tradable goods sectors, because imports compete with local production. As a consequence, profit margins have improved and the aggregate wage share has fallen in most industrialised countries. Figure 4 provides some evidence.[12]

Figure 4



Source: AMECO

Over the last decade, the wage share has fallen significantly in Germany, Austria and Belgium; it has remained stable in most of the Southern countries with the exception of Spain. If European workers and trade unions seek to redress this distributive imbalance by pushing wages up, something that Hahn and Solow (1995) have called the "justice motive", higher labour costs will translate into more unemployment because imports from low wage countries replace local products. These labour cost increases do therefore not cause higher inflation; instead, the growing unemployment will reduce the weight of sectors exposed to international competition and this explains the fall in the aggregate wage share (De Serres et alt. 2001). Workers,

[12] The shaded lines show the end of Bretton Woods in 1971, the creation of EMS in 79, and the ERM crisis in 1991/2.

therefore, have a choice of trading higher real wages in for job security. Wage restraint in Europe would then indicate a preference for employment security.[13]

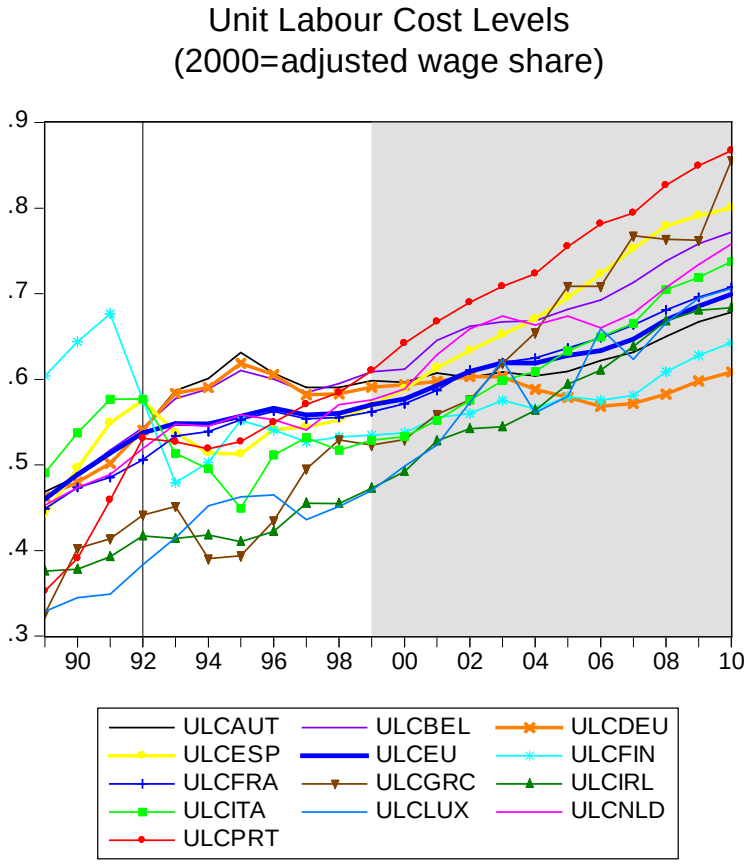
However, not all workers are subject to the pressures of globalization and Europeanization. In the non-tradable goods sector, firms are less exposed to international competition. They have market-power in price setting and this facilitates the accommodation of higher wage claims. But because of the relative homogeneity of nominal wages, sectoral wage increases spill over into national unit labour costs and will increase the Euro Area's wage heterogeneity.

Figure 5 shows the evolution of unit labour cost *levels* expressed in a common currency (ECU and Euro) since 1980. Calculating level differences is controversial. The European Commission uses an index, which has the same value of 100 for all member States in the base year. However, such index makes it impossible to assess distortions in relative cost levels. This is better judged by real unit labour costs, i.e. by relative wage shares. A country with a below-average wage share is likely to yield higher profits and be more competitive. For this reason, I have adjusted the ULC-levels to the wage share in 2000. ULC are calculated as the ratio of total remuneration of employees to real GDP using the GDP deflator with 2000 as the base year.[14] Thus, in the year 2000 nominal unit labour costs and real unit labour costs (i.e. the wage share are the same. In other words, the unit labour cost *levels* in 2000 reflect the relative position of profit margins in the member states, one year after monetary union started. But, because total remuneration does not take into account the share of self-employed work remuneration, the ratio of total remuneration per employee divided by real GDP does not reflect the adjusted wage share indicated by Figure 4. However, the adjusted wage share is the best indicator for profit margins in the economy (see footnote 4). If we want to estimate the diversion of ULC-levels by the differences in profit margins, we must take into account the structural variations in self-employed labour in the member state economies. I have therefore re-scaled the 2000 data to account for the difference of the real unit labour costs and the adjusted

[13] To avoid misunderstandings: the trade-off is between real wages and job *security* and not between real wages and lower unemployment. I may accept to see my real wage reduced, while others may still loose their jobs.
[14] These time series were constructed with annual data from AMECO 2008 data bank.

wage share.[15] The result is shown in Figure 5. Note that prior to 1999, ULC-levels are subject to exchange rate variations.

Figure 5.



Source: Ameco

Before the start of monetary union, we find significant shifts in relative unit labour costs caused by exchange rate realignments during the ERM crisis in 1992-3. While devaluations in Italy, Spain, Portugal and Greece brought labour cost levels below the Euro-average, Germany, Austria and Belgium became seriously overvalued as a mirror image. Thus, nominal exchange rate flexibility did not only eliminate distortions, but it actually created new ones. However, by the late 1990s, these distortions were at least partially corrected. By the time European monetary union started, Portugal had already the lowest profit margins in the Euro Area, and it has unabatedly persisted with high unit labour cost increases until today. Spain, Greece

[15] The time series was multiplied by the scalar of the adjusted wage share divided by the unit labour cost in 2000.

and Italy have also had rapid increases in ULC, moving from below-average to above-average labour cost levels. Today, Spain, Portugal and Greece are the most expensive labour locations in Europe (we consider Luxemburg with its high banking concentration as a special case). The opposite is true for Germany. It first kept ULC stable in nominal terms, while they were rising in the Euro Area; unit labour costs then actually *fell* in absolute terms after the Hartz-reforms started to bite. Today Germany is the cheapest labour cost location in the Euro Area. Finland devalued during the severe adjustment crisis after the Soviet Union, previously a prime trade partner, collapsed in the early 1990s. Contrary to Southern countries, Finland has maintained this initial competitive advantage. Austria has followed the German wage trajectory until Germany started to go against the stream of all other Euro member state.

The overall picture is one of significant diversity in unit labour cost levels and a cursory look at Figure 5 indicates that the divergences have increased since the mid-2000 decade. A precise measure of these divergences is so-called σ-convergence, which measures the dispersion of unit labour cost levels across the Euro Area (Barro and Sala-i-Martin, 1995). Figure 6 shows the cross sectional variance of the log of ULC *levels* within the group of 12 Euro members. During the flexible exchange rate period after the breakdown of Bretton Woods, the dispersion of unit labour costs has varied rapidly and frequently; it has slowed down after the creation of the European monetary system in 1979, but then increased again when the EMS entered its "hard" phase with fewer exchange rate adjustments in the late 1980s. Distortions were corrected after the ERM crisis in 1992/3 and ULC dispersion was stabilized during the first few years of monetary union. However, after 2004 the variance started to increase again, indicating rising tensions in relative competitiveness in the Euro Area. As we will see below, it may not be a coincidence that this rising divergence occurred when German ULC levels started to *fall.*

Figure 6.

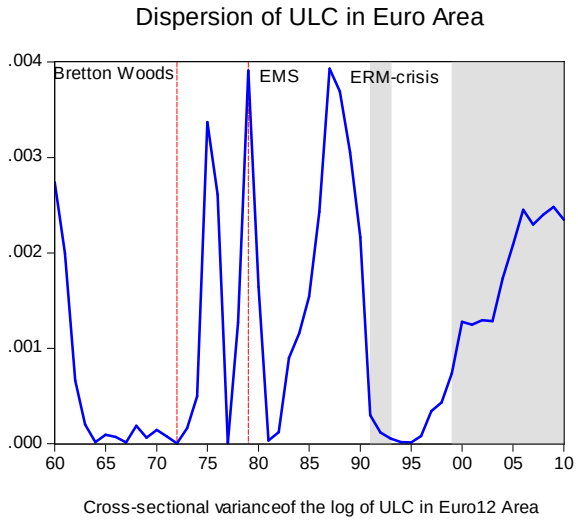


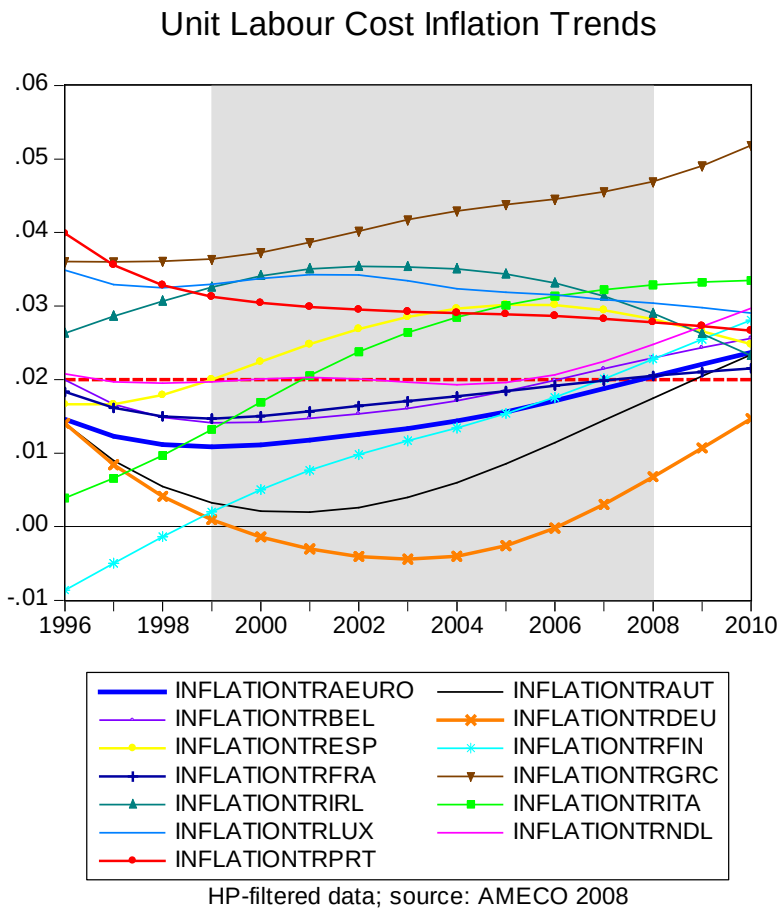
Figure 7 shows the HP-filtered times trends for ULC-inflation. Because the HP-filter is sensitive to the final time series data, we have included the Commission forecasts for 2009 and 2010[16]. The shaded bloc shows the trend data on the actual realisations of the first decade of European monetary union. ULC inflation for the Area as a whole has remained below the ECB target, although it has started to approach the 2 percent mark at the end of the decade. Only Germany, Austria and Finland (until recently) have kept the increases of ULC below the Euro-average; in Germany they were even negative. Greece, Italy, Ireland, Spain and Portugal all had above average wage inflation. But while wage inflation trends have been accelerating in Greece and Italy, they were inverted in Ireland, Spain and Portugal. The structurally higher wage increases in Greece, Spain and Portugal may be due to the Balassa-Samuelson effect,[17] but Portugal is an example that catch up-countries can also converge downwards to lower wage inflation. Note, however, that Portugal still has to bring ULC-inflation further down, presumably by accelerating productivity, in order to reduce its uncompetitive cost levels. The other member States (France and Benelux) have converged to a trend that is close to the Euroland average and the ECB target. We may conclude *that the South of Euroland (Greece, Italy, Spain, Portugal and*

[16] Data from AMECO, 2008

[17] The Balassa-Samuelson effect assumes that productivity increases in the tradable sector, but not in the closed sector. When wages follow aggregate productivity in the economy, the average inflation is higher than in the tradable sector, without the latter loosing competitiveness. See also below.

Ireland) has had a tendency to push aggregate unit labour costs up above the ECB inflation target, while the North (Germany, Austria and Finland) have kept them down. France, as usual, is the *Weltkind in der Mitten*.[18] If this were a persisting structural feature, it would be worrisome: North and South would drift apart, with the South becoming increasingly less competitive. If unchecked, such development could ultimately lead to the breakup of European monetary union.

Figure 7.



[18] These groupings concord broadly with the convergence clusters for CPI inflation found by Busetti et alt. 2006, which covered a shorter period, 1998-2004 and put France in our Northern group, while Italy, the Netherlands and Luxemburg are in a medium position.

ULC in tradable and non-tradable sectors

How can we explain the increasing dispersion of unit labour costs? Clearly, there are obstacles to a rapid and perfect convergence of unit labour demand to the competitive equilibrium. Given that the differences are *national*, the lack of flexibility must be grounded in the insufficient adjustment of national wage settlements to the aggregate Euro-equilibrium. In fact, wages are determined by nationally-defined systems of collective bargaining without significant cross-border cooperation (Soskice and Iverson, 2001; Schulten, 2001). Firms recruit workers in national labour markets. Unions are organized nationally by law, and they defend their members' interests with respect to employment and the purchasing power of wages in local contexts. Nominal wages are, therefore, more homogenous within countries. But national wage levels reflect averages over different sectors with different productivities and different nominal wage contracts. One of the most important sectoral distinctions is between tradable and non-tradable goods. It is usually assumed that productivity grows aster in the tradable sector due to economies of scale and technological competition. Trade unions have little wage setting power in the open sector of the European economy, but they keep such power to some degree in the non-tradable sector. They can, therefore, increase nominal wages more than productivity in the closed sector and unit labour costs in the non-tradable sector rise faster. This rise is often associated with the Balassa-Samuelson effect. Strictly, the Balassa-Samuelson effect assumes that nominal wages are equal in both sectors and pegged to the tradable sector, so that in fast growing open economies unit labour cost inflation will be high without general loss of competitiveness. However, these assumptions reflect a special case. As we have seen, nominal wages are not necessarily the same across sectors, nor will they always follow productivity in the tradable sector. If nominal wages are diversified across sectors, national wage bargainers can choose between two strategies according to their different national or political preferences or the institutional features of the national wage negotiating process. Assuming that trade unions seek to maximize the purchasing power of their membership, these two strategies are:

(1) If unions in the *tradable sector* dominate the negotiating process, say through pattern bargaining, they will seek to maximize employment by undercutting unit labour costs set by world competition. This has been Germany's economic strategy over the last 10 years, if not longer. Wage negotiations in the metal sector have often set the pattern for all others.

(2) Alternatively, if the *non-tradable sector* dominates collective bargaining, especially public services, unions will seek to maximise income by pushing wages in the protected sector above the European level. This has occurred in Spain, Portugal and Italy.

The first strategy leads to a fall of national unit labour costs and inflation relative to the Euro-average; the second strategy leads to above average national price and wage inflation. Especially, if nominal wage increases are indexed on domestic inflation, rather than the ECB inflation target, the two strategies will cause accelerated divergence. But at the European level, the two strategies can compensate each other, so that aggregate unit labour costs would remain stable. This seems to have been the case in the Euro Area.[19]

Some evidence for the role of the tradable towards non-tradable sector is presented in Table 2. We find that unit labour costs have generally increased less – or even fallen – in the tradable sectors of Manufacturing and Commerce, Transport, Communication, while they have risen faster in the non-tradable sectors of Construction and Services. Furthermore, we find that the ULC-spread between these two sectors has increased notably in the South, but also in France. In Germany and Finland ULC, the increases in the two sectors were more homogenous. Thus we can conclude that *Southern wage bargaining is more geared at the non-tradable sector where market power is distorting competitive equilibria; Northern wages are reflecting the need to compete in the tradable sector and this has contributed to wage restraint.*

[19] Carlin and Soskice, 2006 argue that a real depreciation achieved by wage restraint would cause a slump in a large country, because low domestic consumption will outweigh the demand effects resulting from higher net exports. In this case it would be rational for wage bargaining in large countries (Germany) to focus on the non-tradable sector and on the tradable sector in small countries. In reality we observe the opposite. Two arguments could explain this paradox: First, we must not confuse the tradable sector with the export sector. The tradable sector in countries like Germany or Finland for the matter may be significantly larger than in Southern Europe. Second wage bargaining is institutionally driven and unrelated to country size. For example public sector negotiations may dominate national wage setting, because unions are better organized and the private sector is weak and dominated by small companies like in Portugal and Italy.

Table 2. Sectoral Unit Labour Costs

% annual change 1999-2005

	Agriculture	MANUFACTURING	Commerce, Transport, Communication	Construction	Other private services	*of which: real estate services*	Public Services	Total Economy
Germany	-2.53	-0.98	-0.71	1.12	2.10	-2.66	0.81	0.11
Finland	-2.25	0.18	-0.92	-0.04	1.79	1.37	0.34	-0.02
France	3.20	-0.66	1.73	4.14	2.62	2.18	3.35	2.09
Irland	8.46	-1.87	2.70	9.59	2.52	11.77	8.69	4.39
Spain	2.05	1.95	2.39	4.65	2.78	6.84	3.05	2.78
Portugal	1.64	0.90	2.41	5.07	1.24	1.34	4.64	2.91
Italy	1.25	2.88	1.15	3.06	3.30	2.85	3.21	2.56
Greece	8.09	3.04	1.06	6.13	2.85	10.36	4.13	2.77
Euro Area	-0.74	-0.29	0.32	0.82	1.77	0.33	1.16	0.56
USA	0.71	0.04	-1.14	4.17	2.66	2.84	3.53	1.80
mean	1.99	0.52	0.90	3.87	2.36	3.72	3.29	1.99

Source: European Commission, KLEMS

As I have argued above, labour mobility and considerations of social cohesion should prevent large and persistent differentials in nominal wages. If the tradable sector dominates wage bargaining and fixes monetary wages at the competitive world level, workers would move to the non-tradable sector where they could earn higher wages. Total employment would rise up to the level where wages and inflation accelerate (the NAIRU-level) at which point the Central bank would raise interest rates and unemployment returns to its natural rate. If the non-tradable sector takes the leadership in wage setting, the central bank would respond immediately to higher wages by tightening money and preventing further employment growth. Either way, wages in the tradable and non-tradable sector would converge.

But these mechanisms do not work to the same extent in European monetary union because labour mobility is lower and less responsive to regional developments.[20] A member State dominated by the tradable sector can reduce unemployment and increase export market shares by undercutting average European unit labour costs. But the subsequent adjustment process takes longer than in traditional nation States. First of all, the wage cut has deflationary consequences for domestic (and non-tradable) consumption and therefore unemployment and the competitive price advantage remain persistent. Second few workers would migrate to the non-tradable (often public) sector in another country, so that labour supply is less responsive.

[20] This has been the much discussed argument why Europe is not an optimal currency area. However, lack of mobility may even be desirable in order to avoid hollowing out peripheral regions. The problem is not labour mobility, but insufficient flexibility in the adjustment of unit labour costs.

Similarly, in a country where the non-tradable sector leads wage bargaining, above-average wage increases in one country do not attract a significant influx of labour. Hence, all sectoral wages will rise in this country. These cost increases can not be sanctioned by the ECB as long as aggregate ULC-increases remain compatible with the inflation target, which is to say as long as above-average wage increases in one country are compensated by lower increases in another member state. In addition, European-wide trade unions, which could ensure social and wage cohesion across borders, do not exist and national trade unions do not consider the wage dynamics in other countries where they have no members. Thus, there is no mechanism, either through market pressures or through political processes, which would correct small unit labour cost divergences.

These two structural features make the traditional signalling game between the independent Central Bank and wage bargainers dysfunctional (Hall and Franzese, 1998; Carlin and Soskice, 2006:81). More homogenous wage bargaining would allow the Central bank to influence the process. If wage bargainers in all members States had the same objective of creating jobs, they would agree to restrain wage claims and the ECB would have to relax monetary policy if it is to maintain price stability. If all agreed to increase wages, the ECB would respond to accelerating inflation by tightening. The interaction would then follow the traditional logic of a "signalling game". The main problem of wage bargaining in European monetary union is the co-existence of non-coordinated and contradictory objectives in the wage bargaining process. If Trade Unions disagree how to increase purchasing power – some seeking higher wages, some higher employment – the signalling game breaks down and regional distortions accumulate. There exists a strategic substitutability[21] between tradable and non-tradable sectors that will lead to a short term, but unsustainable, Nash equilibrium in wage bargaining, that will cause ever greater discrepancies in ULC.

We can model the underlying logic in a two country game. Assume South plays a non-tradable strategy and seeks higher wages more than higher employment. North

[21] Cooper and John (1988) have developed the notion of strategic substitutabilities, which describes incentive structures for agents who can benefit from doing the opposite of what everyone else does. In our case here, however, the diverging behaviour is institutionally and not strategically determined.

plays tradable and seeks higher employment more than higher wages. In principle, four strategies are possible.[22] (1) If both players were to push wages up, the ECB would raise interest rates with the consequence that neither higher employment nor significant wage increases were possible, although South would obtain a small temporary benefit. (2) If both countries lowered wages, interest rates would come down, so that employment would increase in both countries, although the utility of this fact would be valued higher in the North than in the South, because the non-tradable sector in the South does not gain higher income. (3) If North raised wages and South lowered them, the ECB would not react, but both would suffer from preference frustration. (4) If North lowered wages and South raised them, the ECB would also not react, but both would be satisfied. Table 3 indicates the payoff matrix. Increasing wages in the South and lowering them in the North is the pure strategy Nash equilibrium.

Table 3. Pay-off matrix

		North	
		up	down
South	up	0,0	***7,7***
	down	-1,-1	10,5

Thus, uncoordinated wage setting in Europe leads to sustained divergence of unit labour cost levels in the short run. In the long run this is not sustainable. From the point of view of economic theory, we would expect that ULC distortions would sooner or later be corrected by pressures arising from (un)employment. The question is, how long does the process take? How quickly will unit labour cost levels revert to the European average? If labour markets are rigid, meaning that nominal wages do not respond significantly to relative cost differentials between member States, small deviations will gradually accumulate until the social costs will be considerable. At some point, the political consequences could become highly disruptive. If wage bargainers would understand and act on the need for reversing discrepancies, they would lower the social adjustment costs. We will now look at evidence for the adjustment speed. For this purpose we estimate a European error correction mechanism.

[22] Note that both players have different preferences, hence different payoffs.

3. Convergence of European labour costs?

Estimating the Error Correction Model

The following section contains some technical detail, which is necessary to remove doubt about the empirical evidence. The econometrically less well trained reader may jump straight to the discussion of table 5. Our underlying model is inspired by Dullien and Fritsche (2008 and 2007). In a single currency area with competitive markets regional unit labour costs cannot diverge for ever. Small deviations from the average accumulate to large unit labour cost gaps. The loss of competitiveness reduces employment and lowers wage growth. We formulate the hypothesis that the further national cost levels drift away from the rest of the Euro area, the stronger will be the pressures to revert to the European average. This pressure increases over time as the ULC-gap is growing and will ultimately overshadow short term wage dynamics.[23] The logic behind our hypothesis resembles the familiar model of beta-convergence (Barro and Sala-i-Martin, 2004). It can be formally tested by an Error Correction Model (ECM). It implies that there is a long-run equilibrium relationship between ULC-levels and a correction mechanism that responds to deviations from this equilibrium. How strongly wage inflation responds to cost level discrepancy is estimated by the long run speed of adjustment coefficient. It should be negative and statistically significant at conventional levels. The estimated ECM looks like this:

$$d\ln ulc_{i,t} = c + \alpha_1 (d\ln ulc_{-i})_{)t-1} + \beta(\ln ulc_i - \ln ulc_{-i})_{t-1}$$

Where ulc_i stands for unit labour costs in country *i*, and *–i* stands for the Euro area without country *i*.

We use annual data from the AMECO data base of the European Commission and calculate ULC-levels as the ratio of total labour compensation per employee divided by GDP at 2000 prices. Before 1999 they are expressed in ECU; after monetary union started, they became Euro. Using ECU-data implies that earlier changes in unit labour cost levels reflect changes in exchange rates. After the start of EMU, there are of

[23] Infact, inspecting unemployment rates for the Euro-years shows that unemployment rose in Portugal from below average to the mean while ULC inflation fell. In Italy and Spain, where ULC inflation increased, unemployment fell ; in Ireland it fell slightly, relative to Euroland, but remained well below 50% of the Euroland. By contrast, in Germany unemployment rose from below Euro-average to nearly 2% above. Sources : AMECO.

course no more changes in exchange rates, but only in nominal wages and productivity. We start with the annual data for 12 Euro Area member States from 1980 to 2008; we then resample the data set for 1999-2008, in order to see possible changes in the adjustment dynamic after the introduction of the euro. Before estimating the model, unit root tests were applied to the data. ULC levels can be accepted as being integrated as I(1).

We use the Engle-Granger Cointegration methodology to estimate the ECM. The cointegration vector for ULC levels indicates the long-run equilibrium relation between a country's unit labour costs and those of all other euro member states. This vector was estimated without a constant, with constant and with constant plus deterministic time trend. A cointegration vector with a constant implies that the absolute level difference in our data may be shifted by a constant multiple. For example the adjustment of the wage share in 2000 by self-employed workers may cause such a shift. More worrisome is a positive deterministic time trend. A positive trend indicates that ULCs for a given country are drifting steadily above the ULC-level of the other member States, a negative time trend implies that they are falling below. In other words the gap is growing steadily larger, but the error correction keeps responding in the same linear fashion. Obviously, such development cannot last for ever, but if the time trend is statistically significant, it has dominated the last three decades.

Given the short period and the limited number of observation in our example, the cointegration tests were not highly significant. For the long run period we detect a cointegration relationship for Belgium and Spain and if we include a deterministic trend also for Greece, Netherlands and Portugal (see Table 4). The time trends are positive for all countries, except Germany, Austria and Finland, three countries which we have already identified as the hard core of the Northern bloc. This means, as time goes on, ULC-gaps are growing. This is bad news. For Germany, Finland, Ireland, Italy and Spain, we find cointegration evidence at least for the shorter period since the start of European monetary union. These results indicate that it is difficult to confirm statistically a significant long-run equilibrium relationship.

Table 4. COINTEGRATION TEST

Cointegration test - Statistics resulting from the DF test on long run residuals without constant and without trend

McKinnon critical values at the level of statistical significance of:

5%	-2.8632	-3.0796	-3.5549	-4.014	-4.1222	-4.8286
10%	-2.5158	-2.6411	-3.1941	-3.4978	-3.7483	-4.1759

The cointegrating relationship contains:

	Equ.1: No constant		Equ. 2: A constant		Equ. 3: constant and trend	
	1980-2008	***1999-2008***	***1980-2008***	***1999-2008***	***1980-2008***	***1999-2008***
AUT	-2.025188	-1.656634	-1.734773	-2.449071	-3.207404	-2.638887
BEL	**-3.12964****	-0.999778	**-3.316339***	-3.316795	-3.731292	-3.185284
DEU	-1.434065	-0.689538	-1.695704	**-5.655141****	-2.018938	**-14.81808****
ESP	-1.456456	-0.679968	**-3.682951****	**-3.713421***	-3.674179	**-6.990701****
FIN	-2.000947	**-5.433344****	-2.568998	**-6.547894****	-3.000323	**-7.659413****
FRA	-2.117825	-0.709874	-1.802662	-2.28328	-3.170092	-2.389625
GRC	-1.8602	-0.646093	-1.91972	-2.002528	**-4.628107***	-2.459443
IRL	-0.803431	-0.598567	-0.911817	**-4.30878****	-2.493	**-4.463799***
ITA	-1.903743	-1.531382	-2.30198	**-3.571448***	-2.357211	**-10.0951****
LUX	-0.534717	-1.170108	-2.104281	-3.185072	-3.460521	-3.530485
NLD	-1.700032	-1.357728	-1.386828	-1.221615	**-4.038469***	-0.892113
PRT	-0.392008	-2.132052	-3.002305	-2.677862	**-4.094146***	**-6.023325***

However, this does not necessarily prevent us from estimating the error correction model. The Dickey-Fuller test is known to have low power, i.e. there is a high probability of accepting the hypothesis of no cointegration even if there actually is cointegration. An additional approach for assessing cointegration consists in looking at the significance (if *t*-values >|2|) of the error correction coefficient in the ECM model. If the coefficient is $0<\beta<1$, negative and statistically significant, i.e. its *t*-value is <-2, then it is justifiable to conclude that the two series are cointegrated, even if the DF-tests on residuals fails to reject the hypothesis of no cointegration (see Kremers, Ericsson and Dolado, 1992). If the adjustment coefficient is significant in the ECM, it means that a time trend increases the gap but the reaction to the growing gap remains the same. For the shorter EMU period (1999-2008), a long run cointegration relation does not exist for Austria and possibly not for the Netherlands.

Table 5 estimates the Error Correction Mechanism for the three cointegration models (1. no constant, 2. with constant, 3. with constant and time trend) over the 1980-2008 period. Coefficients for the ECM with the first two cointegration equations are only significant in Belgium, the Netherlands and Finland. This changes if we add a time trend to the equilibrium relation. Now the adjustment coefficients are significant in all countries except Italy and Spain. All coefficients have the right sign. The speed of adjustment is highest in Greece, Luxemburg and the Netherlands and slowest in

Germany. In Greece it takes 15 month to narrow the gap by 50%, in Germany 40 month. We also notice that the short-run dynamics by which national ULC respond to changes in other member States (d log EU_country) are generally larger than the long term adjustment coefficients. The error correction mechanism will therefore only make a difference when the gap between ULC-levels has become large.

Table 5. ECM Adjustment coefficients 1980-2008

		Equation 1		**Equation2**		**Equation3**	
		res0	*dlog(EU_cou*	*res1*	*dlog(EU_cou*	*res2*	*dlog(EU_country)*
Austria	Coefficient	-0.226479	0.730781	-0.142471	0.965476	**-0.381623**	0.960917
	t-value	-1.680871	3.439221	-1.034915	6.590855	-2.490222	6.008484
	Prob.	0.1052	0.0021	0.3106	0	0.0198	0
Belgium	Coefficient	**-0.285431**	0.420654	**-0.295032**	0.449304	**-0.359978**	0.320894
	t-value	-3.083113	1.798253	-3.13881	1.983252	-2.629391	1.264963
	Prob.	0.0049	0.0842	0.0043	0.0584	0.0144	0.2175
Germany	Coefficient	-0.087625	0.297376	-0.13783	0.207387	**-0.209894**	0.207381
	t-value	-0.912139	1.003586	-1.401432	0.687498	-2.353016	0.75163
	Prob.	0.3704	0.3252	0.1734	0.4981	0.0268	0.4593
Spain	Coefficient	-0.057784	0.563829	-0.145616	0.870426	-0.245947	0.916819
	t-value	-0.78775	1.667068	-1.180865	2.4397	-1.470657	2.730186
	Prob.	0.4382	0.108	0.2488	0.0221	0.1539	0.0114
Finland	Coefficient	*-0.262856*	1.855087	**-0.341968**	1.47402	**-0.337671**	1.705019
	t-value	-1.731845	3.512239	-2.388336	3.958676	-2.116769	4.168622
	Prob.	0.0956	0.0017	0.0248	0.0006	0.0444	0.0003
France	Coefficient	-0.070648	0.635187	-0.076454	0.617265	**-0.355397**	0.531603
	t-value	-0.713497	4.753557	-0.784043	4.49152	-2.196081	4.936037
	Prob.	0.4821	0.0001	0.4404	0.0001	0.0376	0
Greece	Coefficient	-0.112612	0.965454	-0.111487	0.985676	**-0.563081**	0.809146
	t-value	-1.397093	1.288062	-1.358961	1.313689	-3.173353	1.470666
	Prob.	0.1747	0.2095	0.1863	0.2009	0.004	0.1539
Ireland	Coefficient	-0.031148	0.78831	-0.027633	0.79517	**-0.313595**	0.769247
	t-value	-0.365639	1.96895	-0.316634	1.975296	-2.663718	2.74067
	Prob.	0.7177	0.0601	0.7542	0.0594	0.0133	0.0112
Italy	Coefficient	-0.110627	0.818089	-0.223228	0.793365	-0.242838	0.801642
	t-value	-0.641436	1.386243	-1.469629	2.27301	-1.673556	2.473228
	Prob.	0.5271	0.1779	0.1541	0.0319	0.1067	0.0205
Luxembou	Coefficient	-0.093208	0.158708	-0.177135	0.429856	**-0.530358**	0.111325
	t-value	-0.875842	0.286068	-1.56748	0.771975	-2.700599	0.252066
	Prob.	0.3895	0.7772	0.1296	0.4474	0.0122	0.8031
Netherlan	Coefficient	**-0.195727**	0.792523	*-0.166432*	0.671635	**-0.479826**	0.480094
	t-value	-2.340881	3.240336	-1.943837	2.658031	-3.002241	1.797294
	Prob.	0.0275	0.0034	0.0633	0.0135	0.006	0.0844
Portugal	Coefficient	-0.01602	1.317971	-0.120474	1.457327	**-0.268265**	1.315244
	t-value	-0.331014	2.280614	-1.272216	2.733696	-2.154901	2.670866
	Prob.	0.7434	0.0314	0.215	0.0113	0.041	0.0131

Did monetary union change the wage regime?

Our long run estimates include 20 years of exchange rate adjustment (1980-1998) in addition to 10 years wage setting in the Euro-regime (1999-2008). Has the abolition of the exchange rate altered the adjustment behaviour? We re-estimated the ECM for the euro decade, but the estimates were not reliable. Although the statistical

significance was high, all adjustment coefficients were larger than -1, which does not make sense. We therefore check the estimates by performing Chow break tests, which are shown in Table 6.

Table 6. Chow Test

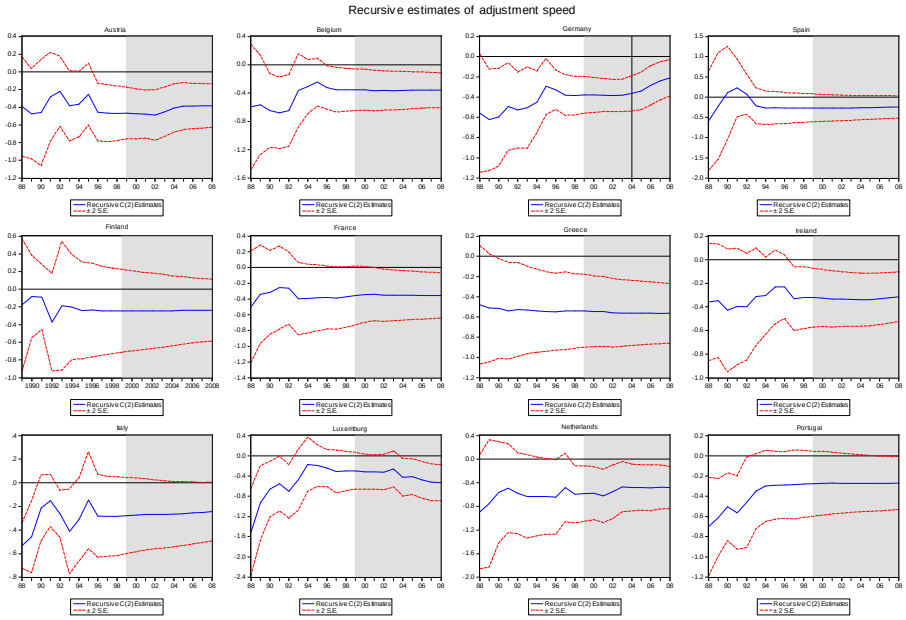
Does a structural break in 1999 exist at 5% of statistical significance?

	Eq.1		Eq.2		Eq.3	
	Prob. F(3,22)		Prob. F(3,22)		Prob. F(3,22)	
Austria	0.090	**NO**	*0.013*	***YES***	0.160	**NO**
Belgium	0.195	**NO**	0.216	**NO**	0.639	**NO**
Germany	*0.000*	***YES***	*0.000*	***YES***	*0.001*	***YES***
Spain	0.677	**NO**	0.531	**NO**	0.875	**NO**
Finland	0.664	**NO**	0.852	**NO**	0.978	**NO**
France	0.912	**NO**	0.832	**NO**	0.993	**NO**
Greece	0.860	**NO**	0.876	**NO**	0.880	**NO**
Ireland	0.470	**NO**	0.547	**NO**	0.693	**NO**
Italy	0.977	**NO**	0.831	**NO**	0.843	**NO**
Luxembou	0.065	**NO**	0.075	**NO**	0.385	**NO**
Netherland	0.222	**NO**	0.107	**NO**	0.259	**NO**
Portugal	0.784	**NO**	0.481	**NO**	0.809	**NO**

We can unambiguously reject the null hypothesis of a structural break in all countries, with the exception of Germany. In other words, despite the widening deterministic gap in ULC-levels, wage negotiations take place as if the possibility of exchange rate adjustments were still available. This fact points to serious short comings in the wage negotiating arrangements in the monetary union.

The one country, where we have evidence for a structural break, is Germany. Unfortunately, this change has gone in the wrong direction: after EMU started, German social partners have become less sensitive to the ULC-gap with other Euro Area member States. Although the government cannot interfere with wage negotiations in Germany (the principle of *Tarifautonomie)*, institutional changes seem to have affected the German error correction mechanism. Figure 8 shows the recursive estimates of the speed of adjustment. We find that for all member States the adjustment coefficients have remained stable, but in Germany it has moved up in 2004, at a time when the Schröder government started to implement fundamental labour market reforms (Hartz IV). The change in the coefficient means, Germany is less inclined to correct the growing undervaluation of its labour costs than in previous years. But given that there is a deterministic trend for German ULC to fall below the rest of the Euro Area, less adjustment will accelerate labour cost distortions.

Figure 8.



Clearly, this pattern is unsustainable. There are limits how long you can "beggar-your-neighbourhood". But the problem is not just that Germany is pursuing aggressive mercantilist wage policies at the expense of its European partners.[24] *The greater issue is that, given the large weight of Germany in the Euro Area, this policy is needed to stabilize aggregate unit labour costs for the Euro Area as a whole*, as the ECB cannot target national wage settlements since its policy is oriented towards European price stability (Traxler, 2003:155). By keeping its costs systematically below other member States, Germany is preventing the European Central Bank from reacting to excessive wage inflation (i.e. above 2%) in the South. The *excessive wage pressures in the South are conditional on the un-cooperative wage restraint in Germany*. The "signalling game", whereby the central bank raises interest rates to communicate to wage bargainers that they are undermining price stability, breaks down.

[24] If the South would copy Germany's wage restraint, the ECB would have to lower interest rates in order to avoid deflation.

4. Reforming Euroland's wage bargaining procedures

Labour market flexibility

Our analysis has shown serious shortcomings in the interaction between a unified monetary policy and national wage bargaining in Europe. I will now argue that the problem is *not* lack of labour market flexibility in the traditional sense, but that national wage negotiators make decisions in the context of incomplete information, where cloistered national wage negotiators ignore Euro-wide externalities.

Flexibility in the labour market has been a reoccurring subject in the assessment of European monetary union. It is the linchpin of the Optimum Currency Area literature. The European Central Bank (ECB, 2002) has written: "Efficiently functioning labour markets are of particular importance for countries participating in Economic and Monetary Union (EMU), because these countries are unable to use country-specific monetary and exchange rate policies to address asymmetric economic shocks." However, it is not entirely clear, what the expression "efficiently functioning labour markets" means. Convergence to a single nominal wage rate for a given skill group would cause havoc because of national differences in productivity. Unit labour cost convergence would imply perfectly competitive goods markets where workers get paid according to their productivity. Presumably, this is what the ECB is concerned with, but our analysis has shown that can be achieved by removing the wage leadership of the non-tradable sector.

Europe is rightly or wrongly famous for its institutionally based labour market rigidity, which may prevent the realization of efficient labour market equilibrium. The theory of institutionally induced market rigidity could explain why convergence to aggregate European ULC is so slow. Let us look at the facts.

Numerous indicators seek to measure the degree of labour market inflexibility (for recent surveys see Freedman, 2007; Du Caju et alt, 2008; OECD, 1997). Table 7 shows the correlation between the speed of adjustment estimated in Table 5 (equation 3) and a number of indicators, which are traditionally assumed to represent (national) labour market (in)flexibilities. To these traditional variables I have added some

proxies for "open societies".[25] Table 7 also indicates the p-value for accepting the null hypothesis that the correlation coefficient is equal to zero. A negative sign signals that an increase in the value of the indicator will be correlated with an increase the value of the adjustment coefficient (which has a negative sign). Despite the statistical weakness of the data, the result is surprising. Not even one of the typical labour market indicators is significantly correlated with the error correction coefficients estimated in Table 5. This is true for OECD labour market indices such as wage centralization and coordination, facility of dismissal, employment protection legislation (EPL) or Trade Union density. Collective bargaining coverage (CBC) seems to weakly improve the adjustment speed. Macroeconomic variables at the national level such as social security contributions, the tax burden, GDP per capita, wage shares and their changes (the justice motive) are insignificant. Evidence for an impact from unemployment is very weak.

However, to our surprise the only significant factors relevant for the speed of adjustment are the proxies for an open society. The sign for the population variable is positive, signalling that the larger a country is, the less it is concerned with adjusting its wages to the developments in other countries. The importance of international broad-mindedness is even more strongly documented by indicators for the percentage of people speaking no, one, two or three foreign languages or English: a high percentage of exclusively native speakers reduces the speed of wage convergence; speaking many languages, or at least English, improves it. These variables are a reflection of the mechanisms underlying the role of the non-tradable sector that we have observed above. For dominance of the non-tradable sector in wage bargaining implies focussing on narrow national economic conditions, rather than the broader European requirements. It is the expression of a bias in favour of the familiar immediate environment; it is a form of economic chauvinism, which is matched by the narrow-mindedness of closed economies where people only communicate with themselves in their own language.[26] This result points in an interesting direction: *rather than focusing on institutional reforms in European labour markets, better results may be obtained by improving the communicative processes in European*

[25] Sources for these indicators are: OECD Employment Outlook, 2004 for labour market indicators; European Commission, Ameco 2007 for macroeconomic data; Eurobarometer 246, Feb 2006 for language skills.
[26] I owe the definition of chauvinism as "a bias in favour of the familiar" to Ravenscroft, 2005: 58.

wage bargaining. What matters may not be the institutional hardware, but its software.[27]

Table 7. Correlation of Adjustment and Labour Market indicators

Covariance Analysis: Ordinary
Sample: 1 12
Included observations: 9

Adjustment coefficient correlated with:	Correlation coeff	Probability
SOCIALSECURITY2005	-0.025633	0.9478
CENTRALIZATION	-0.039633	0.9194
COORDIN ATION	-0.069328	0.8593
DWAGESHARE	0.09544	0.807
TU DENSITY	-0.142243	0.7151
CHANGE UNEMPLOYMEI	-0.171632	0.6588
WAGE SHARE 07	-0.255135	0.5076
EPL1	0.288203	0.452
WAGES HARE 96	-0.323476	0.3958
TAX BURDEN 2005	-0.353496	0.3507
EPL2	0.433952	0.2432
SUM DISMISSAL	0.43962	0.2364
UNEMEMPLOYMENT 199	0.546147	0.1282
CBC	-0.558859	0.1178
POPULATION 2008	0.580259	0.1014
GDPpc 2007	*-0.626165*	*0.0712*
_3 LANGUAGES	**-0.629915**	**0.069**
UNEMPLOYMENT 2008	**0.705423**	**0.0338**
NO LANGUAGE	**0.711151**	**0.0317**
_1 LANGUAGE	**-0.711151**	**0.0317**
ENGLISH	**-0.735396**	**0.0239**
_2 LANGUAGES	**-0.764418**	**0.0164**

Reforming the Macroeconomic Dialogue

This brings us to the *Macroeconomic Dialogue*. The Cologne European Council in 1999 set up the Macroeconomic Dialogue (MED), as the third pillar of a broader European Employment Pact. It intended "to improve the conditions for a cooperative macro-economic policy mix geared to growth and employment while maintaining price stability" (Koll, 2005). Based on economic ideas laid out by Collignon (1999) and Koll (2005),[28] the MED sought to introduce wage and income policies into the tools box of macroeconomic policy. It has been called the 'high point of the Euro-Keynesian political approaches' in the neoliberal economic order (Schulten 2002).

[27] Freeman, 2007, also found that economic performance in labour markets is affected by information, communication and trust.

[28] Both authors were responsible as civil servants in the German finance Ministry for setting up the MED during the German EU-presidency in 1999.

However, the political motivation was less ideological; it was derived from the realization that a single currency area required a unified approach for efficient stabilization policies (see Collignon, 2002, 1997, 1994 and Collignon and Schwarzer, 2002). The idea was to get social partners to agree and coordinate their wage settlements with monetary and fiscal policy in order to ensure a policy mix in support of high growth and employment creation. But due to resistance by the UK government, the notion of wage policies was banned from public documents and the European Central Bank, careful to preserve its independence, only agreed to "cooperate" without committing to ex ante coordination. The weak political will translated into an institution that imposed few constraints and favoured *confidential* exchanges of policy information. As the German presidency put it, "in a macroeconomic dialogue, based on mutual trust, information and opinions should be exchanged in an appropriate manner concerning the question of how to design macroeconomic policy in order to increase and make full use of the potential for growth and employment" (Bulletin 1999; Issue 49: 520, No. 2 and 5). Technically this is achieved in a two level process: first, national monetary and fiscal authorities meet with national social partners, and then peak organizations of social partners meet with the ECB and ECOFIN.

Table 8. Participants of the Macroeconomic Dialogue and their level of activity in the European Monetary Union and the EU *(without EU-COM)*[29]

	MONETARY POLICY	**FISCAL POLICY**	**WAGE SETTING**
EMU or EU level ***(policy dialogue)***	ECB	ECOFIN or Eurogroup	European peak organizations (UNICE, ETUC, CEEO)
National level ***(technical level)***	National central banks	National legislators (enacting national budget laws)	National Social Partners (decentralized wage bargaining)

The Dialogue represents a soft form of policy coordination, which resembles the Open Method of Coordination with few constraints. The driving political agent is the Economic Policy Committee of the Council, not the Commission. As a consequence,

[29] Adapted from Koll, 2005

partial interest rather than the European "common concern" dominate the deliberation. It re-enforces chauvinistic policy outcomes in the sense described above.[30] The outcome is a general "understanding", rather than binding commitments. But what guarantees the implementation of political "understandings" between participants in the MED? Andrew Watt (2005: 252) has correctly observed: "The concrete impact of the MED on its participating institutions and on policy making remains unclear. In particular, there is currently no way for the MED to send 'signals' to the outside world, which would have a stabilizing impact on expectations and on the economic developments themselves." It may therefore not come as a surprise that the normative guidelines formulated for wage bargainers such as the Golden Rule, are not respected in member States. They lack the binding force that is established when agreements are based on fully informed deliberation on collective choices.

Wage agreements in the Euro Area must take into account European-wide economic and monetary conditions, including the relative competitive positions of national production locations and policy reactions by the ECB. But this is not possible, given the strong role of national wage bargaining institutions. The way to improve on Europe's macroeconomic policies is therefore to broaden the communicative processes of wage negotiations and integrate European reasons and arguments into the deliberation of national wage settlements. How can this be done?

One approach is to make use of the single market and Europeanize collective bargaining. An increasing number of firms are nowadays operating in the single European market. They have concrete knowledge of local production conditions and they have to deal with competitive pressures in the European and world markets. Increasingly, the information flow in such trans-national European companies is supported by European works councils. They offer an institutional framework which can potentially underpin cross-border bargaining. Although all the EWCs were constituted as information and consultation bodies with no formal negotiating role, there have been cases where framework agreements have had an impact on collective bargaining (Arrowsmith and Marginson, 2006). Firm-specific European wage agreements with differentiated cross-border contracts would be able to take into

[30] See footnote 26.

account local as well as European conditions of productivity, standards of living, working conditions etc. This would broaden the constituency for wage negotiations beyond national borders. Management would become accountable to a European constituency. If these agreements could take on a role as lead negotiations for national wage bargaining, it would shift the focus away from non-tradable sectors to the European wage/price dynamic. This would help to accelerate adjustment of potential shocks and distortions. The value of such arrangement does not consist in negotiating a unified wage contract, say for European carmakers, but in establishing the sector for tradable goods as a benchmark for others.[31] It would require, however, that other sectors, such as public service, would accept this wage setting leadership.

Secondly, there is a role for macroeconomic policy. Our analysis has shown evidence for wage restraint in the Euro Area, and it cannot be excluded that the existence of the Macroeconomic Dialogue has contributed to it at least to some degree. However, our evidence showed few member States having followed the Broad Economic Policy Guidelines (European Commission, 2005), which were inspired by the Dialogue: national wages have not increased in accordance with the formula of the Golden Rule. The reason, we have argued, is that wage setters take into account national unit labour costs rather than European inflation targets and that they are accountable to national audiences and not to a European constituency. Partly, this is intrinsic to the nature of negotiating national wage contracts, although it is paramount to abolish national indexing mechanisms. But it is also true that the confidential nature of the Macroeconomic Dialogue prevents actual wage bargainers to refer to European norms as negotiating constraints, because these norms are only known to a small group of insiders. In order to Europeanize the wage bargaining process, it would be necessary to open the MED up and have a broad general debate about appropriate wage policies.

This leads us to propose a simple reform of the Macroeconomic Dialogue. Both levels of the Dialogue should be conducted publicly and be submitted to permanent public scrutiny. At the national level it would open up deliberations for all wage negotiations rather than keeping the focus on particular sectors – especially the non-tradable

[31] Du Caju et alt., 2008 have pointed out that "pattern bargaining" can be an important source of wage coordination.

sector. But it would also make the transfer to the European level transparent. However, deliberation at the second level also needs to be conducted in a public sphere. It needs a forum where debate on reasonable macroeconomic policies can take place, so that the chauvinistic "bias in favour of the familiar" can be overcome. By definition national governments or parliaments cannot represent European interest. The only public sphere that exists for such purposes is the European Parliament (Collignon and Paul, 2008). Hence, the Macroeconomic Dialogue should be transferred from the European Council to the European Parliament. Given that the Committee on Economic and Monetary Affairs auditions the President of the European Central Bank five times a year, it would be appropriate that it invites and listens to European Social Partners prior to these auditions and then makes recommendations, which integrate monetary, fiscal and wage policies in the interest of the objectives of Euroland and the European Union. This would also support the ECB, as its authority depends on the public consensus it can build for its policies.

Conclusion

Our analysis has revealed a lack of convergence in national unit labour costs that could potentially threaten the sustainability of the euro. The urgency of this problem is masked by the fact that ULC developments in the North keep aggregate cost and price levels down, so that monetary policy cannot intervene. Institutional reforms in national labour markets are unlikely to solve this problem on their own. A more promising route for overcoming divergence is improving the communicative framework within which national wage negotiations take place. Moving the confidential Macroeconomic Dialogue from Ecofin to the European Parliament may be a first step in this direction.

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