BRIEFING PAPER

Wage Setting and Price Stability

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Executive Summary

Wage Setting and Price Stability

In the following paper the theoretical and the empirical background of the ECB presidents reasoning on wages will be outlined. On the one hand the relation between wages and price stability is analysed. On the other hand it is shown how wages affect employment and competitiveness. Finally it is shown how wage settlements have been since the emergence of currency union.

It turns out that the ECB president has described the relationship between wages and prices correctly. Wage settlements should look after productivity and they should incorporate the ECB price stability target and not actual inflation. The latter one implies that people must forsake all indexation schemes. That wage settlements should consider the competitiveness of the respective economy is also true. However the relationship between wages and employment as described by the ECB just works either in a small open economy or in a theoretical supply side setting. If demand is the limiting factor, the ECB statement is not true.

Looking at the empirics of the past years there is no reason for concern that wage settlements in the Euro area endanger upward price stability .The contrary is rather true. Keeping all other things equal, wages would have led to an inflation rate that is below the inflation target of the ECB. In the light of these findings the ECB should show more trust into the Euro area wage formation process.

Introduction

The ECB president has stressed that "wage agreements should take into account productivity developments, while recognising the still high level of unemployment and price competitiveness positions". He added that "it is also important that wage settlements move away from automatic, backward-looking indexation mechanisms". He acknowledged by this statement that wage movements have a decisive impact on price stability. Therefore the ECB has to closely watch these movements so as to derive proper inflation forecasts. Related to that is the also mentioned competitive position. Prices may have an impact on competitiveness thereby affecting growth. The president also stated that unemployment should be considered as well. That means he assumes a relationship between wages and employment what would also have an impact on growth.

In order to assess the Presidents statement properly it has to be put into theoretical frameworks that explain the relationship between wages, prices and employment. In the following section different theoretical views will be presented and the statement will be judged in the light of these views. As it turns out the statement is in general only sensible if there is no perfect competition- what seems a realistic assumption.

Wages and Prices

In order to be clear, the term wages in the following denotes nominal effective wages plus social security benefits to be paid by the employer. This is the total cost of labour for the employer he will have to consider when producing goods. This is the correct term and not real or bargained wage settlements. The reason for this is that only money wages are set on the labour market. Real wages can only be derived when interacting with goods markets. Bargained wages may be an important part of all wages but they do not encompass all wages. And since paid wages are not the only costs that occur when employing labour, all others especially social security contributions have to be considered, too.

Given that, wages will affect the cost of labour input. In a neoclassical setting with perfect competition on all markets this has no impact on prices. Those were exclusively determined on the goods market by supply and demand. Therefore in such a setting a statement that wages affect inflation makes no sense. But as soon as one moves to a more realistic assumption that there is at least some sort of market power by firms, the price setting becomes related to wages. It takes the form of mark up pricing. That means firms charge their customers their costs plus some mark up to make profits. The size of the mark up is determined by the extent of their market power. This may vary according to the state of the business cycle. Production costs especially on an aggregate level are predominantly affected by labour costs i.e. wages. That means if wages rise too fast prices will also do so. In such a theoretical setting the ECB is right to look on wage developments in order to assess the prospects of inflation developments.

The decisive question is how fast wages should be allowed to rise to preserve price stability. The target of price stability is set by the ECB to an inflation rate of below but close to 2 %. Hence the target shows an almost symmetrical form. Inflation rates above 2 % are seen as a violation, but also inflation rates that are below 2 % and not close to it, do not meet the target. The latter one is seen as a protection against deflationary processes. It is admitted by the ECB that the target cannot be fulfilled in each period of time due to always possible unforeseen shocks. However in the medium run the target must be met. What the ECB need to do is to assume a forward looking approach in order to judge whether the target will be met in the medium run or not. In theory the ECB follows this practice, but sometimes it is arguing with actual inflation rates and that is rather backward looking and thus an inappropriate stance.

These requirements determine the leeway for wages, or more precise, labour costs developments. But these affect prices via a very specific variable. Many empirical studies show that there is a stable relation, in technical terms a co-integration, between prices and unit labour costs. Unit labour costs are the relation between costs of labour per hour or per head and productivity per hour or per head. One can understand this variable as a relation between costs and benefits of labour. So if one wants to measure the impact of wages on prices one has to do this via unit labour costs. Therefore one

has to assess productivity developments in the Euro area and total labour costs. The latter are measured by the compensation of employees in the national accounting system. In unit labour cost variable productivity is a major component. That is the reason why the ECB correctly stresses that wage agreements should take into account productivity developments.

If prices should not rise faster than 2 %, unit labour costs should also not rise stronger and not much less. This sets the limit for an increase of the compensation variable close to the productivity development plus 1.9 %. In this case unit labour costs should not rise more than 2 % and consequently the price impact of wages is slightly less than 2 %, but not much. In other words in this case wage developments are perfectly in line with the target of price stability.

There are several issues to be considered when applying such a rule. Productivity growth is not a constant, but varies a lot. Therefore it is very difficult to take it as a yardstick for wages especially when these have to be negotiated in advance. One major reason for productivity variability is the business cycle. It seems appropriate to calculate a cyclically adjusted productivity movement as it is possible when using modern time series trend calculating procedures. A major obstacle for a proper productivity measurement is of statistical nature. Still not for each member country of the Euro area there are per hour productivity data available. This is due to the fact that there are no hours worked data. Consequently one has to use per capita data, but these may be biased due to changes of working hours.

Another issue of importance is that the price stability target of the ECB defines the leeway for wage rises and not actual inflation. This should be so in order to bring labour costs always in line with the inflation target. If one would look just on actual inflation destabilising processes could occur. In such a case an inflation rate above the inflation target would lead to accordingly higher wage settlements reinforcing accelerated inflation. This is nothing else than the well known wage price spiral that has been effective in almost every industrialised country during the seventies and early eighties and in some even at the beginning of nineties. The same reasoning applies to an

inflation rate below the target. If wages would follow, decelerated inflation would be reinforced, and the target would be missed further and further. Therefore it is a necessity that wages take the inflation target and not actual inflation into account. This is exactly the reason why the ECB is rightly concerned on indexation schemes. These consider only past actual inflation rates. That means with indexation schemes the above described destabilising processes are likely to occur. Therefore this strategy of wage formation should, in line with the recommendation of the ECB, no longer be followed.

In many countries non wage labour costs have also been changing all the time. These changes have to be considered too, since they have an impact on price stability. Increasing non wage labour costs spur inflation and vice versa. In an economy with rising social security contributions therefore wage increase have to be more moderate than in one with decreasing contributions.

Wages, Employment and Competitiveness

Above reasoning has focused on wages and price stability exclusively. But the ECB has also stated that wages should also take into consideration the employment situation. It indicates by this wording that wage rises should be lower than above if unemployment is considered too high. It would be correct in a theoretical neoclassical setting where real wages must equal marginal productivity. Because with lower nominal wages and a given inflation rate, wage restraint leads to lower real wages. Then firms increase their profits out of labour input and they consequently increase employment with lower quality until a decreasing marginal productivity equals again the lowered real wages. But in this theoretical setting all above considerations on inflation are not valid.

If one moves to a theoretical setting with imperfect competition as outlined above, things become more complicated. This is so because the theoretical criterion is real wages and not nominal labour costs. If above considerations on price stability are correct, lower nominal wages have a significant impact on prices and that means they have an accordingly less significant impact on real wages. Furthermore the employment reaction on real wages is less than proportional according to most estimation. Therefore one

should expect real incomes to fall after wage restraint. A second related point is that in such a setting not wages alone determine employment but also production. At this point theoretical thinking diverges into two branches. Supply side economists would say that there is no reason to worry. Since lower real wages increase the incentive to hire, firms would employ more people who in turn produce more. The initial employment effect of lower real wages then gets even reinforced.

On the other hand, demand side oriented economists would state that production is determined by aggregate demand. In this case lower real incomes lead to a decline of demand and production. The effect of lower real wages then is a priori equivocal. The sign of the effect in the end depends on considerations that have to do with the second qualification set by the ECB for wage formation. That is competitiveness. Let us consider two extreme cases. The first one is a completely closed economy. Then the depressed demand will at the end of the day lead to lower employment. This effect will prevail positive incentives set by lower real wages. Consider on the other hand a totally open economy, where demand is completely determined by exports to foreign countries. In this case lower real wages will simply not affect demand. Moreover international competitiveness will increase as long as there is no real wage restraint in foreign countries. Then foreign demand even increases, delivering an unambiguous positive impact of lower real wages.

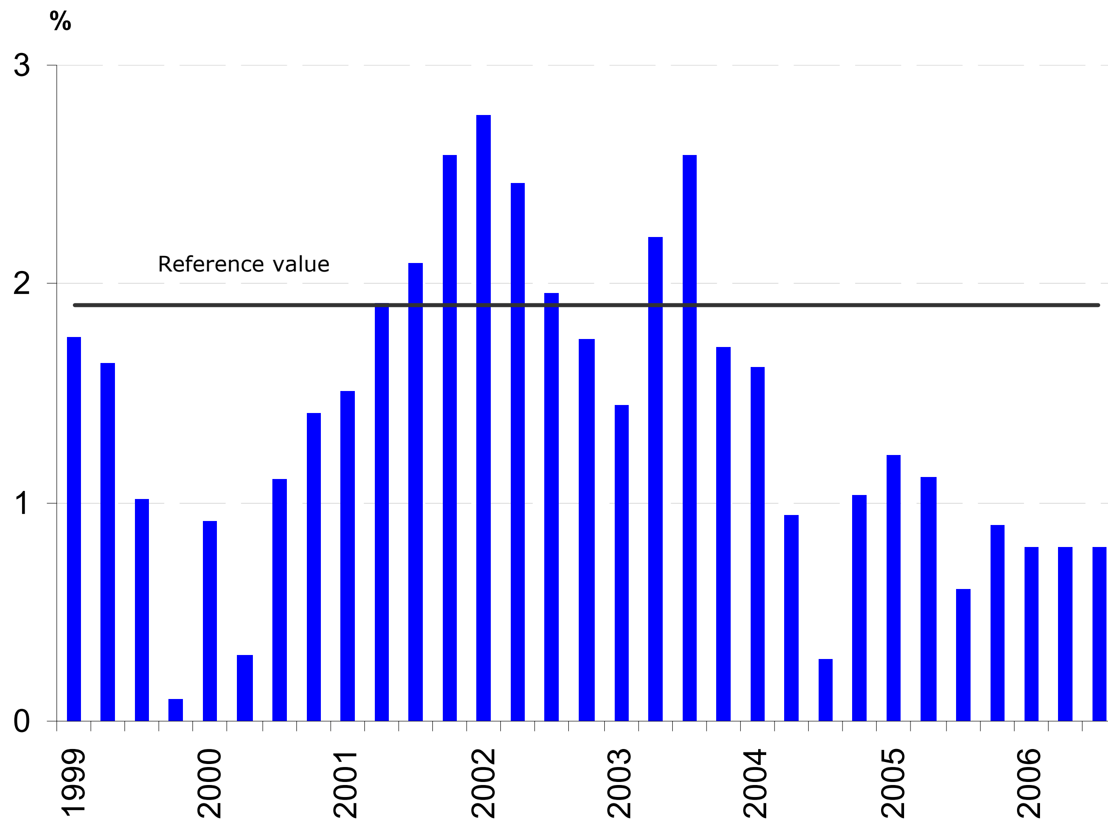
Reality is somewhere in between these extreme cases. For the Euro area as a whole - and that is what counts for the ECB - the closed economy model is closer to reality than the completely open economy. The same applies, albeit to a smaller extent, to the large economies of the Euro area, Germany, France and Italy. It certainly does not apply to small open economies like Luxemburg, Austria and the Netherlands.

In the light of these considerations one should be sceptical about the recommendation as far as wages and employment is concerned. Too many caveats, limit the validity of this statement. It is only perfectly valid in a small open economy or in a purely supply side theoretical setting. But the Euro area is not a small economy. It is large and it is open. For a large and demand driven economy the impact may well be the other way

round. Therefore it would be wise to assess in the first place whether demand or supply is the limiting factor of the economy. If there exist supply side problems, because of a poor international competitiveness, then the recommendation of real wage restraint is sensible. Wage restraint always helps to improve competitiveness. Hence it is advisable to follow the ECBs recommendation with respect to this criterion. If however demand is the problem real wage restraint is not the solution but will aggravate the problem.

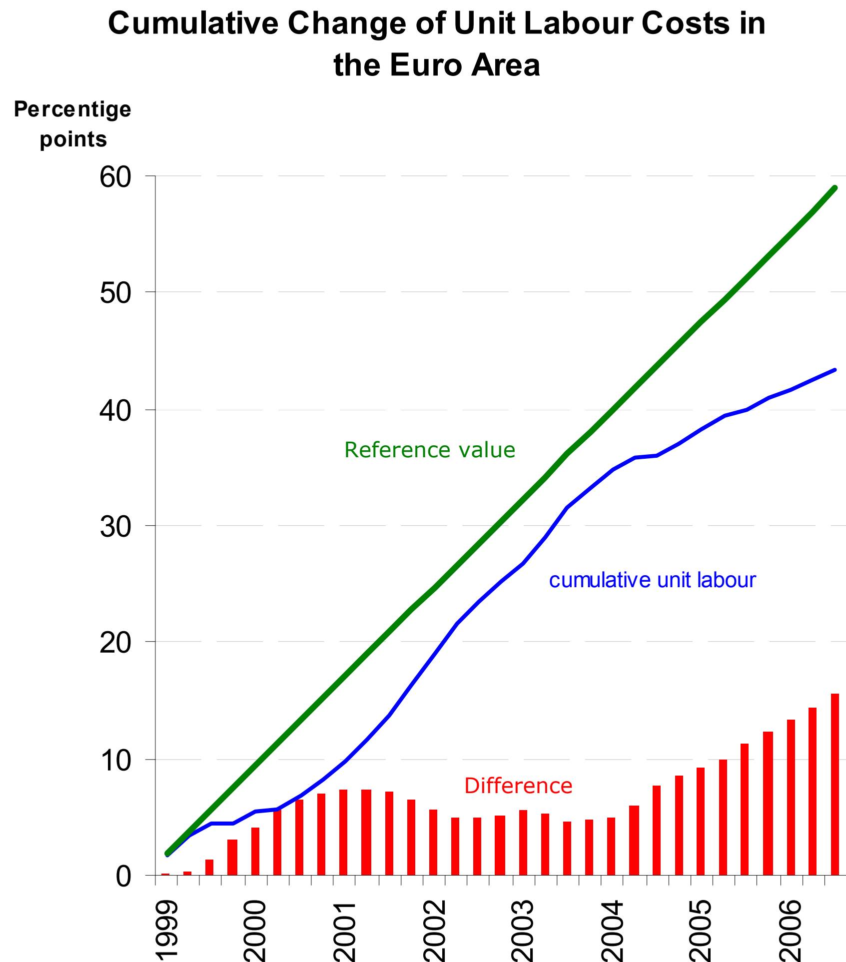
Empirical Considerations

The warnings of the ECB do not just have a general theoretical background, but must be seen against the backdrop of the present situation. There are major wage bargaining rounds in Germany that take place while the economy is growing strongly and tax rises boosted some prices. There obviously concerns within the ECB that wage settlements will be too high for Germany and then will spread all over the Euro area. Are these concerns justified by past behaviour?



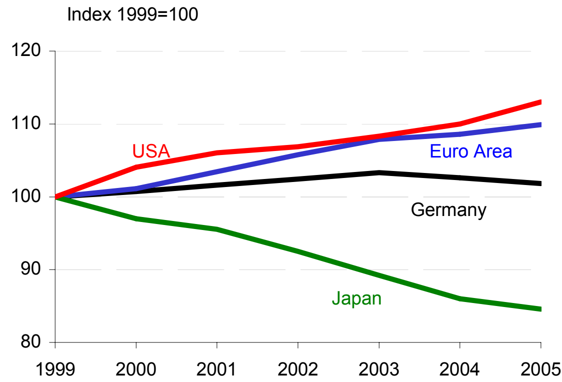
Above, unit labour costs were identified as the decisive variable to asses an appropriate wage setting behaviour. Looking at the development of unit labour costs in the Euro area since the beginning of the currency union, one realizes that wage movements have been moderate during most periods. Only in 2002 and some time in 2003 unit labour costs exceeded the reference value of 1.9 %.These were periods, when economic activity was weak, so that actual productivity growth was weak too. Wages exceeded these figures during that time. But in all other years wages were well below the reference value. Especially since 2004 there exists a very strong wage restraint in the Euro area. Unit labour costs then rose by just about 1 %. This means there is a deflationary impact from wages on prices. This has been more than compensated by higher import prices. Therefore the Euro area still faced inflation rates of temporarily above 2 %. Taking the whole period from 1999 until 2006 into account, unit labour costs increased on (geometrical) average by 1.2 %, quite lower than the reference value of 1.9

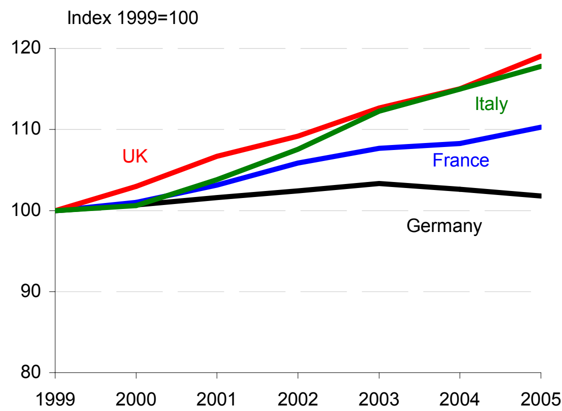
%. Given the past, the ECB has no reason to complain on wages. If -as a purely theoretical exercise- one accumulates the reference value and the change in unit labour costs, one gets the result that unit labour costs could have been more than 10 percentage points higher without having endangered price stability.

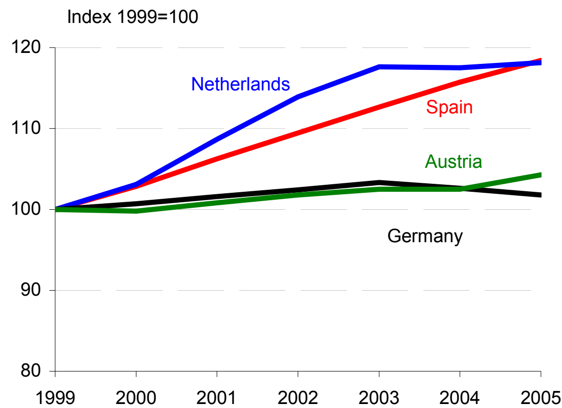


To be clear this is no recommendation to catch up for past wage restraint. The effect on inflation would be detrimental and the ECB would have to act. But the figures show that wages have done nothing in the past to spur inflation. The credibility of a stability oriented wage settlement should be high. In the light of these findings the warnings of the ECB are exaggerated. This applies particularly to the wage formation process in Germany. In no other country except Austria the rise of unit labour costs has been as moderate as in Germany.

Unit Labour Costs[1]







[1]On domestic currencies.

Source: AMECO.

Therefore it seems strange that the ECB focuses so strongly on wage settlements here. A look on unit labour costs in Italy and Spain may prove more worrisome. There, price

stability and international competitiveness are much more at stake than in Germany. In fact presently diverging competitiveness of the Euro member states is much more a serious problem than price stability.

Conclusion and Recommendation

The statement of the ECB is absolutely correct as far the theoretical relationship between wages and price stability is concerned. Wage settlements should look after productivity and they should incorporate the ECB price stability target and not actual inflation. The latter one implies that people must forsake all indexation schemes. That wage settlements should consider the competitiveness of the respective economy is also true. However the relationship between wages and employment as described by the ECB just works either in a small open economy or in a theoretical supply side setting. If demand is the limiting factor, the ECB statement is not true.

Looking at the empirics of the past years there is no reason for concern that wage settlements in the Euro area endanger upward price stability .The contrary is rather true. Keeping all other things equal wages would have led to an inflation rate that is below the inflation target of the ECB. In the light of these findings the ECB should show more trust into the Euro area wage formation process.