EUROPEAN COMMISSION
DIRECTORATE GENERAL
ECONOMIC AND FINANCIAL AFFAIRS
Economy of the euro zone and the Union

ECONOMIC POLICY COMMITTEE
Labour Market Working Group

Summary of the workshop on "Understanding wage behaviour in Europe"

7 June 2005, Brussels

DG ECFIN and EPC's LMWG organised a half-day workshop on "Understanding wage behaviour in Europe" on 7 June 2005 in Brussels. The workshop was attended by around 90 persons, including the Members of the Labour Market Working Group attached to the Economic Policy Committee.

The workshop aimed at disseminating knowledge on recent results of empirical research on the determinants of wages and their role for macroeconomic performance and providing a forum for discussion between academic researchers, experts and policy makers on economic research in this area.

Annexes: Workshop programme

List of participants

Opening remarks

In the opening address, **Servaas Deroose** (Commission, DG-ECFIN) stressed that the common feature of all the studies presented was that they tried to distil information from cross-country comparisons either in the form of looking at cross country differences in empirical estimates of wages or labour demand or by doing panel data analysis. This is a classic case where national differences in the EU may prove to be an advantage simply because they allow us to arrive at a better understanding of common and special determinants of wages. He also welcomed such an occasion to foster an interesting debate between academics and policy makers in an issue of high policy relevance. Wages have been a recurrent feature of the European economic policy agenda, as for instance reflected in the recommendation on wages in the BEPGs. On the macroeconomic policy side, the need for continuing wage moderation has recurrently been emphasised, especially in the frame of EMU, and wage growth has contributed to macroeconomic stability in the euro area now for a number of years. On the structural policy side, little has been done in Member States to reform wage bargaining institutions and foster further wage differentiation. Both aspects have been analysed in a relatively separate manner. Therefore, it is worthwhile to focus on the interdependence of labour market institutions and wages.

Session 1. Wages and macroeconomic performance

Raùl **RAMOS (**AQR, University of Barcelona) and Christian **DREGER** (IWH Halle) presented the results of an analysis on the contribution of wages to labour market performance commissioned by DG ECFIN ("The contribution of wage developments to labour market performance"[1]). A meta-analysis of the empirical literature suggested that wage flexibility had changed notably over time. Measures of wage flexibility were higher when regional, annual and more recent data were used. Their empirical analysis demonstrated the heterogeneity of individual country experience, which was partly due to the existence of different speeds in labour market adjustments to shocks in productivity, unemployment and real wages. This was shown by deriving measures of labour market flexibility as the accumulated response of wages and employment to shocks in VAR models, as well as by comparing the relevant elasticities in structural estimates of both wage equations and labour demand equations across countries. Adjustment to shocks in EU labour markets is clearly influenced by institutions - the response of real wages and employment to shocks is faster and larger in more deregulated labour markets, which also have a lower presence of trade unions. The empirical results suggested that union density and degree of coordination in wage bargaining were having offsetting effects on wage flexibility while taxation had an indirect effect through their interaction with other institutional variables.

1 "The contribution of wage developments to labour market performance" (2005). Study commissioned by the Directorate-General for Economic and Financial Affairs of the European Commission, and prepared by Anàlisi Quantitativa Regional (AQR), Universitat de Barcelona and Halle Institute for Economic Research, (IWH). Coordinator, Jordi Suriñach, Researchers: Manuel Artís, Herbert Buscher, Miquel Clar, Christian Dreger and Raúl Ramos. The complete and definitive version will be published as European Economy Special Report N° 1/2005.

Gilles **SAINT-PAUL** (IDEI, University of Toulouse) presented a paper co-authored by Samuel Bentolila, aiming at explaining movements in the labour share in the OECD[2]. Before going into the analysis he explained that the wage share was not a proper indicator of wage pressure, i.e. a declining wage share would not indicate the absence of a problem with wages. The reason was that productivity was endogenous and declining employment could, for example, lead to an increase in productivity that would not justify a similar increase in wages. He called into question the conventional view that the labour share would be constant in the medium-run. He showed that movements in the labour share could be decomposed into movements along a technology-determined curve, namely the "share-capital curve" (depicting the relationship between the labour share and the capital-output ratio), shifts of this curve, and deviations from it. Movements along the share-capital curve capture changes in factor prices such as wage pushes and changes in real interest rates, as well as the contribution of labour-augmenting technical progress. The curve is itself shifted by factors such as non-labour embodied technical progress or changes in the price of imported materials. Lastly, other sources of variation of the labour share are represented by movements off the share-capital curve, and are accounted for by deviations from marginal cost pricing such as changes in mark-ups, labour adjustment costs, and changes in workers' bargaining power. His empirical analysis revealed evidence that the labour share was shifted by total factor productivity, capturing technological progress, and the real price of oil. He also found that there were significant deviations from this relationship due to changes in employment and –less clearly– labour conflicts, which according to the model should capture gaps between the marginal product of labour and the wage, arising respectively from labour adjustment costs and workers' wage bargaining power.

Julian **MORGAN** (ECB) presented research undertaken at the ECB on the impact of aggregation in the empirical analysis of euro area labour markets using a Phillips Curve specification for the 5 largest euro areas countries.[3] The results pointed to some advantages from estimating such relationships at the national level rather than conducting the analysis at the area-wide level. The standard errors and the 1-2 period ahead out-of-sample forecast errors from the aggregated national equations were found to be lower than those from the area-wide equation. However, these differences were not particularly large. Morgan draw some support for adopting an area-wide approach in Phillips curves-based analysis from the fact that it proved possible to impose a common coefficient on the unemployment gap across countries. Moreover, the statistical properties of the area-wide equation were quite good. Nevertheless, this should not conceal one of the main advantages of national analysis – the possibility to incorporate different specifications at the national level.

The ***general discussion*** focused first of all on the presentation of **Saint-Paul**, and in particular on implications and explanatory power of the presented approach for cross-country differences and changes in the wage share. It was argued that the long-run implication of the approach was nevertheless a constant wage share as none of the determinants shown had a trend, on which **Saint-Paul** agreed for the very long run. Asked about the causality direction possibly running from wages to productivity, he replied that this would not be in line with the results of Granger causality tests between

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2 Samuel Bentolila and Gilles Saint-Paul (2003), "Explaining movements in the Labor Share", *Contributions to macroeconomics*, Volume 3, Issue 1.

3 Silvia Fabiani and Julian Morgan (2003), "Aggregation and euro area Phillips curves", *ECB Working Paper* No 213.

these two variables. A further intervention suggested that oil price movements also had a significant impact on the wage share. **Saint-Paul** answered that changes in oil prices and wage share over the last four decades were not necessarily causal but simply coincident.

As regards possible evidence on differences in labour market determinants between the USA and the euro area, **Ramos** clarified that while wage flexibility has increased over time, their estimates suggested that it was still at a level below the one measured for the USA. Moreover, adjustment for example via migration and labour mobility were more powerful in the USA than in the euro area.

Session 2. Wages, institutions and labour market performance

Luca **NUNZIATA** (University of Oxford, University of Padova) focused his talk on the impact of labour market institutions on the wage level[4]. Previous research had either been restricted to the impact of taxes on wages or had analysed the impact labour market institutions in a static cross-country framework. Thanks to a newly developed data base that encompasses information on changes in institutions over time, he was able to analyse the issue in a panel approach, while controlling for macroeconomic determinants. The estimates revealed that unemployment and productivity had an important impact on the level of labour costs. Labour market institutions also had a significant impact, both directly and through their interaction with unemployment and taxation. For instance, bargaining coordination had a negative direct effect on labour costs, and also negative indirect effect in reducing the positive impact of taxation and increasing the negative impact of unemployment. Higher benefit replacement rates as well as employment protection legislation had a positive impact whereas benefit duration was insignificant in his estimates. He closed by presenting the results of an accompanying paper that showed that the impact of institutions on wage inequality was as strong as that of trade and technology measures. More flexibility might increase wage inequality.

Albert **VAN DER HORST** (CPB, Netherlands Bureau for Economic Policy Analysis) gave a presentation on wages, taxes and benefits in Europe that demonstrated huge differences in the determinants of wages as well as in the response of employment to wages in six countries (DE, FR, ES, NL, UK and USA).[5] One of his central insights was that the wage curve represented a good framework for the analysis of European countries but not for the USA, for which a Philips curve representation was more suitable. The role of the taxes wedge on wages was strongest in DE but not significant in FR, with NL, ES and UK being in an intermediate position. The reservation rate had a strong effect in NL, whereas it was insignificant in DE. Further evidence was presented on cross-country differences in the size and speed with which employment responds to changes in wages. Overall, the tax wedge had a role in explaining increasing unemployment in four out of five European countries (except FR), while changes in the replacement rate over the 1990s could be related to declining unemployment in FR, NL and UK.

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4 L. Nunziata (2005), "Institutions and Wage Determination: a Multi-Country Approach", *Oxford Bulletin of Economics and Statistics,* forthcoming..

5 Albert van der Horst (2003), "Structural estimates of equilibrium unemployment in six OECD countries", *ENEPRI Working Paper* No 22.

Gilles **MOURRE** (European Commission, DG ECFIN) presented the main findings of a research project that aims at identifying wage compression in Europe using the Structure of Earnings Survey 2002.[6] "Wage compression" was defined as narrower wage differences across workers or firms than productivity differences. Results of the graphical analysis turned out to be inconclusive partly because of its inability to control for country-specific effects. When estimating a labour demand model by means of cross-sectional econometric analysis, there is some evidence of wage compression both across occupations and across educational attainments. The evidence, however, appeared much less robust across levels of education than across occupations, which might be due to the fact that educational attainment was too coarse a measure to capture the various levels of professional skills. Moreover, the research suggested that compression of wages was not uniform across wage levels, consistent with the traditional observation of less wage dispersion at the lower end of the earning distribution.

In the ***general discussion***, the audience asked questions related to the choice of institutional variables, i.e. on the degree of organisation of employers as further variable of interest and the composition of the tax gap. **Nunziata** explained that no data was available on employers, but agreed that the composition of the tax wedge could be relevant. **Van Der Horst** reported about a study that found that the composition of the tax wedge would not matter in the NL. As regards DE, he agreed that changes in taxes were not the only factor responsible for rising unemployment but other variables would also need to be taken into account.

When asked whether his approach revealed an impact of institutions on wage compression, **Mourre** explained that institutions, in particular the wage bargaining framework and minimum wages, are likely to matter a lot. As an example, he noted that more decentralised wage bargaining in the new Member States may be the reason for less wage compression in these countries.

As regards the implication that higher wage flexibility leads to more wage inequality and as consequence likely also to less social cohesion, **Nunziata** stressed that one should distinguish between identifying costs and benefits of wage flexibility and political decisions on what kind of society was warranted.

A further intervention pointed to potentially conflicting messages on the impact of wage compression and employment from graphical and econometric analysis. **Mourre** replied that the econometric analysis was able to correct for unobserved countries specific effects as well as for other types of heterogeneity (firm size, occupations, gender), which could blur the picture yielded by graphical analysis, as found out by other authors. The empirical method used has the merit to identify the specific impact of wage dispersion, controlling for other factors. However, he acknowledged that the negative impact of wage compression on relative employment rests on a labour-demand theoretical framework and other complex effects may also be at play.

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6 Gilles Mourre (2005), "Wage compression and employment in Europe: First evidence from the Structure of Earnings Survey 2002", European Commission, DG ECFIN, *Mimeo*.

Closing remarks

Anne Brunila (chairwoman of the Economic Policy Committee's Labour Market Working Group) closed the workshop by thanking the speakers and underlining the importance of such an event for policy-makers. She emphasised in particular the main learning of the second session: differences in wage developments across Europe are not observed mainly because people are dissimilar or macroeconomic conditions are not the same, but because labour market institutions are different. The interest was less in individual optimising behaviour but in detecting evidence on the impact of institutions, which provide the framework for individual decisions, on wage behaviour.

Enclosure: Workshop programme

Participation list

EUROPEAN COMMISSION
DIRECTORATE GENERAL ECONOMIC AND FINANCIAL AFFAIRS

ECONOMIC POLICY COMMITTEE
LABOUR MARKEt WORKING GROUP

UNDERSTANDING WAGE BEHAVIOUR IN EUROPE

Brussels, 7 June 2005
Centre Borschette, 36 rue Froissart, 1040 Brussels, Room 0A

8.45 - 9.15	Registration
9.15-9.20	**Welcome and opening remarks:** Servaas Deroose
9.20-11.15	**Session 1: Wages and macroeconomic performance**

*Chair: Servaas Deroose (*DG Economic and Financial Affairs)

Jordi Suriñach, Raul Ramos, Miquel Clar (AQR, University of Barcelona), Christian Dreger, Herbert Buscher (both IWH Halle): 'The contribution of wages to macroeconomic performance' http://europa.eu.int/comm/economy_finance/publications/eespecialreports_en.htm (*forthcoming*)

Gilles Saint-Paul (University of Toulouse): 'Explaining movements in the labour share'
http://www.bepress.com/bejm/contributions/vol3/iss1/art9/

Julian Morgan (European Central Bank): 'Aggregation and euro area Phillips curves' http://www.ecb.int/pub/pdf/scpwps/ecbwp213.pdf

11.30-13.00	**Session 2: Wages, institutions and labour market performance**

Chair: Anne Brunila, Chairman of the Labour market working group of the Economic Policy Committee

Luca Nunziata (Nuffield College Oxford and University of Milan): 'Institutions and wage determination: a multi-country approach'
http://www.nuff.ox.ac.uk/economics/papers/2001/w29/labour%20cost%20determination.pdf

Albert van der Horst (CPB Den Haag): 'The role of fiscal variables on wages and labour demand'
http://www.cpb.nl/eng/pub/discussie/19/disc19.pdf

Gilles Mourre (DG Economic and Financial Affairs): 'Wage compression and employment in Europe: first evidence from the Structure of Earnings Survey 2002'

13.00 – 14.30	**Lunch**

Contacting the organisers:
Michael Thiel michael.thiel@cec.eu.int
Gilles Mourre gilles.mourre@cec.eu.int

List of participants

Brussels 7 June 2005

Name	Organisation
Abdel Maoula, Ragab	Banque MISR
Acedo Montoya, Lourdes	Delegación de la Junta de Andalucía
Agathonos, Bettina	European Parliament, Economic and Monetary Committee
Arpaia, Alfonso	European Commission – DG ECFIN
Bilsborough, Mark	European Commission - EPC
Boukadoum, Mourad	Mission of Algeria to the European Communities
Bouzon, Julien	European Policy Centre (EPC)
Brunila, Anne	Ministry of Finance, Finland
Buscher, Herbert	IHW Halle
Carone, Giuseppe	European Commission – DG ECFIN
Christensen, Anders Borup	Ministry of Finance, Denmark
Clar, Miquel	AQR, University of Barcelona
Cornesse, Dominique	European Commission – DG ECFIN
Costello, Declan	European Commission – DG ECFIN
Curci, Nicola	Ministry of Economy and Finance, Italy
de Joux, Christopher	Simmons & Simmons
Deroose, Servaas	European Commission – DG ECFIN
Dhiraj, Amarendra bhushan	World summit for information societies, Switzerland
Dhonte, Pierre	IMF
Diez-Guardia, Nuria	European Commission – DG ECFIN
Dreger, Christian	IHW Halle
Du Caju, Philip	National Bank of Belgium
Governatori, Matteo	European Commission, DG EMPL
Grünewald, Werner	European Commission, EUROSTAT
Hagelüken, Alexander	Süddeutsche Zeitung
Hassan, Emmanuel	European Commission - DG EMPL
Herzog-Stein, Alexander	German Council of Economic Experts
Huemer, Gerhard	UEAPME
Ito, Seiichi	Mission of Japan to the EU
Jansen, Jos	Ministry of Social Affairs and Employment
Janssen, Ronald	ETUC
Jokinen, Hannu	Ministry of Finance, Finland
Julien-Hiebel, Catherine	European Commission - EPC
Kajzer, Alenka	Institute of macroeconomism analysis and development
Kamesui, Susumu	Mission of Japan to the EU
Kanjou Augé, Imad	European Commission – Cabinet Almunia
Kuosmanen, Jouko	European Commission – DG ECFIN
Kur, Iwona	Warmia and Mazury Regional Office
Levin, Mattias	European Commission - BEPA
Ljungerud, Hedvig	HM Treasury
Mahfouz, Selma	Ministry of Finance, France
Mallis, Elias	Ministry of Finance, Cyprus
Maršík, Petr	Ministry of Industry and Trade, Czech Republic
Mas Baranowski, Cecilia	Centre Balears Europa
Masure, Luc	Bureau federal du Plan
Matouskova, Martina	Ministry of Industry and Trade, Czech Republic
Maystadt, Jean-François	UNICE

McCarthy, John	Department of Finance, Ireland
McMorrow, Kieran	European Commission – DG ECFIN
Medeiros, João	European Commission – DG EMPL
Moral, Javier	Ministry of Economy, Spain
Morgan, Julian	European central Bank
Mourre, Gilles	European Commission – DG ECFIN
Nicodème, Gaëtan	European Commission, DG ECFIN
Nunziata, Luca	Nuffield College Oxford & University of Milan
Olofsson, Ragnar	Ministry of Finance, Sweden
Parvu, Ana-Ileana	National Commission For Economic Forecasting
Pavel, Jan	Ministry of Finance, Czech Republic
Pichelmann, Karl	European Commission – DG ECFIN
Pierini, Fabiana	European Commission – DG ECFIN
Portelli, Charmaine	Ministry of Finance, Malta
Prunzel, Regine	HKV
Przywara, Bartosz	European Commission – DG ECFIN
Pula, Gábor	Magyar Nemzeti Bank, Economics Department
Raab, Gustav	EP
Ramos, Raul	AQR, University of Barcelona
Ricciardelli, Marina	University ‘La Sapienza’
Roeger, Werner	European Commission – DG ECFIN
Rouxel-Laxton, Valérie	European Commission – DG EMPL
Ruscher, Eric	European Commission – DG ECFIN
Saint-Paul, Gilles	University of Toulouse
Šajtlavova, Marcela	Ministra of Economy, Slovak Republic
Salomaki, Aino	European Commission – DG ECFIN
Scharle, Agota	Ministry of Finance, Hungary
Scheremet, Wolfgang	Federal Ministry of Economics and Labour, Germany
Schneider, Jean-Luc	Ministère de l'Economie, des Finances et de l'Industrie, France
Serrano, Inês	Ministério das Finanças, Portugal
Strazdaite, Viktorija	Ministry of Finance, Lithuania
Strobl, Eric	Universite de Paris X – Nanterre
Surinach, Jordi	AQR, University of Barcelona
Thiel, Michael	European Commission – DG ECFIN
Toppila, Jussi	Ministry of Labour, Finland
Tuite, Patricia	European Commission – DG ECFIN
van der Horst, Albert	CPB Den Haag
Van der Waarden, Jakob	Ministry of Economic Affairs, The Netherlands
Ward-Warmedinger, Melanie	European Central Bank, EU Countries Division
Watt, Andrew	European Trade Union Instit for Research Educ, Health, Safety
Weber, Maurice	SPF Finances
Yndeheim, Ola	Ministry of Finance, Sweden
Ysebaert, Jean-Pierre	ING Investment Management Belgium
Zimiene, Natalija	Ministry of Social Security and Labour, Lithuania
Zwiener, Rudolf	Macroeconomic Policy Institute (IMK)

Number of participants: 92