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The Dynamic Approach to Europe's Unemployment Problem

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The Dynamic Approach to Europe's Unemployment Problem

DAEUP

Final report

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Preface

Within the Fifth Community RTD Framework Programme of the European Union (1998–2002), the Key Action 'Improving the Socio-economic Knowledge Base' had broad and ambitious objectives, namely: to improve our understanding of the structural changes taking place in European society, to identify ways of managing these changes and to promote the active involvement of European citizens in shaping their own futures. A further important aim was to mobilise the research communities in the social sciences and humanities at the European level and to provide scientific support to policies at various levels, with particular attention to EU policy fields.

This Key Action had a total budget of EUR 155 million and was implemented through three Calls for proposals. As a result, 185 projects involving more than 1 600 research teams from 38 countries have been selected for funding and have started their research between 1999 and 2002.

Most of these projects are now finalised and results are systematically published in the form of a Final Report.

The calls have addressed different but interrelated research themes which have contributed to the objectives outlined above. These themes can be grouped under a certain number of areas of policy relevance, each of which are addressed by a significant number of projects from a variety of perspectives.

These areas are the following:

- ***Societal trends and structural change***

16 projects, total investment of EUR 14.6 million, 164 teams

- ***Quality of life of European citizens***

5 projects, total investment of EUR 6.4 million, 36 teams

- ***European socio-economic models and challenges***

9 projects, total investment of EUR 9.3 million, 91 teams

- ***Social cohesion, migration and welfare***

30 projects, total investment of EUR 28 million, 249 teams

- ***Employment and changes in work***

18 projects, total investment of EUR 17.5 million, 149 teams

- ***Gender, participation and quality of life***

13 projects, total investment of EUR 12.3 million, 97 teams

- ***Dynamics of knowledge, generation and use***

8 projects, total investment of EUR 6.1 million, 77 teams

- ***Education, training and new forms of learning***

14 projects, total investment of EUR 12.9 million, 105 teams

- ***Economic development and dynamics***

22 projects, total investment of EUR 15.3 million, 134 teams

- ***Governance, democracy and citizenship***

28 projects; total investment of EUR 25.5 million, 233 teams

- ***Challenges from European enlargement***

13 projects, total investment of EUR 12.8 million, 116 teams

- ***Infrastructures to build the European research area***

9 projects, total investment of EUR 15.4 million, 74 teams

This publication contains the final report of the project 'The Dynamic Approach to Europe's Unemployment Problem', whose work has primarily contributed to the area 'Employment and unemployment in Europe'.

The report contains information about the main scientific findings of DAEUP and their policy implications. The research was carried out by eight teams over a period of 42 months, starting in September 2001

The abstract and executive summary presented in this edition offer the reader an overview of the main scientific and policy conclusions, before the main body of the research provided in the other chapters of this report.

As the results of the projects financed under the Key Action become available to the scientific and policy communities, Priority 7 'Citizens and Governance in a knowledge based society' of the Sixth Framework Programme is building on the progress already made and aims at making a further contribution to the development of a European Research Area in the social sciences and the humanities.

I hope readers find the information in this publication both interesting and useful as well as clear evidence of the importance attached by the European Union to fostering research in the field of social sciences and the humanities.

J.-M. BAER,

Director

Table of contents

Preface	v
I. EXECUTIVE SUMMARY	11
II. BACKGROUND AND OBJECTIVES OF THE PROJECT	26
III. SCIENTIFIC DESCRIPTION OF PROJECT RESULTS AND METHODOLOGY	27
1. WP1: Analysis of Aggregate Unemployment Dynamics	27
1.1. Objectives	27
1.2. Methodology Used	27
1.3. Outcomes and Policy Implications	28
1.4. Other findings	30
2. WP2: Analysis of Individual Unemployment Transitions	32
2.1. Objectives	32
2.2. Methodology Used	32
2.3. Outcomes and Policy Implications	33
2.4. Other Findings	35
3. WP3: Inactivity, Unemployment and Work	35
3.1. Objectives	35
3.2. Methodology Used	36
3.3. Outcomes and Policy Recommendations	36
3.4. Other Findings	39
4. WP4: 'Flexible' Unemployment and Unemployment Dynamics: Temporary Help Agencies, Short-term Contracts	40
4.1. Objectives	40
4.2. Methodology Used	40
4.3. Outcomes and Policy Implications	40
4.4. Other Findings	43
5. WP5: Labour Market Frictions, Unemployment Exits and Wages	44
5.1. Objectives	44
5.2. Methodology Used	44
5.3. Outcomes and Policy Implications	44
6. WP6: Labour Market Frictions, Institutions and Performance	46
6.1. Objectives	46
6.2. Methodology Used	47
6.3. Outcomes and Policy Implications	47

6.4. Other Findings	52
7. WP7: International Comparisons of Unemployment Dynamics and Frictions	53
7.1. Objectives	53
7.2. Methodology Used	54
7.3. Other Findings	54
IV. CONCLUSIONS AND POLICY IMPLICATIONS	57
1. Unemployment Insurance and Assistance Systems	57
2. Active Labour Market Policies	57
3. Maximum Legal Workweek Legislation	58
4. Flexible Work Forms: Part-Time and Temporary Work	58
5. Temporary Help Agencies	58
6. Employment Protection Legislation	58
7. Target Groups: Youth and Lone Parent Unemployment	58
8. Policies to Promote Self-Employment	59
9. Shadow employment	59
V. DISSEMINATION AND EXPLOITATION OF RESULTS	60
VI REFERENCES AND BIBLIOGRAPHY	72
VII. ANNEXES	78

Abstract

In March 2000, the European Council in Lisbon set out a ten-year strategy to make the EU 'the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion'. The Lisbon Strategy aimed at promoting long-term economic growth, full employment, social cohesion, and sustainable development in a knowledge-based society. Within this broad agenda, regaining the conditions for full employment in Europe was defined as 'the key objective of economic and social policy'.¹ By improving employability, reducing skills gaps, promoting innovation and lifelong learning, increasing employment in services, and developing equal opportunities practices, the European Council aims 'to raise the employment rate from an average of 61% today to as close as possible to 70% by 2010 and to increase the number of women in employment from an average of 51% today to more than 60% by 2010'.²

In 2004, the European Council and the Commission decided to prepare a mid-term review of the Lisbon strategy. The review, carried out by a group of experts led by Former Dutch Prime Minister Wim Kok, was presented to the Spring Summit in March 2005. The report concluded 'that little progress had been made over the first five years and recommended to refocus the agenda on growth and employment. It also underlined the need for real ownership by the member states of the reforms needed'.³ Prioritisation of objectives must be substantiated by coherent action plans both at the EU and national levels, predicted on a sound understanding of Europe's growth and employment problems. Meeting strategic targets also require public support for the reform process, effectively through national political debates.

'A Dynamic Approach to Europe's Unemployment Problem' (DAEUP) involved a programme of research designed to increase our understanding of European unemployment and to assess policies to bring unemployment levels down. Its distinctive feature resided in the adoption of a dynamic approach in response to the finding that labour markets are characterised by continuous pervasive change, as well as new data sources and forms. Research had been conducted with a view to addressing key policy issues and contributing to public debate, by making findings accessible to key players and any interested parties. In its three-year lifespan, the DAEUP project investigated the following policy areas: unemployment insurance and assistance systems, active labour

¹ http://ue.eu.int/ueDocs/cms_Data/docs/pressData/en/ec/00100-r1.en0.htm.

² Ibid.

³ <http://www.euractiv.com/Article?tcmuri=tcm:29-131891-16&type=LinksDossier>.

market policies, maximum legal workweek legislation, flexible work forms, Employment Protection Legislation, minimum wage, the effects of immigration, youth and lone parent unemployment, and female participation in the labour market.

I. EXECUTIVE SUMMARY

DAEUP involved a programme of research designed to increase our understanding of Europe's unemployment problem, and to assess policies designed to bring unemployment levels down. The programme consisted of seven workpackages focussing on different aspects of unemployment. Its distinctive feature resided in the adoption of a dynamic approach, in response to the finding that labour markets are characterised by continuous pervasive change. DAEUP researchers applied and advanced the dynamic approach to the phenomenon of European unemployment through a combination of theoretical and empirical analyses. Another key feature of this project was the use of new datasets, including individual (micro-level) and aggregate (macro-level), longitudinal and cross-sectional, and panel data.

The research programme consisted of the following workpackages:

WP1: Analysis of Aggregate Unemployment Dynamics

WP2: Analysis of Individual Unemployment Transitions

WP3: Inactivity, Unemployment and Work

WP4: Flexible Employment and Unemployment Dynamics: Temporary Help Agencies, Short-term Contracts

WP5: Labour Market Frictions, Unemployment Exits and Wages

WP6: Labour Market Frictions, Institutions and Performance

WP7: International Comparisons of Unemployment Dynamics and Frictions

In **WP1**, teams constructed models emphasising the role of job search among employed and unemployed individuals, as well as in firms. These models were used to address a variety of central issues in the European unemployment problem: the effectiveness of active labour market policies, regional unemployment, alternatives to standard job protection measures, and the optimal timing of labour market reforms in relation to the business cycle.

Findings suggest that some active labour policies contribute to reducing unemployment levels, but do not seem to be as effective in increasing the employment participation rate. With respect to regional unemployment, an active industrial policy, involving - for example- targeted investment incentives, is recommended. Regional wage-setting

mechanism should also be reformed so as to reflect the local labour market. Wage imbalances could also be addressed by introducing or enforcing subsidies to promote greater capital and labour mobility.

Experience rating is a prospective alternative to standard job protection measures. It is a benefits system whereby firms are taxed in proportion to their worker separations. Studies show that experience rating reduces unemployment and the cost of unemployment benefits, while increasing a firm's production levels. Within a rigid labour market, experience rating also helps improve the labour market efficiency for low skilled workers; however, when worker and firm heterogeneity are factored in, experience rating may actually have negative effects on very low skilled workers.

The common assumption that periods of expansion or booms form the optimal timing for labour market reforms is called into question in this project. For one, a study shows that across-the-board labour market reforms are rarely implemented; rather, most reforms are designed to be 'marginal', in that they only affect the flexible tier of the market. There is also some evidence that 'marginal' reforms have taken place at the beginning of a recession when the exposure of the employed to unemployment was higher.⁴

WP2 involved a series of purely micro studies. The intention was to assess and complement aggregate analyses and to provide new insights and factual information. This workpackage also tackled the issue of the concentration of unemployment on subsets of people through long periods of unemployment and its repeated spells. Uniquely, WP2 made use of recently acquired matched worker-firm data from different countries to measure labour market transitions more accurately and to consider new perspectives.

The problem of unemployment concentration was examined in the context of youth unemployment. Research was specifically conducted on the consequence of youth unemployment on the cumulative wage experience through most of an individual's working age. Results suggest that wages recover slowly and incompletely after a substantive experience of youth unemployment, a phenomenon also known as 'scarring'. This finding has important implications for policies aimed at reducing the incidence and duration of unemployment, particularly in terms of designing interventions directed towards the youth.

One of the main objectives of WP2 was to examine labour market transitions from the perspective of the individual. This was accomplished in relation to self-employment

⁴ Saint-Paul, 2002.

transitions, active labour market policies, and the welfare and benefits system. With respect to transitions to self-employment, research has found that aggregated unemployment rates have a positive effect on the likelihood of becoming self-employed, that unemployed individuals are more likely to turn to self-employment, though the length of unemployment drastically reduces this probability, and that government policies undertaken in the UK in the 1980s successfully promoted entry into self-employment.⁵

Matched worker-firm data were used to test theoretical matching models, with the aim of defining more accurately the nature of unemployment in the UK. The study's main finding was that inasmuch as the standard random matching approach provides a reasonably good fit, the empirical evidence lends greater support to 'stock-flow' matching. The implication is that the inflow of new vacancies plays a bigger role in matching than has been determined using the standard approach. This indicates that unemployment is caused by structural factors, rather than search failures, and therefore is significant in drafting appropriate unemployment benefits.⁶

Recognising the tendency to focus on transitions between employment and unemployment, **WP3** aimed to expand our understanding of unemployment through a scientific enquiry into one of its major components: inactivity. In addition, this workpackage sought to rectify the dearth in scholarship on the dynamics of workless households, a major socio-economic issue.

Under WP3, studies were made on the 'shadow' or informal employment, workless households, lone parent households, and transitions between the states of employment, unemployment and inactivity. Studies on shadow employment show that it shares the same properties as unemployment. This means that policies most likely to succeed in reducing shadow employment are just those that may contribute to unemployment reductions. Conversely, repressing shadow employment is likely to increase unemployment, by either reducing gross job creation or closing down low productivity jobs in the shadow sector.⁷

Despite near record employment rates, the workless household rate in Britain has increased by twice as much as that found in the late-1970s, and nearly 1 in 5 children grow up in workless households. Research on workless household found that only a quarter of the increase in workless households owes to shifts to more single adult or lone

⁵ Martinez-Granado, 2002.

⁶ Coles & Petrongolo, 2003.

⁷ Boeri & Garibaldi, 2002.

parent households. It also found that the presence of a working partner forms a positive incentive to work, especially in the low wage sectors.⁸

Over the last 30 years the employment rate of married/co-habiting mothers in the UK rose dramatically. Yet the employment rate of lone mothers was lower in the early 1990s than it was in the late 1970s, at just under 40%; that is 25% points below that of married mothers. The UK is almost alone among OECD countries in having employment rates for lone mothers so far below those of other mothers. The incoming Labour government in 1997 initiated a series of policy reforms aimed at reducing child poverty, in part by increasing employment rates among lone parents. Research on the impact of these policy changes found that these have raised the employment rates of lone parents by approximately 5%. Tax credit incentives also resulted in a significant increase in the number of people working over 16 hours, though the hours worked by those already working over 16 hours appeared to have remained constant.⁹

Studies were made on the transition from unemployment to non-participation. Transitions into nonparticipation occur when the reservation wages drop below the utility of being a nonparticipant. Taking account of these transitions allows the identification of the duration dependence in the job offer arrival rate and the wage offer distribution. This is significant in the sense that each source of duration dependence in the job search process has different policy implications. Results show that during the unemployment spell the rate at which job offers arrive is relatively constant but that the wage offer distribution shifts downwards. The latter effect causes the reservation wage to decrease over the unemployment duration. We argue that this shift in the wage offer distribution is associated with loss of skills. The policy implication is that active labour market policies aimed at improving the prospects of the unemployed workers should focus on improving skills.

Work in this area has also identified that gender, having children and the region of residence are the most important factors in explaining the utility of nonparticipation. Additionally, 'years of education' is the most important covariate in both the job offer arrival rate and the wage offer distribution. And lastly, taking non-stationarity in job search into account confirms results from reduced-form studies of labour market transitions that both duration dependence and unobserved heterogeneity are relevant in explaining job search and the transition from unemployment to employment.

⁸ Gregg & Wadsworth, 2000.

⁹ Gregg & Harkness, 2003.

Studies were also made using a three-state model differentiating between employment, unemployment and inactivity. The model showed that unemployment and aggregate wages rise because some of the employed workers are 'unattached' to the labour force, i.e., they join the inactive pool when they lose their job. It was also found unemployment income has little effect on the level of employment, since it attracts people already in the labour force and merely raises the share of unattached workers. Finally, the study suggests that contrary to two-state models, taxation of market activity increases non-participation and unattachment, and adversely affects unemployment. In analysing the role of non-standard or flexible employment forms on the distribution of unemployment, **WP4** directly addressed the question of how unemployment might be reduced, as well as issues of labour market regulation, welfare benefits and active labour market policies. WP4 investigated the impact of fixed-term contracts (FTC) and temporary help agencies on employment and wages.

In France, as in most European countries, fixed-term labour contracts (FTCs) stipulate a maximum duration. At the end of the contracts, employers must either transform their FTCs into indefinite-term contracts (ITCs), or terminate the contract and pay a termination cost to the workers. In France in January 2002, the termination cost increased from 6% to 10% of the total employment value. Research investigating the outcome effect of this reform on the transformation rate to ITCs and on the employment level found that the reform has increased the incentive to transform FTCs into ITCs at the price of diminishing the level of employment. The policy was therefore only partially successful. A significant number of *dead-end* jobs have been destroyed by the reform, and they have not been fully replaced by *stepping-stone* jobs.

When both FTCs and ITCs are available, it was found – contrary to previous findings – that termination costs are greater than hiring costs for both types of contract. Results also show that it is far less costly to adjust the number of FTCs than to adjust the number of ITCs. And lastly, for both production and non-production workers, the termination cost is greater than the hiring cost, though the cost differential is greater for non-production workers than for production workers.

Conversions from FTCs and ITCs were also looked into. In particular, studies were made on the determinants and the timing of such conversions in Spain. Results show high levels of conversions around durations of one and three years, and that the timing of these promotions suggests that firms use FTCs for reasons other than covering jobs that are temporary in nature. Results also suggest that reforms implemented in 1994 and 1997 improved the prospects of target groups, namely women, the youth and the less skilled. These reforms, which restricted the applicability of general FTCs and introduced

fiscal incentives to firms, were successful at inducing firms to earlier conversions to ITCs. However, while they affected the time pattern of conversions, they were unable to raise the average conversion rate.

The Humboldt team has contributed a number of research papers on temporary agency work to WP4. These papers deal respectively with the relative contemporaneous and future earnings of temporary agency workers,¹⁰ the internal operation of temporary work agencies¹¹, the relative working conditions of temporary agency workers,¹² the stepping-stone function of temporary agency work in helping the unemployed to find regular employment,¹³ as well as the regulation and development of agency work in Germany and its importance for general labour market dynamics.¹⁴ The recent monograph by Kvasnicka summarizes and extends these papers.¹⁵

First econometric estimates of wage differentials show that a large part of the difference in wages is due to worker characteristics (including skill levels), rather than conditions offered by temporary agency work. Wage differentials also showed some measure of chronological variations, with differentials appearing to be larger for the period 1991-95 than 1980-90. It was also found that wage differentials between temporary and permanent work vary according to skill level, with a greater wage differential for employment by the low skilled. Finally, studies found that temporary work produce no negative effect on an individual's long-term earnings potential when compared to those who have never been in temporary agency employment.

In terms of relative working conditions, results indicate that temporary agency workers have, on average, kept or improved their working conditions in relation to their previous job; though permanent workers were more likely to experience improved working conditions than their counterparts in temporary agencies. Also, findings show that temporary agency workers do not perceive a higher risk of job loss, though they commonly view temporary agency placements as a 'bridge' and often leave these placements voluntarily.

Research on the future employment trajectories of agency workers in Germany has found to date no compelling evidence that agency work provides a stepping stone to regular employment for the unemployed. This is a weighty conclusion which speaks against the

¹⁰ Kvasnicka and Werwatz, 2002, 2003a/b.

¹¹ Kvasnicka, 2004a.

¹² Kvasnicka and Werwatz, 2003c.

¹³ Kvasnicka, 2004b.

¹⁴ Burda and Kvasnicka, 2005.

¹⁵ Kvasnicka, 2005.

positive view of temporary help. Because access to data is severely restricted, these results have not been tested for robustness with respect to sample or specification. In any case, unemployed workers do seem to benefit from access-to-work function of agency work. Moreover, workers, while suffering a contemporaneous wage loss in agency employment, seem to benefit in their future earnings from an employment spell in agency work. The apparent unequal distribution of the individual costs and benefits of agency work for workers over time, therefore, requires the adoption of an explicit intertemporal perspective of policies targeted at agency work that are inspired by distributional goals.

Thus, in terms of relative earnings, working conditions and career prospects, temporary agency work were found to display heterogeneity. In general, temporary agency work offers a positive value providing greater flexibility in rigid labour markets.

WP5 adopts the search and matching approach and examines its implications for wages. Specifically, this workpackage explores two hypotheses linking the nature of the labour market and wages: one is that thick markets produce higher quality matches, and the second being markets with high search frictions lead to lower wages. Separately, WP5 looks at the link between wages and unemployment from the perspective of the temporal dynamics of individuals' employment status and wage rate.

Work produced under this workpackage relate to female participation in the labour market, the effects of immigration, search frictions with respect to monopsony power and their effects in conjunction with minimum wage.

The low level of female employment in most South European countries has attracted a great deal of attention by national and European policy makers. A debate is currently devoted to finding specific policies that may raise female employment rates. While there is a large consensus on the need to raise the time spent in the market by European women, there is some confusion over how these goals should be achieved. Reducing the high tax wedge, developing part-time work and improving assistance in the job search process are often mentioned policies, but their different effects are rarely discussed in a unified way.

To analyse policies designed to increase female employment levels, the CEPR team proposed a simple and original model of labour supply in an imperfect labour market. They showed that subsidies to labour market entry increase women's participation in the labour market, but they also increase exits or drop-outs from the labour market, thereby yielding an ambiguous effect on unemployment. Furthermore, subsidies to part-time workers do increase employment, but they have ambiguous effects on the number of

hours worked and market production. Finally, they show that reductions in taxes on market activities that are highly substitutable with home production have unambiguous positive effects on market employment and production.

Research on the effect of immigration concentrated on migration inflows in the Spanish labour market. Investigation into the impact of immigration on the employment climate in Spain found that the impact of immigration on the employment opportunities of native workers is statistically insignificant. This finding holds true on separate estimation according to educational attainment and gender. Interestingly, separate estimation by region yielded large, negative elasticities. This suggests that the negative partial correlation between immigration and the employment opportunities of the native workers is a function of labour mobility, rather than immigration per se.

A separate study presented a model explaining the existence of positive effects of immigration on the employment rate and wages of natives. The theoretical model involved two countries: one poor and one rich. The model demonstrates that full migration is better than no and even partial migration. The reason is that immigration makes it possible for firms in 'rich' countries to pay lower wages on average. This boosts the domestic employment rate, and hence greater employment opportunities for natives. Immigrants naturally benefit from employment opportunities and higher wages offered in host countries. Meanwhile, the workers in sending countries benefit from a rise in wages as a result of the decrease in labour supply.

The Tinbergen team looked at search frictions with respect to monopsony power. Labour market frictions were estimated using data on job durations. Although the empirical analysis focused on France, separate analyses were also performed for the USA, the UK, Germany and the Netherlands. The team quantified monopsony power as a function of search frictions and examined the policy implications for the minimum wage, unemployment benefits and search frictions.

The results on the amount of monopsony power and the policy effect are unambiguous. For all countries, monopsony power was estimated to be lower than 5%, though in the absence of job mobility of employed workers, the monopsony power would be much higher. In conclusion, for all countries, job mobility provides much more protection against exploitation of workers than a wage floor.

The Tinbergen team also examined search frictions in conjunction with minimum wage. Specifically, it investigated the mechanism by which the interaction between the reservation wage of the unemployed and the productivity level of firms can generate multiple equilibria. The theoretical model showed how the imposition of a minimum wage

rate could raise the reservation wage, and price low-productivity firms out of the market. A minimum wage policy can thus be applied to isolate the desirable equilibrium, in which only highly productive firms exist. In this scenario, the resulting minimum wage rate may unduly appear to be irrelevant, if there is no spike in the wage offer distribution. The minimum wage could still have an impact, even if its value is less than the lowest wage offered in the market. Alternative policies to raise the reservation wage include providing more generous unemployment benefits or taxing firm profits. Ultimately, the effect on social welfare of such policies will be conditional upon the costs of pricing the low-productivity firms out of the market. These include the firms' investment expenditures and the short-run increase in unemployment.

A major component of **WP6** is an assessment of the impact of labour market institutions on the development and adoption of new technologies, and, subsequently, on growth. Also examined under this workpackage is the role of labour market institutions, including employment protection legislation, unions, wage-setting procedures and active labour market policies, on unemployment and inactivity flows. Finally, it looks at the impact of product market regulation on the labour market.

For WP6, teams investigated the maximum workweek legislation, the effect of firing costs with respect to adverse selection, the macroeconomic environment, size of firms, reform of the unemployment compensation systems, and payroll tax subsidies for low-wage workers. A substantial amount of work was also devoted on analysing the impact of technology, productivity, and trade on the European labour market.

In 1998, the French government adopted a policy requiring firms to implement a 35-hour workweek by the year 2000. The CNRS team investigated the effects of this reduction in the maximum workweek. Results show that workers who were working 40 hours per week in March 1981 were less likely to be employed in 1982 than observationally identical workers who, in 1981, were working 36 to 39 hours per week. On a separate analysis, extended to account for multi-wave treatments, results also show that workers are still employed 40 hours in 1982 lost their jobs more often than those already employed under the new standard workweek. Indeed, all results show that these job losses can be directly attributed to the reduction in the workweek. They also show that minimum wage workers are much more affected than others. The mandatory stability in monthly wages when combined with the reduction of the workweek and the minimum wage rise in 1981 meant that the most cost-effective policy was to fire workers and hire new ones whose monthly earnings were based on the actual number of hours worked. These results should help us think about the possible effects of the mandatory 35-hour

workweek which started in January 2000, especially as similar programmes are being considered in the rest of the EU.

The IDEI team looked into possible efficiency rationales for reducing the workweek as a means to alleviate unemployment, and assessed the efficiency of 'job-sharing' policies. The main findings are that first-best allocation is unattainable under laissez-faire or a legal workweek, as this requires agents to sign wage contracts that specify a wage rate for each level of demand; that, under a laissez-faire environment, the number of hours worked for each level of demand is low and thus cannot match the efficient average working time; and lastly, that if low-demand firms experience low levels of demand and/or the overtime wage rate is relatively small, then a legal workweek may actually boost employment through work sharing. Contrary to the CNRS team's findings on workweek legislation, therefore, this study suggests that a legal workweek is not harmful per se; rather, its impact on unemployment depends on the level at which it is set.

In exploring Employment Protection Legislation (EPL), research was conducted on the effects that the reduction in hiring caused by firing costs could have on different groups of workers. It is hypothesised that firms increasingly prefer hiring employed workers who are less likely to be lemons as firing costs increase. Estimates of re-employment probabilities drawn from the National Longitudinal Survey of Youth confirm this. Results indicate that unjust-dismissal provisions in US states reduce the re-employment probabilities of unemployed workers compared to employed workers. Consistent with the hypothesis, the relative effects of unjust-dismissal provisions on the unemployed are generally less for union workers and those who lost their previous jobs after completing their employment contract. While this empirical analysis applied US data, the results also have implications for the EU. As European countries have higher dismissal costs than the US, firms should discriminate even more against job seekers.¹⁶

The FRD team conducted a separate study on the employment effects of severance payments in the presence of wage rigidities. This study assessed the effects of severance payments when bonding possibilities are restricted by wage rigidities, and whether any effect would be quantitatively comparable with the well known effects of firing taxes. The study concluded that 'in the case of full wage rigidity, when the institutional constraints to wage setting is not allowed to internalise the change in the firing cost (i.e. in the short-run), are the firing tax and the pure transfer exactly equivalent. In all other cases, they differ. Surprisingly, when the institutional process leading to the wage rigidity constraint is endogenised (i.e. in the medium-run), in some cases the neutrality of the

¹⁶ Kugler & Saint-Paul, 2004.

severance payments can be restored.’ In short, stringent employment regulations could have greater negative impacts on employment in the presence of a strongly centralised bargaining process.¹⁷

WP6 also covered unemployment compensation systems. One particular study looked into the effects of different reforms of the unemployment compensation system in France, characterised by the simultaneous co-existence of unemployment insurance (UI) and unemployment assistance (UA). The study reveals that reforms of the unemployment compensation scheme do not have the same impact on employment and welfare where the system is characterised by the interplay of UI and UA.¹⁸

This has implications for policy, at least in the context of the French labour market, insofar as it shows that policies that increase unemployment benefits have some positive effect on social welfare even if financing costs are taken into account, but do not produce the same impact for different groups of workers. A surprising result is that policies aimed at softening eligibility to UI slightly lower unemployment rates. The welfare effects of different ways of softening eligibility can be quite different in terms of the impact on different groups, though there is always some improvement on expected welfare.

In work on the trade off between unemployment benefits (UB) and employment protection (EPL), the FRD team found that ‘the UB-EPL trade-off represent stable, hard to modify, politico-economic equilibria.’ This inspires a political feasibility theorem: reforms of employment protection should trade labour market feasibility with public unemployment insurance which redistributes in favour of low-skilled workers. The trade-off may become less steep with significant redistribution across skill groups embedded in the way UBs are financed. One may design a UB scheme in such a way as to pool risk across employers, but wage differentials should widen and unemployment benefits should not be strictly based on earnings in order to win public support for reforms. This allows for a more viable redistribution from high- to low-wage earners in the provision of unemployment insurance, thereby rendering EPL more readily substitutable with UBs from the point of view of voters.¹⁹

A number of studies were made on the nature of the relationship between technology, productivity growth and employment. The GRECSTA-CNRS team assessed the potential effects of institutional changes and of new technologies on job security in France. For the period 1982-2002, they found that the fall in job security would have been greater if

¹⁷ Garibaldi & Violante, 2004.

¹⁸ Ortega & Rioux, 2002.

¹⁹ Boeri, T, & JI Conde-Ruiz & G Vincenzo, 2004.

employment had not been reinforced in 1990. Similarly, worsening job security in 1980s would have been less significant if French labour laws had not become more flexible in 1986.

Even so, this study reveals that heightened risks of involuntary job loss in the long-term are not uniquely attributable to institutional changes. For one, it was observed that job security trends varied across industries. This may well be a result of technological change. 'New information technologies seem to modify the degree of substitutability between low and high-seniority workers and firms have less and less incentive to keep their workers for long periods of time.'²⁰

The same team also looked into the impact of new technologies on the demand for skills. Findings are that current technological innovations fundamentally modify the nature of the workers' tasks. By reducing the relative costs of activities that are the easiest to pre-programme and to automate, new technologies make it possible to allocate more human and material resources to non-routine activities, for example, the design and marketing of new products. And tasks that are least amenable to programming and automation more often require higher skills. '[T]his is one of the main reasons why technological advancement appears, in the end, to be biased towards high-skilled labour.'²¹ This finding has implications for the choice of government- or firm-sponsored training programmes designed to help workers adapt to firms' changing needs and contemporary technologies.

Rather than contemporary technology's bias towards high-skilled workers, research on the same subject carried out by the CEPR team found that the impact on employment depends on 'the extent to which technology is embodied in new jobs'. Using estimates for employment, wages and investment from an annual panel of the US, 12 EU countries and Japan, they find that new technology is generally good for jobs, at the aggregate level technology is overwhelmingly "disembodied", creative destruction plays no role in aggregate unemployment dynamics, and the productivity growth explains virtually all the changes in trend unemployment in the US, but only a fraction in Europe.²²

Also based on a multi-country model, the IDEI team found evidence of increasing employment-productivity trade-off over the period 1960-1997. Its research shows 'how the process of endogenous technological adoption, following the diffusion of a general purpose technology, can explain these observations by causing the emergence of an AK

²⁰ Givord, P & E Maurin, 2003.

²¹ Maurin, E & D Thesmar, 2003.

²² Pissarides, C & G Vallanti, 2003.

accumulation phase where demographic factors temporarily become a major determinant of labour productivity growth.' In particular, it was found that countries with rapid labour force growth have not been able to take advantage as quickly of the new opportunities associated with capital deepening, but that this disadvantage may now have passed.²³

Finally, WP6 examined employment in relation to trade. The GRECSTA-CNRS team analysed 'the links between trade and employment in France, taking stock of the decrease in wage inequality in this country up to 1984 and its stability afterwards.' Its findings are that imports are negatively related to employment. More specifically, imports of "finished goods", incorporating the outsourcing abroad of part of the firm's local production activities, have the strongest relationship with the decrease in total employment, as well as (unskilled) production employment. On the other hand, exports tend to be associated with job creation, although similarly, this result depends on the nature of the exported good.²⁴

The CRECSTA-CNRS team also investigated trade regulations and their impact on job creation. The aim was to establish whether product market and entry regulation affect employment growth in Europe. Using the French retail trade sector as a case study, results show that barriers to entry and high levels of concentration among large retail chains may have played an important role in the sluggish employment growth in the French retail sector over the last two or three decades. This finding is relevant for much of Europe where labour market reform is difficult to implement. It suggests that reforms in trade regulations may provide additional and more politically feasible means to promote employment growth²⁵

Central to **WP7** is the comparative use of data from many countries. Teams involved will use these data to estimate an index of search and matching frictions and the associated level of frictional unemployment for European countries. This workpackage also examines the relative roles of unemployment inflow and outflow shocks for a range of countries. Based on an international context, WP7 will examine the broader pattern of labour market flows, thereby enabling a closer examination of the inter-relationships between gross job flows, worker flows, job-to-job flows and unemployment flows.

Research under this workpackage were generally subsumed in the other workpackages, where, in many cases, work conducted adopted multi-country and comparative approaches. In addition to work already cited, the FRD team studied net employment

²³ Beaudry P, & F Collard, 2002.

²⁴ Biscourp, C & F Kramarz, 2004.

²⁵ Bertrand, M & F Kramarz, 2002.

growth across 21 OECD economies since 1980, focusing on the wide range of experiences within the EU. The initial composition of employment across sectors is relevant in a few countries, but can only partially account for cross-country differences in net employment growth. Institutions play a more important role. A policy package including low dismissal costs and low taxation is significantly associated with high net employment growth and can account for a substantial share of cross-country differences. While the Netherlands' employment miracle is largely accounted for by an increase in part-time jobs for women aged 25-49 in the services sector, in the whole sample part-time jobs largely replace full-time jobs, and temporary jobs replace permanent jobs, with small net effects on hours worked. Continental Europe did not increase employment as much as other OECD countries until the mid-1990s, but later appears to be staging a resurgence of employment growth. This resurgence is not merely cyclical, is likely related to reforms, and may well be there to stay. ²⁶

A cross-country comparison of labour market frictions was also completed under this workprogramme. Applying an unconditional inference method on aggregate job duration data for France, the USA, the UK, Germany, and the Netherlands, the Tinbergen team found the amount of monopsony power and the policy effect are unambiguous. 'For all countries we find a small amount of monopsony power. In the absence of job mobility of employed workers, the monopsony power would be much higher. In sum, in all countries, job mobility appears to provide much more protection against exploitation of workers than a wage floor. ²⁷

The CEPR team investigated European and US Labour Market Differences, in terms of the specificity of human capital investments. Work here suggests that in the US context, workers tend to invest in general human capital especially since they face little employment protection and low unemployment benefits, while the European model (generous benefits and higher duration of jobs) favours specific human capital investments. The main argument is based on a fundamental property of human capital investments: they are not independent of the aggregate state of labour markets, and, in particular, frictions and slackness of the labour market raise the returns to specific human capital investments relative to general capital investments.

Two sets of implications are then derived: on one hand, mobility costs are high in Europe and transitions between steady-states have especially strong adverse effects. Jobs endogenously last longer in Europe than in the US, but when they are destroyed, the

²⁶ Garibaldi, P & P Mauro, 2002.

²⁷ Ridder G & GJ van den Berg, 2003.

welfare loss for workers is higher. On the other hand, in the steady-state, European workers, *ceteris paribus*, are more efficient. In terms of transaction costs, the US pay on average higher search/hiring costs in the labour market, and smaller training costs, so that the welfare implications of each type of economy are *a priori* ambiguous: no model dominates the other one, and each has its own coherence, although the European one is more fragile when macroeconomic conditions change. Ultimately then, employment protection modifies the structure of human capital investments, towards specific human capital investments.²⁸

²⁸ Wasmer, E, 2003.

II. BACKGROUND AND OBJECTIVES OF THE PROJECT

The project aimed to improve our understanding of unemployment and explore policies designed to reduce it. Factors influencing European unemployment were examined at both aggregate and individual levels with the purpose of drawing out answers to a range of key theoretical problems and issues. These include those raised in the Commission's Employment Guidelines (1999), such as 'flexible' employment, labour market frictions, labour market regulation, welfare provision, taxation, active labour market policies, macroeconomic policy and innovation. Research teams also reviewed technological change and the labour market, the dynamics of which have long been neglected in the study of labour economics. As one would expect, the extent to which labour market institutions affect the adoption and diffusion of technological change has substantial implications for the growth potential of the European economy.

This project employed a dynamic approach to the analysis of European unemployment, based on the search and matching framework, a well-founded methodological approach with strong theoretical bases and sound empirical support. The project therefore also helped advance the dynamic approach by applying theoretical and empirical analyses to vital policy issues in European unemployment.

Findings were based on a wide range of empirical techniques and data sources. Datasets were available for various countries, thereby allowing for cross-national comparisons within the EU. Where aggregate data is used, comparative studies covered a wide range of countries; those using the relatively scarce matched worker-firm data, however, will accordingly cover a smaller number of countries.

Research findings were rendered relevant to European policy formation and accessible to its key players. These are presented and summarised in a CEPR Policy Paper available in hard copy and electronic versions. Resources were earmarked for an extensive dissemination programme in key European cities designed to reach and appeal to a diverse audience, including EU officials, national governments, the policy community, fellow scientists and the press.

The researchers were drawn from eight leading academic and research institutions around Europe. These were the University of Bristol (co-ordinating body), Centre for Economic Policy Research in London, Universidad Carlos III de Madrid, Fondazione Rodolfo De Benedetti in Milan, CRECSTA-CNRS in Paris, Humboldt University in Berlin, and Institut d'Economie Industrielle in Toulouse.

III. SCIENTIFIC DESCRIPTION OF PROJECT RESULTS AND METHODOLOGY

1. WP1: Analysis of Aggregate Unemployment Dynamics

1.1. Objectives

- To construct models emphasising the role of job search by the unemployed, by already employed workers and by firms. Within these models we will explore various features: the role of job search, the importance of heterogeneity among workers and firms, the role of unions in the wage-setting process, and the role of job-to-job flows. We will estimate these models using aggregate flow data, local labour market data and an explicit combination of micro and macro data.
- To use these models to address a variety of central issues in the European unemployment problem. We will re-evaluate the widely held view that European unemployment has risen because of shocks to the unemployment outflow, with implications for the appropriate focus for unemployment policy in Europe. We will assess the role of the business cycle in driving unemployment. We will model the matching process whereby workers are matched with new jobs.
- To consider the dynamic evolution of aggregate unemployment. At times unemployment changes very rapidly, at other times it exhibits persistence. A number of theories have been proposed to explain the latter but explaining both is harder. This WP proposes an analysis in which small shocks are dissipated quickly but large shocks can be highly persistent.

1.2. Methodology Used

The teams involved used data sets on labour market flow data at the aggregate level and also at local labour market level, together with large individual level surveys. They also used new techniques that explicitly combine individual and aggregate data in the same statistical procedure. This allowed the strengths of one type of data to offset the weakness of the other type.

These data were used to address the following set of questions: What are the roles of unemployment inflow and outflow shocks in generating the dynamics of unemployment? How is the correlation between the unemployment rate and average unemployment duration to be understood? Why does unemployment change rapidly at some times and exhibit persistence at others? Can an economy have more than one equilibrium level of unemployment, and can the institutional structure help resolve any indeterminacy? What

is the role of job-to-job moves in determining the equilibrium and dynamics of unemployment? Should policy attempt to encourage or discourage such mobility? How can we best incorporate heterogeneity among the unemployed workers and firms in the analysis? How important is this empirically in an explanation of unemployment? What role do unions play in influencing unemployment dynamics?

1.3. Outcomes and Policy Implications

In **WP1**, teams constructed models emphasising the role of job search among employed and unemployed individuals, as well as in firms. These models were used to address a variety of central issues in the European unemployment problem: the effectiveness of active labour market policies, regional unemployment, alternatives to standard job protection measures, and the optimal timing of labour market reforms in relation to the business cycle.

Findings suggest that some active labour policies contribute to reducing unemployment levels, but do not seem to be as effective in increasing the employment participation rate. With respect to regional unemployment, an active industrial policy, involving - for example- targeted investment incentives, is recommended. Regional wage-setting mechanism should also be reformed so as to reflect the local labour market. Wage imbalances could also be addressed by introducing or enforcing subsidies to promote greater capital and labour mobility.

Experience rating is a prospective alternative to standard job protection measures. It is a benefits system whereby firms are taxed in proportion to their worker separations. Studies show that experience rating reduces unemployment and the cost of unemployment benefits, while increasing a firm's production levels. Within a rigid labour market, experience rating also helps improve the labour market efficiency for low skilled workers; however, when worker and firm heterogeneity are factored in, experience rating may actually have negative effects on very low skilled workers.

The common assumption that periods of expansion or booms form the optimal timing for labour market reforms is called into question in this project. For one, a study shows that across-the-board labour market reforms are rarely implemented; rather, most reforms are designed to be 'marginal', in that they only affect the flexible tier of the market. There is also some evidence that 'marginal' reforms have taken place at the beginning of a recession when the exposure of the employed to unemployment was higher.

One of the aims of Work Package 1 was to examine similarities and differences in the labour market dynamics of various OECD countries. As a first step, Ronald Bachmann

collected labour market data from five OECD countries.²⁹ The goal was to analyse the evolution of labour dynamics in the different countries over an extended period of time. Therefore, countries for which only short time series are available (this concerns mainly the flow series) were not included in the sample. This is the case for countries from Northern Europe and from Eastern Europe. Therefore, the countries covered are France, Germany, Spain, the UK, and the US. As a second step, the data were analysed econometrically. On the one hand, this involved putting together a set of stylised facts concerning the level, standard deviation, and persistence of the different series. This clearly showed the importance of labour market institutions for the dynamics of unemployment flows. Average unemployment flows in the US (normalised by the labour force) are more than twice as high as the corresponding figures from the European countries analysed. A notable exception is Spain, where the introduction of fixed-term contracts has led to an enormous increase in unemployment flows. On the other hand, different vector autoregressions (VARs) were estimated. The stability of these vector-autoregressive specifications was then analysed using Chow-type break tests. This yielded different dates of structural breaks, which were compared to the timing of labour-market reforms. Here, no clear-cut results emerged. This is in all likelihood due to the fact that labour market reforms generally take some time to show effects, a topic which clearly calls for more research.

A more detailed analysis of worker flows in Germany was conducted by Ronald Bachmann using as a data source the IAB employment sample, provided by the German employment office.³⁰ These spell data make it possible to distinguish between workers in employment covered by social security, unemployment benefit recipients, and workers not covered by social security. The individual spell information is used to construct aggregate flow series over time between the three corresponding labour market states, as well as job-to-job flows, and to investigate different potential explanations for the observed evolution of the different flows over time. The analysis of direct job-to-job transitions proved to play an important role for the cyclical features of the level of unemployment and of worker flows to and from unemployment. The well-known fact that unemployment flows are both countercyclical was shown to be true for these data as well. The question asked then was what brings about higher inflows into unemployment during a recession. According to conventional wisdom, a burst in job destruction is responsible for this. However, it turned out that this mechanism only plays a minor role. The decline in direct job-to-job transitions during a recession is much more important, which means that workers who lose their jobs during a recession are not able to find a

²⁹ Bachmann, 2003.

³⁰ Bachmann, 2005b.

new one immediately. It appears therefore that job destruction is relatively flat over the cycle, while the driving factor for unemployment flows is the number of vacancies posted and hence the number of people hired. This point has also been recently made for the US economy. The advantage of the study by Bachmann is that it employs a data source that comes from administrative records and is therefore highly reliable, and that it goes back in time for nearly three decades.

As for theoretical research, Ronald Bachmann analysed the importance of the interaction of shocks to skill mismatch and labour market institutions for the difference in the labour market experience of continental Europe on the one hand and the US on the other hand (Bachmann, 2005a).³¹ The labour market institutions considered are firing costs and unemployment benefits, which are both higher in Europe than in the US. In order to do so, *ex ante* skill heterogeneity of workers and specific skill requirements by firms were introduced into an otherwise standard model of undirected search with endogenous job destruction a la Mortensen-Pissarides. Simulations of the model show that a shock to skill mismatch cannot, at plausible parameter values, explain the rise in unemployment in Europe relative to the US. This result is due to the endogeneity of job destruction which leads to longer job tenure. This points out a mechanism that has been largely ignored in the literature, namely the increased willingness of workers to hang on to a “good” job (i.e. a job with low skill mismatch) as a reaction to a negative idiosyncratic (match-specific) shock. As mismatch increases, it is more difficult for an unemployed worker to find a suitable job. Therefore, workers employed in a relatively “good” job are willing to endure wage cuts in case economic conditions worsen. This reduces inflows into unemployment and, in the simulation, reduces unemployment. Interestingly, the simulation predicts that this effect is stronger in “Europe” than in the US. This points to the role of unemployment benefits as search subsidies: in Europe, workers are more likely to leave “bad” jobs for more stable ones.

1.4. Other findings

Relationship between unemployment flow and unemployment stock. May have an effect on the focus of research and policy which has generally been on the outflow process (unemployment duration). Quantitative study produced findings that unemployment dynamics ensue from shocks to the inflow. Two contributions: it shows that the well-know correlation of unemployment and unemployment duration largely arises from a dependence of duration on the labour marker, and not vice versa. Related to this, it

³¹ Bachmann, 2005a.

shows that inflow shocks have been more important than outflow shocks in generating unemployment change.

In "*Are Monetary Policy Reaction Functions Asymmetric? The Role of Non-Linearity in the Phillips Curve*", Juan Jose Dolado et al search for asymmetries in the policy responses of five central banks to inflation and output gaps. They argue that such responses can arise when the Phillips curve underlying the derivation of the optimal policy rule is nonlinear. To test for the existence of such asymmetric features we use two empirical approaches. The first one is based on the estimation of a Euler equation which allows for the interaction between expected inflation and the output gap while the second relies on the estimation of an ordered probit model to capture the discrete nature of changes in discount rates, allowing again for the interaction term.

They find that significant evidence of nonlinearity in the policy rules of four European central banks after the 1980s, in the sense that they have tended to intervene with more virulence when inflation and output move above their target than what a linear Taylor rule would predict. However, that is not the case for the Fed, where a linear Phillips curve cannot be rejected. These contrasting results between European countries and the US can be interpreted by the fact that the convexity of the Phillips curve relies upon the existence of labour market rigidities and that those are much more severe in the former than in the latter.

In sum, the results of this paper seem to confirm the hypothesis that there are nonlinearities in the operating procedures of central banks when setting a short-term interest rate to control monetary policy. Taking them into consideration may turn out to be helpful for financial market analysis when they forecast the evolution of interest rates on the basis of the already very popular usage of Taylor rules.

In "*Unemployment Equilibrium and On-the-Job Search*", Turon and Burgess use the search and matching framework to explore the impact of employed job search on the labour market. The specific features of their model are endogenous employed job search, flows in and out of the labour force, endogenous job destruction and heterogeneous job creation. Also, job flows and workers flows do not coincide as they allow for job-to-job flows and labour force entries and exits. Employed job search is shown to have a substantial impact on unemployment dynamics but a negligible one on the level of unemployment. More on-the-job search leads to lower unemployment inflow and outflow, i.e. a more stagnant unemployment pool. With employed job search, the stock of vacancies is more cyclically sensitive, the unemployment outflow less cyclically sensitive and the unemployment inflow more cyclically sensitive than without employed job

search. With this model, the impact of a change in unemployment benefit does not only occur through the conventional decrease in the unemployment outflow rate, but also through an increase in the unemployment inflow rate. The calibrated version of this model replicates well the cyclical behaviour of job and worker flows observed in the data.

2. WP2: Analysis of Individual Unemployment Transitions

2.1. Objectives

- To undertake a series of purely micro studies in order to ensure that analysis of an aggregate economy also makes sense at the individual level. These studies focus in detail on unemployment transitions – and labour market transitions in general – from the perspective of an individual.
- To empirically tackle the issue of the concentration of unemployment on subset of people through long durations and repeated spells.
- To study the flow into unemployment, using microeconomic studies.
- To use matched worker-firm data, which has only been available relatively recently, to measure labour market transitions more accurately and to add new facts on their determinants.

2.2. Methodology Used

Researchers used data sets such as: matched worker-firm datasets from different countries; administrative datasets detailing individuals unemployment histories; and large scale surveys of individuals matched with local labour market conditions to address the following set of questions:

How important are repeat spells of unemployment? How do repeat spells and long durations interact to concentrate unemployment on a subset of the workforce? How do they interact in different regulatory environments to produce different unemployment profiles? What are the best ways to measure the distribution of the unemployment burden? What characteristics of people and local labour markets influence the probability of becoming unemployed? Why do some individuals in some circumstances move job-to-job or job-unemployment-job? How do labour market institutions influence this? What characteristics of firms give rise to large labour market flows? Do technology or personnel policies have a role to play? How do firm turnover policies interact with local labour market conditions to produce the matrix of unemployment flows?

2.3. Outcomes and Policy Implications

WP2 involved a series of purely micro studies. The intention was to assess and complement aggregate analyses and to provide new insights and factual information. This workpackage also tackled the issue of the concentration of unemployment on subsets of people through long periods of unemployment and its repeated spells. Uniquely, WP2 made use of recently acquired matched worker-firm data from different countries to measure labour market transitions more accurately and to consider new perspectives.

The problem of unemployment concentration was examined in the context of youth unemployment. Research was specifically conducted on the consequence of youth unemployment on the cumulative wage experience through most of an individual's working age. There is a plethora of empirical evidence to suggest that a spell of unemployment harms an individual's labour market outcomes. Paul Gregg and Emma Tominey contributed to these studies by examining the consequence of youth unemployment upon the cumulative wage experience up to 20 years later. In "*The Wage Scar from Youth Unemployment*," Paul Gregg and Emma Tominey find a large and significant wage penalty, even after controlling for educational achievement, region of residence, and a wealth of family and individual specific characteristics. They employ an instrumental variables technique to ensure that their results are not driven by unobserved individual heterogeneity. Their estimates are robust to the test, indicating that the relationship estimated between youth unemployment and the wage in later life is a causal relationship. Results suggest that youth unemployment imposes a sizeable wage scar upon both males and females at age 23 followed by substantial recovery over the next 10 years, but only if the individual can avoid further spells of unemployment after age 23. A modest residual scar of around 8% persists up to 20 years later even for those who have no further unemployment experience. Those with extensive youth unemployment are at higher risk of further unemployment through to age 33 and this inhibits wage recovery. However, there was no further relationship between youth unemployment and unemployment reported after age 33. The results suggest therefore that wages recover slowly and incompletely after a substantive bout of youth unemployment. Further, subsequent exposure to unemployment retards this recovery process.

Whilst the lowest exit rates from unemployment fall upon older, less educated individuals, intervention maybe better directed towards the youth, if the evidence suggests that unemployment imposes a substantial scar upon individuals, which they carry for much of their future labour market experiences. However, an econometric

problem exist whereby the fixed individual characteristics which make someone prone to unemployment as a youth, will also drive later unemployment and poor wages. Further, these characteristics may well be poorly observed in conventional databases or difficult to observe at all, such as motivation, self-confidence and expectations. Consequently, the relationship between early unemployment and later outcomes may not be causal but reflect heterogeneity. If this is the case, policy aimed at reducing the incidence or duration of unemployment will be misdirected and the vast inequalities in life chances will remain.

One of the main objectives of WP2 was to examine labour market transitions from the perspective of the individual. This was accomplished in relation to self-employment transitions, active labour market policies, and the welfare and benefits system. With respect to transitions to self-employment, in *"Self-Employment and Labour Market Transitions: A Multiple State Model"*, Maite Martinez-Granado assess the effects of changes in demographic characteristics and economic conditions to the rates of entry and exit to the labour market states of self-employment, employment and unemployment. She finds that a) aggregated unemployment rates is found to have a positive effect on the probability of becoming self-employed (push effect), b) unemployed individuals are found to be more likely to become self-employed but the duration of their unemployment drastically reduces this probability, and c) government policies undertaken during the 1980s (e.g. Enterprise Allowance Scheme (EAS), Business Start-up Scheme (BSUS)) are found to have been successful in promoting the entrance into self-employment, but not in preventing the exit from self-employment.

Matched worker-firm data were used to test theoretical matching models, with the aim of defining more accurately the nature of unemployment in the UK. The study's main finding was that inasmuch as the standard random matching approach provides a reasonably good fit, the empirical evidence lends greater support to 'stock-flow' matching. The implication is that the inflow of new vacancies plays a bigger role in matching than has been determined using the standard approach. This indicates that unemployment is caused by structural factors, rather than search failures, and therefore is significant in drafting appropriate unemployment benefits.³²

³² Coles & Petrongolo, 2003.

2.4. Other Findings

Bramoullé and Saint-Paul's "Social Networks and Labour Market Transitions" examined the role of social networks on unemployment duration, and the complementarities between social segregation and labour market flows. This work has potential implications for the analysis of technological change, insofar as technologies such as the Internet affect social ties as well as the job search process. Bramoullé and Saint-Paul study the influence of social networks on labour market transitions. They develop the first model where social ties and job status co-evolve through time. Their key assumption is that the probability of formation of a new tie is greater between two employed individuals than between an employed and an unemployed individual. They show that this assumption generates negative duration dependence of exit rates from unemployment. Their model has a number of novel testable implications. For instance, they show that a higher connectivity among unemployed individuals reduces duration dependence and that exit rates depend positively on the duration of the last job held by the unemployed worker.

3. WP3: Inactivity, Unemployment and Work

3.1. Objectives

- It is now widely recognised that official, explicit unemployment only captures part of the problem of joblessness. The state of inactivity or 'out of the labour force' is also of considerable interest and relevance. It is well known from individual level studies that transitions in and out of inactivity are an important component of unemployment dynamics, though this fact is only rarely carried over into aggregate analysis. We intend to rectify this omission and embed an analysis of inactivity flows into an aggregate model of labour market dynamics. This will involve both a theoretical framework and empirical investigation.
- We now understand that joblessness has particularly acute effects if concentrated in areas or in families. The latter is the problem of 'workless households' now acknowledged in the EU as a major socio-economic issue. While there is work measuring the number of workless households in the EU, little has been done on the dynamics of workless households. We will fill this gap.

3.2. Methodology Used

Teams involved in WP3 used data sets such as individual administrative data on actual unemployment spells, large cross-sections surveys (LFS) from different countries and longitudinal data sets and aggregate data sets to address the following set of questions: What is the impact of workers less attached to the labour market on unemployment, wages and employment creation? How do inactivity flows and unemployment flows fit together? Is there a link between the high rates of unemployment of women and young workers and their low attachment to the labour force? How do household employment status transitions link to individual job transitions? What drives household work transitions and what roles do local labour market conditions, welfare benefits and taxes play?

3.3. Outcomes and Policy Recommendations

Recognising the tendency to focus on transitions between employment and unemployment, **WP3** aimed to expand our understanding of unemployment through a scientific enquiry into one of its major components: inactivity. In addition, this workpackage sought to rectify the dearth in scholarship on the dynamics of workless households, a major socio-economic issue.

Under WP3, studies were made on the 'shadow' or informal employment, workless households, lone parent households, and transitions between the states of employment, unemployment and inactivity. In "*Shadow Activity and Unemployment in a Depressed Labour Market*", Tito Boeri and Pietro Garibaldi study the relationship between shadow employment and unemployment. They find that shadow employment shares the same properties as unemployment, and that a labour market trade-off is involved by the repression of shadow activity. This means that policies most likely to succeed in reducing shadow employment are just those that may contribute to unemployment reductions. Conversely, repressing shadow employment is likely to increase unemployment, by either reducing gross job creation or closing down low productivity jobs in the shadow sector.

Its policy implication is that total repression of the shadow sector is not a credible threat. However, governments will always find it optimal to have some positive degree of enforcement of sanctions against the informal sector in order to make sure that legal jobs exist, and hence a tax base is in place for the financing of public spending.

Despite near record employment rates, the workless household rate in Britain has increased by twice as much as that found in the late-1970s, and nearly 1 in 5 children grow up in workless households. Research on workless household found that only a

quarter of the increase in workless households owes to shifts to more single adult or lone parent households. It also found that the presence of a working partner forms a positive incentive to work, especially in the low wage sectors.

Over the last 30 years the employment rate of married/co-habiting mothers in the UK rose dramatically. Yet the employment rate of lone mothers was lower in the early 1990s than it was in the late 1970s, at just under 40%; that is 25% points below that of married mothers. The UK is almost alone among OECD countries in having employment rates for lone mothers so far below those of other mothers. The incoming Labour government in 1997 initiated a series of policy reforms aimed at reducing child poverty, in part by increasing employment rates among lone parents. Research on the impact of these policy changes found that these have raised the employment rates of lone parents by approximately 5%. Tax credit incentives also resulted in a significant increase in the number of people working over 16 hours, though the hours worked by those already working over 16 hours appeared to have remained constant.³³

Studies were made on the transition from unemployment to non-participation. Transitions into nonparticipation occur when the reservation wages drop below the utility of being a nonparticipant. Taking account of these transitions allows the identification of the duration dependence in the job offer arrival rate and the wage offer distribution. This is significant in the sense that each source of duration dependence in the job search process has different policy implications. Results show that during the unemployment spell the rate at which job offers arrive is relatively constant but that the wage offer distribution shifts downwards. The latter effect causes the reservation wage to decrease over the unemployment duration. We argue that this shift in the wage offer distribution is associated with loss of skills. The policy implication is that active labour market policies aimed at improving the prospects of the unemployed workers should focus on improving skills.

Work in this area has also identified that gender, having children and the region of residence are the most important factors in explaining the utility of nonparticipation. Additionally, 'years of education' is the most important covariate in both the job offer arrival rate and the wage offer distribution. And lastly, taking non-stationarity in job search into account confirms results from reduced-form studies of labour market transitions that both duration dependence and unobserved heterogeneity are relevant in explaining job search and the transition from unemployment to employment.

³³ Gregg & Harkness, 2003.

In "Job Search with Nonparticipation" by Paul Frijters and Bas van der Klaauw. In a non-stationary job search model we allow unemployed workers to have a permanent option to leave the labour force. Transitions into nonparticipation occur when the reservation wages drop below the utility of being nonparticipating. Taking account of these transitions allows the identification of the duration dependence in the job offer arrival rate and the wage offer distribution.

Each source of duration dependence in the job search process has different policy implications. For example, training and schooling programmes can be useful in case of low skills, extensive monitoring of search behaviour when discouragement is that main source of duration dependence, and employer subsidies for hiring long-term unemployed might be a useful policy in the presence of stigmatisation. Therefore it is important to have an indication about the underlying source of duration dependence.

They estimate the structural model with individual data from the German Socio-Economic Panel and use simulated maximum likelihood. Results show that during the unemployment spell the rate at which job offers arrive is relatively constant but that the wage offer distribution shifts downwards. The latter effect causes the reservation wage to decrease over the unemployment duration. We argue that this shift in the wage offer distribution is associated with loss of skills. The policy implication is that active labour market policies aimed at improving the prospects of the unemployed workers should focus on improving skills. Schooling and training programmes or subsidised employment are therefore expected to be more successful than, for example, counselling or monitoring. The programme should not only focus on the long-term unemployed workers as workers start losing skills already in the first year of unemployment. However, some human capital lost in the first few months of unemployment, such as social networks, might be hard to compensate for by schooling and training programmes.

The most important factors in explaining the utility of nonparticipation are gender, having children and the region of residence. Females, unemployed workers with children and individuals living in former West-Germany have a higher utility of being nonparticipating. Additionally, 'years of education' is the most important covariate in both the job offer arrival rate and the wage offer distribution. Labour market prospects definitely improve with years of education.

Finally, results indicate that both duration dependence and unobserved heterogeneity are relevant in explaining job search and the transition from unemployment to employment. This has been recognised in reduced-form studies of labour market transitions. However, most structural analyses of labour market behaviour do not account for non-stationarity

in job search. For particular groups of workers taking account of nonparticipation as an independent labour market state is important, as it changes the complete reservation wage path and the transition from unemployment to nonparticipation is endogenous and selective. This is particularly true for individuals who do not have very good labour market prospects and have a high utility of nonparticipation, for example single mothers.

3.4. Other Findings

In "*Does the Representation of Family Decision Process Matter? A Collective Model of Household Labour Supply for the Evaluation of a Personal Tax Reform in Spain*," Raquel Carrasco and Javier Ruiz-Castillo study the impact of the 1999 personal income tax reform, which involved the reduction in the number of tax brackets, the lowering of marginal tax rates, and the introduction of a large standard deduction from the tax base depending on family composition.

Evaluation of policy measures according to a unitary (where households behave as single decision making units) or collective model (household formed by several different individuals, possibly with different preferences, where decisions are arrived at results from some form of intra-household bargaining process) of the household. The first important finding of the paper is that the unitary model performs very badly on the data set constructed under the collective approach. This is partly due to the mistaken assumption that households behave as single decision makers when the data set has been constructed according to a collective model. The implication for future research is that it is justified to put more effort in making operational the collective approach.

Regarding the collective framework, the paper first evaluates the 1999 tax reform maintaining constant the behaviour predicted by the deterministic collective model. Consistently with other static exercises, it is found that the 1999 tax system leads to an increase in mean disposable incomes and a reduction of the redistributive effect on the pre-tax income distribution.

The more interesting results take into account individuals' responses to changes in the tax system. An important finding is that the female's bargaining power depends, among other variables, on the earnings potential of the members of the couple. In turn, this variable partially depends on the tax system parameters. Thus, in the collective framework any tax reform affects the spouses' labour supplies through two channels. First, through changes in the overall budget constraint, the only channel available in a unitary world. Second, through changes in the female's bargaining power, a distinctive feature of the collective approach.

When single, males and females appear to behave very similarly as far as labour supply is concerned. However, when married, these individuals change their behaviour drastically. In particular, as it is well known from many previous studies, married females in Southern European countries tend not to participate in the labour market and, generally to exert less market work effort than their husbands. In the simplified approach presented in this paper.

4. WP4: 'Flexible' Unemployment and Unemployment Dynamics: Temporary Help Agencies, Short-term Contracts

4.1. Objectives

To analyse the role of non-standard or flexible employment forms (eg short-term contracts, the use of temporary help agencies and part-time work) in influencing unemployment dynamics. It may be that such contract forms raise flexibility and reduce unemployment flows and rates, or that they exaggerate the concentration of unemployment by enabling the 'employable' to remain permanently employed and more or less permanently excluding the less employable. In the US it has been suggested that temporary help agencies have supplanted short-term unemployment as the main transition state.

4.2. Methodology Used

DAEUP teams involved used matched worker-firm panel data sets, large individual-level surveys, and aggregate data from a selection of countries to address the following questions:

What is the impact of 'flexible' employment forms on aggregate unemployment flows and rates? On individual unemployment histories? Do they act to make more or less unequal the distribution of unemployment and earnings? How do temporary help agencies influence job matching and unemployment flows and outflows? How does the full-time/part-time split of the workforce affect unemployment? What is the effect of the availability of long-term and short-term contracts on unemployment and wages?

4.3. Outcomes and Policy Implications

In analysing the role of non-standard or flexible employment forms on the distribution of unemployment, **WP4** directly addressed the question of how unemployment might be reduced, as well as issues of labour market regulation, welfare benefits and active labour market policies. WP4 investigated the impact of fixed-term contracts (FTC) and temporary help agencies on employment and wages.

Michael Kvasnicka has written a number of empirical papers on temporary agency work in Germany, that provide new insights into the internal operation of temporary work agencies, the relative contemporaneous and future earnings of agency workers, their working conditions, and their future employment chances. Burda and Kvasnicka (2005) explored the theoretical role of agency work on the labour market, surveyed the existing literature and data sources available, and provided key statistics on the development and specificities of agency work in Germany, on its contribution to general labour market dynamics, as well as on the long-term average wage trends in this sector. One of the main findings of this study is that the contribution of agency work to labour market flows is far more significant than its still marginal employment share in the economy suggests. Another important finding of this study is that average wages in the TWA industry have declined in real terms over the period 1975-1995, while agency employment has strongly expanded, a result that proved robust across different occupational and skill groups. As a matter of fact, occupations and skill groups in TWA employment experiencing the lowest wage growth over this period seem to have grown more strongly than others.

Kvasnicka produced a number of key statistics on the internal operation of one of the largest providers of temporary work services in Germany based on a new panel data set created in close cooperation with this provider.³⁴ Results showed that hirings by the provider occurred on-call, i.e. conditional on having a specific placement opportunity lined up, that fixed-term contracts have experienced rapid growth since their singular use in the industry became permissible in 1997, and that recalls were only marginally employed by the provider as a means to economize on screening costs. Regression analyses further showed that the markup of client fees of wages is smaller for both worker recalls and workers employed on a fixed-term contract. As in both cases the fixed costs per worker (recruiting and job termination costs, respectively) are lower, a smaller markup out of which the agency covers its labour costs is required. In the majority of worker assignments with clients, and for about a third of all agency workers, the agency proved to be in a position to pool and spread these fixed employment costs per worker across different client firms. In contrast to commonly held perceptions about the fragility of jobs created in the industry, the results further revealed that the majority of TWA jobs terminated in fact constituted voluntary severances from the perspective of workers. The study also documented for the first time the quantity of labour traded (client assignments per TWA worker, volume of hours performed at client firms), the operative wage and client fee schedules, as well as the agency's ability to effectively utilize its workforce through consecutive assignments with client firms.

³⁴ Kvasnicka 2004a.

Kvasnicka investigated the stepping-stone or bridging function to regular employment of temporary agency work for the unemployed.³⁵ Based on social security data of the federal employment service in Germany (IAB Regional Employment, the study applied statistical matching techniques to determine how individuals in an inflow sample into unemployment in 1994 to 1996 were affected in their future employment chances by taking up an agency job. More specifically, workers that left unemployment for a TWA job were matched to comparable unemployed workers with the same elapsed unemployment duration (the control group) to see how TWA employment (the treatment) affected their relative future monthly employment and unemployment probabilities over a period of four years. The results did not lend support to the stepping-stone function of TWA work. However, agency work neither proved to be a trap, as the future risks of unemployment of the treated also appeared unaffected by a spell in TWA employment.

Kvasnicka and Werwatz explored and quantified the relative contemporaneous and future (short-term and long-term) earnings of agency workers, based on data from the employment register of the German federal employment service (IAB Employment Sample 1975-1995).³⁶ Their fixed-effects panel regressions pointed to significantly lower wage discounts in agency work than had hitherto been thought and to no long-term relative earnings losses of workers that have held a job in this industry. The latter results proved robust across different age cohorts, as well as educational and occupational groups.

Based on the German Socio-Economic Panel (GSOEP), a representative longitudinal annual household survey, Kvasnicka and Werwatz (2003c) applied statistical matching techniques to describe and quantify differences in the working conditions of agency workers relative to otherwise comparable workers in the economy. TWA workers on average turned out to have a longer way to work, to work less often in the occupation they were trained for, and to receive less often vacation and christmas bonuses than other workers. Nevertheless, TWA workers in the majority viewed their working conditions as similar if not superior to those encountered in their last employment relationship, being on the whole but slightly less satisfied with their current job than other workers. Moreover, TWA workers did not seem to suffer from increased physical strains exposed to at work, or reduced access to on-the-job training. However, TWA workers reported more often to be subject to damaging influences to their health, and to be exposed to work-related risks of accidents. In addition, TWA workers regarded the chances of in-house future career advancement as far less likely to materialize than

³⁵ Kvasnicka 2004b.

³⁶ Kvasnicka & Werwatz, 2002, 2003a/b.

comparable workers employed in other industries, and also reported more often than other workers to search for a new job in the near future. On the whole, therefore, the working conditions and labor market prospects of TWA workers appeared far more heterogeneous than hitherto thought, bearing both risks and potential advantages.

4.4. Other Findings

“Dual employment protection legislation: a framework for analysis”, presented at the Final Conference of DAEUP, is written by J Dolado, M Jansen and JF Jimeno. Traditionally, reforms on Employment Protection Legislation (EPL) in many countries have been *partial* in the sense of affecting a specific type of contracts which, however, were available to *all* workers. A well-known example of this kind of two-tier reforms is the introduction of “atypical” contracts (fixed-term, part-time, seasonal, etc) with lower firing cost than the conventional open-ended contracts. This type of reforms have been analysed at length in the literature³⁷ (see e.g. Blanchard and Landier, 2002, and Cahuc and Postel-Vinay, 2002) and the basic lesson to be drawn from these studies is that if the differential of severance payments between both contracts is sufficiently high, the increase in workers’ turnover will be so large that equilibrium unemployment may end up raising. Much less attention, however, has been paid to the fact that, besides being partial, many of these reforms are also *targeted*. So, one can find many instances - like the 1984 reform in Italy, the 1990 reform in France, the 1997 and 2001 reforms in Spain, and quite a few cases in Latin America - where EPL establishes different provisions for different types of workers, trying to improve the labour market prospects of particular population groups (young workers, women, unskilled workers, etc.). Thus, quite often, labour market reforms only change regulations to be applied to certain population groups who face more disadvantages in the labour market. As discussed earlier, well-known examples are again the introduction of atypical employment contracts which ease firing restrictions for new entrants and are usually unavailable for hiring adult prime-age male workers, or the use of employment subsidies for hiring of workers with some specific individual characteristics.

³⁷ 1. Blanchard, O. and A. Landier (2002): “The Perverse Effects of Partial Labour Market Reforms: Fixed Duration Contracts in France”, *The Economic Journal*, 112, F214-F244. Cahuc, P., F. Postel-Vinay (2002): “Temporary jobs, Employment Protection, and Labor Market Performance”, *Labour Economics*, 9, 63-91.

5. WP5: Labour Market Frictions, Unemployment Exits and Wages

5.1. Objectives

Once we drop the assumption of perfectly competitive frictionless labour markets we need to specify the way in which workers and firms meet and agree contracts. The most popular model is the search and matching approach. This is widely used to model flows of workers into new jobs and out of unemployment. However, a less often analysed aspect of this approach are its implications for wages. In this WP we explore two hypotheses linking the nature of the labour market and wages. First, thick markets – markets with a lot of trade – should produce better quality matches. This is increasing returns in the *quality* of matches, measured in the labour markets case by higher wages. Second, and not unrelated, a market with high search frictions should lead to lower wages. We examine these both empirically and theoretically.

In a separate project, we look at the link between wages and unemployment from a different perspective – the evolution of individuals' employment status and wage rate over time. In particular we focus on the bottom end of the distribution and 'low-pay - no-pay' cycle.

5.2. Methodology Used

The relevant teams employed surveys of individuals, matched worker-firm data and an administrative longitudinal dataset to address the following issues:

Do 'thick' labour markets lead to better quality matches and higher wages? Do search frictions lead to lower wages? How do spells of unemployment and spells of low pay interrelate in an individuals' labour market history? Does a period of low pay or a period of unemployment give a better chance of escaping to a good job?

5.3. Outcomes and Policy Implications

WP5 adopts the search and matching approach and examines its implications for wages. Specifically, this workpackage explores two hypotheses linking the nature of the labour market and wages: one is that thick markets produce higher quality matches, and the second being markets with high search frictions lead to lower wages. Separately, WP5 looks at the link between wages and unemployment from the perspective of the temporal dynamics of individuals' employment status and wage rate.

Work produced under this workpackage relate to female participation in the labour market, the effects of immigration, search frictions with respect to monopsony power and their effects in conjunction with minimum wage.

The low level of female employment in most South European countries has attracted a great deal of attention by national and European policy makers. A fervid debate is currently devoted to finding specific policies that may raise female employment rates. While there is a large consensus on the need to raise the time spent in the market by European women, there is some confusion over how these goals should be achieved. Reducing the high tax wedge, developing part-time work and improving assistance in the job search process are often mentioned policies, but their different effects are rarely discussed in a unified way.

To analyse policies designed to increase female employment levels, the CEPR team proposed a simple and original model of labour supply in an imperfect labour market. They showed that subsidies to labour market entry increase women's participation in the labour market, but they also increase exits or drop-outs from the labour market, thereby yielding an ambiguous effect on unemployment. Furthermore, subsidies to part-time workers do increase employment, but they have ambiguous effects on the number of hours worked and market production. Finally, they show that reductions in taxes on market activities that are highly substitutable with home production have unambiguous positive effects on market employment and production.

Research on the effect of immigration concentrated on migration inflows in the Spanish labour market. Investigation into the impact of immigration on the employment climate in Spain found that the impact of immigration on the employment opportunities of native workers is statistically insignificant. This finding holds true on separate estimation according to educational attainment and gender. Interestingly, separate estimation by region yielded large, negative elasticities. This suggests that the negative partial correlation between immigration and the employment opportunities of the native workers is a function of labour mobility, rather than immigration per se.

A separate study presented a model explaining the existence of positive effects of immigration on the employment rate and wages of natives. The theoretical model involved two countries: one poor and one rich. The model demonstrates that full migration is better than no and even partial migration. The reason is that immigration makes it possible for firms in 'rich' countries to pay lower wages on average. This boosts the domestic employment rate, and hence greater employment opportunities for natives. Immigrants naturally benefit from employment opportunities and higher wages offered in

host countries. Meanwhile, the workers in sending countries benefit from a rise in wages as a result of the decrease in labour supply.

The Tinbergen team looked at search frictions with respect to monopsony power. Labour market frictions were estimated using data on job durations. Although the empirical analysis focused on France, separate analyses were also performed for the USA, the UK, Germany and the Netherlands. The team quantified monopsony power as a function of search frictions and examined the policy implications for the minimum wage, unemployment benefits and search frictions.

The results on the amount of monopsony power and the policy effect are unambiguous. For all countries, monopsony power was estimated to be lower than 5%, though in the absence of job mobility of employed workers, the monopsony power would be much higher. In conclusion, for all countries, job mobility provides much more protection against exploitation of workers than a wage floor.

The Tinbergen team also examined search frictions in conjunction with minimum wage. Specifically, it investigated the mechanism by which the interaction between the reservation wage of the unemployed and the productivity level of firms can generate multiple equilibria. The theoretical model showed how the imposition of a minimum wage rate could raise the reservation wage, and price low-productivity firms out of the market. A minimum wage policy can thus be applied to isolate the desirable equilibrium, in which only highly productive firms exist. In this scenario, the resulting minimum wage rate may unduly appear to be irrelevant, if there is no spike in the wage offer distribution. The minimum wage could still have an impact, even if its value is less than the lowest wage offered in the market. Alternative policies to raise the reservation wage include providing more generous unemployment benefits or taxing firm profits. Ultimately, the effect on social welfare of such policies will be conditional upon the costs of pricing the low-productivity firms out of the market. These include the firms' investment expenditures and the short-run increase in unemployment.

6. WP6: Labour Market Frictions, Institutions and Performance

6.1. Objectives

There is substantial literature relating the nature of labour market institutions to the level of unemployment. The aim of this literature is to discover whether any of the institutional structures of the EU are responsible for the higher unemployment than in the US. In this workpackage we take this literature forward in a number of ways.

A major part of our work under this heading is an examination of the impact of labour market institutions on the development and adoption of new technologies, and on growth. This is a relatively neglected aspect of technology diffusion and should pay large dividends in understanding the growth process. We also examine the role of labour market institutions in influencing unemployment flows and inactivity flows. This includes the role of employment protection legislation, unions, wage-setting procedures and active labour market policies. Finally, we look at the effect of product market regulation on employment flows.

6.2. Methodology Used

For WP6, researchers used aggregate data across a set of countries within Europe and further a field together with matched worker-firm datasets to address the following questions:

To what extent are labour market regulations a barrier to the adoption of new technologies? To what extent will new information technologies transform organisational structure, industrial relations and labour market dynamics? Should labour market regulation be coordinated at European level? Does labour market flexibility involve a trade-off between job creation and trading - is it harmful for growth? What role does employment protection and wage determination play in search models, and how do unions fit in? How effective are labour market policies? What is the impact of product market regulation on employment?

6.3. Outcomes and Policy Implications

A major component of **WP6** is an assessment of the impact of labour market institutions on the development and adoption of new technologies, and, subsequently, on growth. Also examined under this workpackage is the role of labour market institutions, including employment protection legislation, unions, wage-setting procedures and active labour market policies, on unemployment and inactivity flows. Finally, it looks at the impact of product market regulation on the labour market.

For WP6, teams investigated the maximum workweek legislation, the effect of firing costs with respect to adverse selection, the macroeconomic environment, size of firms, reform of the unemployment compensation systems, and payroll tax subsidies for low-wage workers. A substantial amount of work was also devoted on analysing the impact of technology, productivity, and trade on the European labour market.

In 1998 the French government adopted a policy requiring firms to implement a 35-hour workweek by the year 2000. In "*Employed 40 Hours or Not Employed 39: Lessons from*

the 1982 Mandatory Reduction of the Workweek," Crépon and Kramarz investigate the effects of this reduction in the maximum workweek. They evaluate the effect of the workweek reduction on employment to non-employment transitions using two different approaches, based on two natural experiments associated with the 1982 hours reduction. In the first one, they compare workers who worked 36 to 39 hours before 1982 with workers who worked exactly 40 hours. In the second experiment, they take advantage of specific features of the implementation process of the reduction. Their results show that workers who were working 40 hours per week in March 1981 were less likely to be employed in 1982 than observationally identical workers who, in 1981, were working 36 to 39 hours per week. This first analysis also uses differences in different techniques by comparing transitions from 1981 to 1982, after implementation of the decree with those prevailing between 1978 and 1981, before the election of Mitterrand. Our second analysis, in which evaluation techniques are extended to account for multi-wave treatments, also demonstrates that workers are still employed 40 hours in 1982 lost their jobs more often than those already employed under the new standard workweek. Indeed, all our results show that these job losses can be directly attributed to the reduction in the workweek. In our first analysis, the effects are significant and vary between 2.4% and 4% according to the technique considered. In our second analysis, the effects are also quite significant and we estimate a lower bound for the induced additional job losses at 4.1;p%. Furthermore, we show that minimum wage workers are much more affected than others. This is fully consistent with their theoretical model predictions, since wage rigidity has been most binding for the low-wage workers, more particularly after the 5% minimum wage increase of July 1981. Hence, this wage rigidity should have generated simultaneous job destruction and creation. In addition, our results show, also in conformity with the model, that better compensated workers were less directly affected by the reduction of the workweek.

These results should help us understand the possible effects of the mandatory reduction of hours in France, where the maximum weekly working hours declined from 39 to 35 hours beginning January 2000. Similar programmes are envisaged in other European countries, which hope that hours reductions will be an efficient policy for reducing unemployment.

The IDEI team looked into possible efficiency rationales for reducing the workweek as a means to alleviate unemployment, and assessed the efficiency of 'job-sharing' policies. The main findings are that first-best allocation is unattainable under laissez-faire or a legal workweek, as this requires agents to sign wage contracts that specify a wage rate for each level of demand; that, under a laissez-faire environment, the number of hours worked for each level of demand is low and thus cannot match the efficient average

working time; and lastly, that if low-demand firms experience low levels of demand and/or the overtime wage rate is relatively small, then a legal workweek may actually boost employment through work sharing. Contrary to the CNRS team's findings on workweek legislation, therefore, this study suggests that a legal workweek is not harmful per se; rather, its impact on unemployment depends on the level at which it is set.

In exploring Employment Protection Legislation (EPL), research was conducted on the effects that the reduction in hiring caused by firing costs could have on different groups of workers. It is hypothesised that firms increasingly prefer hiring employed workers who are less likely to be lemons as firing costs increase. Estimates of re-employment probabilities drawn from the National Longitudinal Survey of Youth confirm this. Results indicate that unjust-dismissal provisions in US states reduce the re-employment probabilities of unemployed workers compared to employed workers. Consistent with the hypothesis, the relative effects of unjust-dismissal provisions on the unemployed are generally less for union workers and those who lost their previous jobs after completing their employment contract. While this empirical analysis applied US data, the results also have implications for the EU. As European countries have higher dismissal costs than the US, firms should discriminate even more against job seekers.³⁸

The FRD team conducted a separate study on the employment effects of severance payments in the presence of wage rigidities. This study assessed the effects of severance payments when bonding possibilities are restricted by wage rigidities, and whether any effect would be quantitatively comparable with the well known effects of firing taxes. The study concluded that 'in the case of full wage rigidity, when the institutional constraints to wage setting is not allowed to internalise the change in the firing cost (i.e. in the short-run), are the firing tax and the pure transfer exactly equivalent. In all other cases, they differ. Surprisingly, when the institutional process leading to the wage rigidity constraint is endogenised (i.e. in the medium-run), in some cases the neutrality of the severance payments can be restored.' In short, stringent employment regulations could have greater negative impacts on employment in the presence of a strongly centralised bargaining process.³⁹

WP6 also covered unemployment compensation systems. One particular study looked into the effects of different reforms of the unemployment compensation system in France, characterised by the simultaneous co-existence of unemployment insurance (UI) and unemployment assistance (UA). The study reveals that reforms of the

³⁸ Kugler & Saint-Paul, 2004.

³⁹ Garibaldi & Violante, 2004.

unemployment compensation scheme do not have the same impact on employment and welfare where the system is characterised by the interplay of UI and UA.⁴⁰

This has implications for policy, at least in the context of the French labour market, insofar as it shows that policies that increase unemployment benefits have some positive effect on social welfare even if financing costs are taken into account, but do not produce the same impact for different groups of workers. A surprising result is that policies aimed at softening eligibility to UI slightly lower unemployment rates. The welfare effects of different ways of softening eligibility can be quite different in terms of the impact on different groups, though there is always some improvement on expected welfare.

In work on the trade off between unemployment benefits (UB) and employment protection (EPL), the FRD team found that 'the UB-EPL trade-off represent stable, hard to modify, politico-economic equilibria.' This inspires a political feasibility theorem: reforms of employment protection should trade labour market feasibility with public unemployment insurance which redistributes in favour of low-skilled workers. The trade-off may become less steep with significant redistribution across skill groups embedded in the way UBs are financed. One may design a UB scheme in such a way as to pool risk across employers, but wage differentials should widen and unemployment benefits should not be strictly based on earnings in order to win public support for reforms. This allows for a more viable redistribution from high- to low-wage earners in the provision of unemployment insurance, thereby rendering EPL more readily substitutable with UBs from the point of view of voters.⁴¹

A number of studies were made on the nature of the relationship between technology, productivity growth and employment. The GRECSTA-CNRS team assessed the potential effects of institutional changes and of new technologies on job security in France. In "*Changes in Job Security and their Causes: An Empirical Analysis for France 1982-2002*", by Pauline Givord and Eric Maurin analyse the changes in the risks of involuntary job loss in France between 1982 and 2000. They separate the effects of institutional changes from the effects of new technologies. Their findings confirm that labour market institutions matter: the decline in job security observed during the last two decades would have been more significant if employment protection had not been reinforced in 1990. Symmetrically, the decline in job security observed during the 80s would have been less significant if French labour laws had not become more flexible in 1986.

⁴⁰ Ortega & Rioux, 2002.

⁴¹ Boeri, T, & JI Conde-Ruiz & G Vincenzo, 2004.

At the same time, their analysis reveals that institutional changes alone cannot account for the long-term decline in job security observed in France. In part, the changes in labour laws that took place in France cannot account for the decline in job security trends across industries. In contrast, technological change seems to be a good candidate for explaining these facts. New information technologies seem to modify the degree of substitutability between low and high-seniority workers and firms have less and less incentive to keep their workers for long periods of time.

Even so, this study reveals that heightened risks of involuntary job loss in the long-term are not uniquely attributable to institutional changes. For one, it was observed that job security trends varied across industries. This may well be a result of technological change. 'New information technologies seem to modify the degree of substitutability between low and high-seniority workers and firms have less and less incentive to keep their workers for long periods of time.'⁴²

The same team also looked into the impact of new technologies on the demand for skills. Findings are that current technological innovations fundamentally modify the nature of the workers' tasks. By reducing the relative costs of activities that are the easiest to pre-programme and to automate, new technologies make it possible to allocate more human and material resources to non-routine activities, for example, the design and marketing of new products. And tasks that are least amenable to programming and automation more often require higher skills. '[T]his is one of the main reasons why technological advancement appears, in the end, to be biased towards high-skilled labour.'⁴³ This finding has implications for the choice of government- or firm-sponsored training programmes designed to help workers adapt to firms' changing needs and contemporary technologies.

Rather than contemporary technology's bias towards high-skilled workers, research on the same subject carried out by the CEPR team found that the impact on employment depends on 'the extent to which technology is embodied in new jobs'. Using estimates for employment, wages and investment from an annual panel of the US, 12 EU countries and Japan, they find that new technology is generally good for jobs, at the aggregate level technology is overwhelmingly "disembodied", creative destruction plays no role in aggregate unemployment dynamics, and the productivity growth explains virtually all the changes in trend unemployment in the US, but only a fraction in Europe.⁴⁴

⁴² Givord, P & E Maurin, 2003.

⁴³ Maurin, E & D Thesmar, 2003.

⁴⁴ Pissarides, C & G Vallanti, 2003.

Also based on a multi-country model, the IDEI team found evidence of increasing employment-productivity trade-off over the period 1960-1997. Its research shows 'how the process of endogenous technological adoption, following the diffusion of a general purpose technology, can explain these observations by causing the emergence of an AK accumulation phase where demographic factors temporarily become a major determinant of labour productivity growth.' In particular, it was found that countries with rapid labour force growth have not been able to take advantage as quickly of the new opportunities associated with capital deepening, but that this disadvantage may now have passed.⁴⁵

Finally, WP6 examined employment in relation to trade. The GRECSTA-CNRS team analysed 'the links between trade and employment in France, taking stock of the decrease in wage inequality in this country up to 1984 and its stability afterwards.' Its findings are that imports are negatively related to employment. More specifically, imports of "finished goods", incorporating the outsourcing abroad of part of the firm's local production activities, have the strongest relationship with the decrease in total employment, as well as (unskilled) production employment. On the other hand, exports tend to be associated with job creation, although similarly, this result depends on the nature of the exported good.⁴⁶

The CRECSTA-CNRS team also investigated trade regulations and their impact on job creation. The aim was to establish whether product market and entry regulation affect employment growth in Europe. Using the French retail trade sector as a case study, results show that barriers to entry and high levels of concentration among large retail chains may have played an important role in the sluggish employment growth in the French retail sector over the last two or three decades. This finding is relevant for much of Europe where labour market reform is difficult to implement. It suggests that reforms in trade regulations may provide additional and more politically feasible means to promote employment growth.⁴⁷

6.4. Other Findings

In '*Drawing Lessons from the Boom of Temporary Jobs in Spain*', Juan Dolado examined the available Spanish evidence regarding the consequences of a dual labour market - in which one-third of employees are under very flexible employment contracts with low severance payments and two-thirds are under permanent employment contracts with very high employment protection - and the lessons which can be drawn by other

⁴⁵ Beaudry P, & F Collard, 2002.

⁴⁶ Biscourp, C & F Kramarz, 2004.

⁴⁷ Bertrand, M & F Kramarz, 2002.

countries. Second, he addressed the puzzle of why temporary employment in Spain has remained so high, despite recent labour market reforms which have reduced firing costs under the permanent contract and restricted the use of temporary contracts.

Based on this review of the Spanish experience, it cannot be taken for granted that liberalisation of temporary contracts improves the workings of the labour market. Together with the plausible benefits of higher 'flexibility', there may be perverse effects on both efficiency and equity grounds. In principle, the most evident effects of the surge of temporary employment are higher worker and job turnover rates, and lower unemployment duration. As regards the unemployment rate, the evidence is more mixed. On the one hand, there have been some unexpected negative consequences stemming from the existence of a segmented/dual labour market, such as lower investment in human capital, higher wage pressure, lower labour mobility and larger wage dispersion. In fact, a symptom of the mixed blessings of temporary employment is the policy reversal regarding EPL reform, which has been taking place in Spain since the mid-1990s. Since then, the main goal of labour market reform has been to reduce the proportion of temporary employment into permanent contracts and the conversion of temporary employment into permanent by means of Social Security contribution rebates.

7. WP7: International Comparisons of Unemployment Dynamics and Frictions

7.1. Objectives

One of the success stories of modern analysis of labour markets has been the comparative use of data from many countries. This approach is central to this WP, in which we will analyse other industrialised countries, principally the USA.

Many analysts now reject the frictionless competitive model of labour markets in favour of a model with search and matching frictions. These frictions directly impinge on unemployment and employee's monopsony power over wages. We will estimate an index of the frictions for European countries and the associated levels of frictional unemployment.

We will also look at unemployment flows directly. We will examine for a range of countries the relative roles of unemployment inflow and outflow shocks in generating the observed changes in unemployment. This analysis will identify any commonalities of experience in European labour markets and isolate any differences. These results can be correlated with other features of the labour markets.

Finally we will examine in international context the broader pattern of labour market flows. Unemployment flows are best understood within the matrix of all the labour

market flows. Importantly, we can study these using both aggregate flows data and, for a subset of countries, firm-level matched worker-firm data. This will allow us to explore the inter-relationships between gross job flows, worker-flows, job-to-job flows and unemployment flows. We will thus derive a much richer picture of the dynamic forces shaping the changes in unemployment across European countries.

7.2. Methodology Used

This WP required the use of data from a variety of countries. Care was taken to ensure maximum possible comparability of the data. Teams involved used estimates of aggregate labour market flows and individual level matched worker-firm data in order to address the following questions:

Is the relative importance of unemployment inflow and outflow shocks the same across European countries? If not, what causes the differences? And how does this compare to the US? Do the differences between worker flows in the US and Europe contribute to an understanding of European unemployment? Why do the differences arise? How does the behaviour of firms figure in generating any such differences? In which countries are search frictions most important, and why? How do search frictions relate to estimates of structural and frictional unemployment?

Central to **WP7** is the comparative use of data from many countries. Teams involved will use these data to estimate an index of search and matching frictions and the associated level of frictional unemployment for European countries. This workpackage also examines the relative roles of unemployment inflow and outflow shocks for a range of countries. Based on an international context, WP7 will examine the broader pattern of labour market flows, thereby enabling a closer examination of the inter-relationships between gross job flows, worker flows, job-to-job flows and unemployment flows.

Research under this workpackage were generally subsumed in the other workpackages, where, in many cases, work conducted adopted multi-country and comparative approaches.

7.3. Other Findings

In "Anatomy of Employment Growth", Garibaldi and Mauro study net employment growth across 21 OECD economies since 1980, focusing on the wide range of experiences within the European Union. The initial composition of employment across sectors is relevant in a few countries, but can only partially account for cross-country differences in net employment growth. Institutions play a more important role. A policy package including low dismissal costs and low taxation is significantly associated with high net employment

growth and can account for a substantial share of cross-country differences. While the Netherlands' employment miracle is largely accounted for by an increase in part-time jobs for women aged 25-49 in the services sector, we find that in the whole sample part-time jobs largely replace full-time jobs, and temporary jobs replace permanent jobs, with small net effects on hours worked. Continental Europe did not increase employment as much as other OECD countries until the mid-1990s, but later appears to be staging a resurgence of employment growth. We argue that this resurgence is not merely cyclical, is likely related to reforms, and may well be there to stay.

In "Les Carrières Salariales en France et aux Etats-Unis," Nouveau compared the French and US labour markets in terms of the rate of wage increase during a worker's career, disentangling a tenure effect from a quality of job appraisal effect. Traditional methods of estimation are widely considered to be biased. The idea of the paper was to use a measure of the difference of bias between two econometrics methods (an ordinary least square regression, and Topel's two-step method in order to understand the determinants of labour mobility, using the fact that this bias is theoretically sensitive to the relative importance of two kinds of mobility: 'voluntary' and 'involuntary'). Consistent with former results, a conclusion of the paper is that most labour mobility is involuntary, in the US as well as in Europe. Another result, consistent with the literature, is that tenure does not seem to have a significantly more important effect on wages in France than in the US, which interestingly contradicts the mainstream idea of firm-specific human capital accumulation.

Cyril Nouveau also investigated the regional dimension. Looking at the sectoral composition of local economies, he found that the high unemployment regions in France would be regions of small enterprises, with high rates of turnover. It is concluded, as expected in the earlier report, that only a small part of regional differences in turnover and employment rates are related to industrial structure.

Wasmer's "Interpreting European and US Labour Market Differences: The Specificity of Human Capital Investments" suggests that in the US context, workers tend to invest in general human capital especially since they face little employment protection and low unemployment benefits, while the European model (generous benefits and higher duration of jobs) favours specific human capital investments.

The main argument is based on a fundamental property of human capital investments: they are not independent of the aggregate state of labour markets, and, in particular, frictions and slackness of the labour market raise the returns to specific human capital investments relative to general capital investments.

Two sets of implications are then derived: on one hand, mobility costs are high in Europe and transitions between steady-states have especially strong adverse effects. Jobs endogenously last longer in Europe than in the US, but when they are destroyed, the welfare loss for workers is higher. On the other hand, in the steady-state, European workers, *ceteris paribus*, are more efficient. In terms of transaction costs, the US pay on average higher search/hiring costs in the labour market, and smaller training costs, so that the welfare implications of each type of economy are *a priori* ambiguous: no model dominates the other one, and each has its own coherence, although the European one is more fragile when macroeconomic conditions change. Hence, employment protection modifies the structure of human capital investments, towards specific human capital investments.

In "Measuring Labour Market Frictions: A Cross-Country Comparison," Ridder and van den Berg define and estimate measures of labour market frictions using data on job durations. We compare different estimation methods and different types of data. We propose and apply an unconditional inference method that can be applied to aggregate duration data. It does not require wage data, it is invariant to the way in which wages are determined, and it allows workers to care about other job characteristics. The empirical analysis focuses on France, but we perform separate analyses for the USA, the UK, Germany and the Netherlands. We quantify the monopsony power due to search frictions and we examine the policy effects of the minimum wage, unemployment benefits and search frictions.

The results on the amount of monopsony power and the policy effect are unambiguous. For all countries we find a small amount of monopsony power. In the absence of job mobility of employed workers, the monopsony power would be much higher. They conclude, that in all countries, job mobility provides much more protection against exploitation of workers than a wage floor.

IV. CONCLUSIONS AND POLICY IMPLICATIONS

Work conducted on different aspects of European unemployment and policy recommendations that followed represent a key step in addressing the Lisbon agenda on member countries. EU members are expected to reach employment rate equal to 70% of the working age population by the year 2010. Such goals can be reached only by enlarging employment pool over and beyond the labour force. It is thus vital to understand labour and employment issues, particularly institutions that impact on employment growth. *A Dynamic Approach to Europe's Unemployment Problem* is a research project designed to increase our understanding of unemployment and to assess policies to bring unemployment down. The project was truly European in scope, with research being carried out by teams from eight leading academic institutions around Europe. The teams greatly benefited from the annual DAEUP workshops, bilateral visits and other events, and from close research collaboration that was generated throughout the duration of the project.

In its three-year lifespan, the DAEUP project has investigated the following policy areas: unemployment insurance and assistance systems, active labour market policies, maximum legal workweek legislation, flexible work forms, Employment Protection Legislation, minimum wage, the effects of immigration, youth and lone parent unemployment, and female participation in the labour market. Policy recommendations are summarised below:

1. Unemployment Insurance and Assistance Systems

Studies concluded that policies which raise unemployment benefits have negative employment effects but the size of the impact is small. A number of studies argue that punitive sanctions, such benefit cuts, have substantially reduced unemployment durations, especially for former high-wage workers.

2. Active Labour Market Policies

A number of studies concluded that training programmes are successful at reducing the unemployment rate. Positive results were also found for public employment services, but expenditure on subsidised jobs was found to be unproductive in terms of labour market outcomes. The finding of locking-in effects means that subsidised employment is most effective at reducing unemployment durations when limited to a short-term.

3. Maximum Legal Workweek Legislation

Evidence shows that the 1982 reduction in the maximum workweek in France had negative effects on employment, especially for minimum wage workers.

4. Flexible Work Forms: Part-Time and Temporary Work

By increasing the termination cost of fixed-term contracts (FTCs), the French government hoped to increase the incentive for firms to transform temporary contracts into permanent ones. Results suggest that this policy was only partially successful. FTCs are very important in allowing firms to respond to short-term productivity fluctuations. Targeting subsidies have been effective at enhancing the prospects of permanent employment for target groups

5. Temporary Help Agencies

The evidence from one study argues that the long-term earnings potential of temps is not harmed, and in some cases is helped, by a period of temporary agency work. Temps more frequently state that they are exposed to harmful environmental factors, nervous strain and risk of accident, but on average they regard their new job as better or equal to their previous job. It appears that temporary work is viewed more as a 'bridge' rather than as a secure job, with temporary workers more likely to look for new jobs/occupations.

Another paper did not find empirical evidence in favour of a stepping-stone function to regular employment; rather, agency work provides a short-term 'access-to-work' function for the unemployed.

6. Employment Protection Legislation

The findings speak in favour of an experience rating system, suggesting that such a system could reduce unemployment and increase efficiency. Another study argues that reform of firing costs requires greater coordination at a European level, in order to overcome EMU regulations on monetary and fiscal policy. Firing costs based upon size act as a disincentive to growth for firms close to a threshold.

7. Target Groups: Youth and Lone Parent Unemployment

Findings argue that UK reforms begun in 1998 were successful at increasing the employment, hours of work, and earnings of lone parents. Evidence on the 'scarring' effect of youth unemployment on future wages suggests intervention to reduce the

exposure of young adults to substantive periods of unemployment. This measure should not only lower unemployment, but also reduce inequality.

8. Policies to Promote Self-Employment

The evidence on transitions to self-employment from two different papers suggest that bad economic conditions and a disadvantaged position in the labour market 'push' individuals toward self-employment. This effect is far stronger for unemployed rather than employed individuals. Policies that promote part-time employment and child-care facilities should help increase female participation in the labour market.

9. Shadow employment

An investigation into shadow employment suggests in order to reduce shadow employment, it is necessary to reduce unemployment. Therefore any policy that fosters job creation and enhances productivity will induce a reduction in shadow employment.

V. DISSEMINATION AND EXPLOITATION OF RESULTS

Bristol

The DAEUP researchers at Bristol benefited from strong links with policy makers. Paul Gregg, for example, is Special Advisor to the Chancellor of the Exchequer. He has submitted reports on worklessness to the OECD and national governments. Burgess, Gregg and Turon made numerous seminar and conference presentations of their research under this project.

CEPR

The CEPR Discussion Paper Series has been an excellent outlet for the exchange and dissemination of research findings. Papers appearing in this series command a much wider readership than university working paper series, and are available to everyone in print and electronic formats. Key results in each CEPR discussion paper were also reported in the quarterly CEPR Bulletin, which was circulated to members of the academic and policy communities. CEPR organised four events across key European cities (Madrid, London, Brussels, and Berlin) to disseminate the key findings of the DAEUP project. A report summing up the project's research output and policy implications was one of the projects deliverables. This was completed in February 2005 and has been published as a CEPR Policy Paper which is available in electronic and print format (CEPR Policy paper 11)

Stephane Carcillo joined the French Ministry of the Economy and Finance (Forecasting Directorate) as an Economist in charge of labour market reforms. As such, he has been directly in line with the needs and issues raised by government officials on employment policy.

FRD

The various members of the team had contacts at very high level (in particular, through the Italian Treasury Minister) and to whom research findings were presented. Some of the research undertaken by the FRD team will be used in the evaluation of EPL reform in Italy.

GRECTSA-CNRS

The various members of the team had regular contact at very high levels (in particular, through the Council of Economic Advisors, CAE) and have presented their research to decision-makers.

Humboldt

The research on temporary agency work carried out at Humboldt University Berlin provided ample opportunities for the dissemination of results obtained under the DAEUP project, as reforms of temporary agency work have been central to recent policy initiatives of the German government to tackle unemployment. Michael C. Burda and Michael Kvasnicka organized a large-scale and well-received two-day DAEUP dissemination meeting on agency work in January 2005 in collaboration with the CEPR, the British Embassy in Berlin, and Randstad Germany, one of the leading providers of temporary work agency services in Europe. The meeting attracted more than sixty participants and hosted about twenty presenters, including leading international researchers on agency work from Europe and the US, policy makers, and representatives from the business community.

Michael C. Burda gave a talk in 2003 on the 'Adecco Symposium on Labour Flexibility, Economic Growth and Social Progress' at the London Business School on 'Temporary Help Agency: The bizarre case of Germany', as well as on 'Temporary Employment in Germany: Trends and Prospects' on the Berlin Lunchtime Meeting, organized by the German Institute for Economic Research (DIW), the Institute for the Study of Labor (IZA), and the CEPR.

Michael Kvasnicka's research on temporary agency work, in particular its studies on the relative current and future earnings of agency workers, and on the working conditions of agency workers, has received wide coverage in the German national print media against the background of the federal government's recent labour market reform in which the deregulation of the TWA industry ranked prominently. This led to a reprint of some of his work in the Federal Labour Gazette of the German Ministry of Economics and Labour⁴⁸ and to an invitation in 2003 of the Ministry of Economics of Lower Saxony to present his research at a congress on TWA work. Michael Kvasnicka also gave an invited presentation at a workshop on temporary employment in Europe organized by the General Directorate Employment and Social Affairs of the European Commission in 2004. Moreover, his research has been reviewed in the information bulletins/publications of a number of institutions, among others, the European Agency for Safety and Health at Work, the German Federal Government, the German Federation of Trade Unions, the Association of German Chambers of Industry and Commerce, and various employers organizations and providers of TWA services on the German TWA submarket.

⁴⁸ Kvasnicka, 2003a.

Bachmann has already started joint research with Burgess and Turon from the University of Bristol. This research activity exploits the methods developed and the results obtained during the lifetime of the project and will continue after the completion of the DAEUP project.

Burda and Kvasnicka are continuing their research on temporary agency work in the context of a new project funded by the German Science Foundation. They are also part of an interdisciplinary team of researchers commissioned by the German Federal Ministry of Economics and Labour to evaluate the recent reforms of temporary agency work in Germany. Both of these projects build on and extend the research on the remuneration and the future employment chances of agency workers conducted under the DAEUP project. Multiple contacts to providers of temporary work agency services established during the last years will be exploited for cooperative research projects, promising new valuable data for further analyses of the workforce management and recruiting behaviour of temporary work agencies.

Conference presentations

Pietro Garibaldi:

CEPR workshop at Bristol University, "Unemployment Dynamics in Europe," 15-18 March.

International meeting on research institutions, OECD, 25 June.

OECD meeting at the European Central Bank, "What Hinder Labour Adjustment in Europe?", 28 June.

Presentation at the Villa Petra at the della Society for Economic Dynamics, Florence, 1-4 July.

Tilburg University (Olanda), presented "Employment Protection Legislation and the Size of Firms".

DAEUP network conference organised by Humboldt University, presented "Employment Protection Legislation and the Size of Firms", 21 March, Berlin.

ISAE (Istituto Analisi Economica), presented "Employment Protection Legislation and the Size of Firms", 17 June, Rome.

Discussed unemployment policy in a panel in which Maurizio Sacconi, Undersecretary of Welfare was also a member, Rome, 19 June.

European Central Bank, participated in the workshop "What Determines the Patterns of Labour Supply in Europe?", 22 June.

2002 'Equilibrium Search Unemployment, Labour Market Flows and Home Production', presented at ECARES-ULB, Bank of Italy (Ente Einaudi), Humboldt Universität, Lausanne (DEEP-HEC), Geneva (IUHEI), Séminaire Fouregeaud, Paris, CEMFI (CEPR Workshop on Unemployment, Redistribution and Inequality), the London School of Economics, the CEPR European Summer Symposium in Labour Economics (ESSLE) the European Economics Association Meeting, Venice and the European Meeting of the Economic Society, Venice.

'Raising Female Employment: Reflections and Policy Tools', paper prepared for the EEA meeting, Stockholm 2003.

Tito Boeri:

2004

Il lavoro degli extra, March 18.

Cos'è cambiato nel mercato del lavoro italiano?, Schio, March 25.

La globalizzazione: problemi e opportunità, Circolo Rossetti di Milano, March 27.

Dynamics and inertia in the Italian labour market, Venice, 16-17 April.

The growing costs of an ageing society: public and private roles in developing a sustainable system, Venice, 23-24 April.

Financing retirement in Europe: public sector reform and financial market development, CEPR Meeting, Louvain-la-Neuve, 13-14 May.

How far from Lisbon?, Wilton Park Conference 747, Frankfurt, 19 May.

I nuovi paesi aderenti all'Unione Europea: prospettive economiche e impatto sui rating sovrani," Seminar organised by Standard & Poor's, Milano, 24 May.

Preparatory meeting for the Dutch EU presidency, The Hague, 2 June.

Workshop on Enlargement, London Business School, London, 11 June.

Why is There Excess Coverage?, Seminar by the Università Cattolica di Milano Press, 15 June.

Wage Inequality, Technology and Institutions, IZA workshop, Bonn, 2 July.

Participated in the workshop "Job Quality and Employer Behaviour" organised by the Catholic University, Milan, 15 March.

March 19, Bocconi University, for a workshop in the memory of Professor Marco Biagi.

March 28, Berlin, he participated in the DAEUP Network Workshop organised by the Humbolt University, and presented his paper with Michael Burda.

April 11, Brussels, participated in the *Brussels Economic Forum* on pension reforms.

April 17-18, he participated in the second meeting of *A Sustainable Project for Europe*.

May, Paris, conference on *The Economics of Eastern Enlargement*.

June 10, Brussels, seminar of the European Ideas Network: presented the paper *How to address labour reform?*.

June 13, Bologna, seminar at the Centre for International Development on Eastern Enlargement.

June 20, Rome, participated in the roundtable *A Sustainable Project for Europe*. The group met with Carlo Azeglio Ciampi, President of Italy.

June 25, Rome, conference organised by CNEL on the reform of pensions in Italy and Sweden.

July 9, London, presentation on the Italian pensions system at Watson Wyatt.

Michael C. Burda:

2005

EALE-SOLE World Conference in San Francisco: "Preferences for Rigid versus Individualized Wage Setting", June.

CEPR/HU workshop "A New Source of Labour Market Flexibility?" British.

Embassy in Berlin, January.

2004

IZA workshop "Wage Inequality, Technology and Institutions" in Bonn.

"Preference for Rigid versus Individualized Wage Setting in Search Economies with Frictions", July.

Fondazione DeBenedetti Conference "Structural Reforms without prejudices" in Lecce.

Economics Seminar at University Tübingen: "Präferenzen für rigide versus individuelle Lohnfindung in Suchökonomien mit Friktionen", June.

CESifo area conference in Munich: "Human Capital Labor Market Institutions and Equilibrium Unemployment", June.

CEBR Seminar University (Copenhagen): "Preference for Rigid versus Individualized Wage Setting in Search Economies with Frictions", May.

University Pompeu Fabra, Barcelona: "Preference for Collective versus Individualized Wage Setting in Search Economies with Frictions", April.

DAEUP Final Conference SER network in Bristol: "Human Capital Investment in Equilibrium Unemployment", April.

Research stay at University Bocconi (Prof. Boeri) Milan: Paper "Preferences for Rigid versus Individualized Wage Setting in Search Economies with Firing Frictions", March.

2003

Economics Research Seminar at University Bonn: " Preference for Rigid.

Versus Individualized Wage Setting in Search Economics with Frictions", October.

DIW/CEPR/IZA Berlin-Lunchtime-Meeting in Berlin: "Temporary Employment in Germany, Trends and Prospects", October.

Annual Meeting Verein für Socialpolitik in Zürich: "Factor Mobility, Income Differentials and Regional Economic Integration", October.

Wirtschaftswissenschaftliches Seminar Ottobeuren: "Education and Labour Market", September.

European Summer Symposium in Labour Economics in Buch am Ammersee: " Preference for Rigid versus Individualised Wage Setting in Search Economics", September.

Annual Meeting of the European Economic Association in Stockholm: "Factor Mobility, Income Differentials and Regional Economic Integration", August.

Seminar at University Konstanz; "Preferences for Rigid versus Individualized Wage Setting in Search Economies", June.

Seminar Series at University of Bologna, Milan: "Factor Mobility, Income Differentials and Regional Integration", June.

CESifo-conference "Employment and Social Protection in Munich; "Preference for Rigid Wages and Job Protection in Equilibrium Unemployment", May.

Symposium "Labor Flexibility, Economic Growth and Social Progress" in London: "Temporary Help Agency: The bizarre case of Germany", April.

CEPR/HU second workshop in Berlin: A Dynamic Approach to Europe's Unemployment Problem. An EU Research Programme; "Preferences for Rigid Wages and Job Protection in Equilibrium Unemployment", March.

Tilburg University: "Preference for Rigid Wages and Job Protection in Equilibrium Unemployment", February.

Ronald Bachmann:

2005

EALE-SOLE World Conference in San Francisco: "Skill mismatch in equilibrium unemployment".

World Congress of the Econometric Society in London: "Labour market dynamics in Germany: The role of on-the-job search".

Annual Conference of the European Economic Association (EEA-ESEM 2004) in Madrid: "Skill mismatch in equilibrium unemployment" (poster presentation).

2003

IZA Summer School in Buch (Ammersee): "Worker flows in 5 OECD countries".

EMAR-DTI Workshop "New directions in labour market flexibility research": "Unemployment flows in 5 OECD countries".

Raquel Carrasco:

2004

Consumption, Income and the Self-Employment Decision, Universidad de Alicante, May 2004, and Fundación Ramón Areces, March 2004.

Bruno Crepon:

2003

'Employment and reduction of the workweek in France' was presented at an INSEE research seminar.

Patrick Feve:

2004

ESEM, August, Madrid.

2003

ESEM, August, Stockholm.

SED, June, Paris.

Michael Kvasnicka:

2005

American Economic Association (AEA) Annual Meeting, Philadelphia.

CEPR Workshop "Temporary Agency Work: A New Source of Labour Market Flexibility?"

Berlin Conference on Temporary Help Agency, January.

Labour Research Seminar at the Centre for European Economic Research (ZEW), Mannheim (*invited*).

International Summer School in Economics and Management, Havana.

Verein für Socialpolitik Annual Meeting, Dresden.

European Association of Labour Economists (EALE) Annual Conference, Lisbon.

European Society for Population Economics, Bergen.

Low Wage European Research Network (LoWER) Annual Conference, London.

CEPR Workshop, DAEUP, Bristol.

7th Kolloquium on Personal Economics, Bonn.

Workshop on Temporary Employment in Europe: Trends, Determinants and Perspectives, Brussels (*invited by the DG Employment and Social Affairs of the EU Commission*).

2003

European Economic Association Annual Conference, Stockholm.

CEPR Workshop, DAEUP, Berlin.

Business-to-Business Forum Zeit.Arbeit, Braunschweig, (*invited by the Ministry of Economics of Lower Saxony*).

2002

IZA European Summer School in Labour Economics, Buch am Ammersee.

Sonderforschungsbereich 373 Jahrestagung, Motzen.

Eric Maurin:

2003

'The Costs of Temporary Labour Contracts and the Demand for Labour: An Evaluation of a Recent French Reform Using a Panel of Establishments' will be presented at the ESSLE conference in Ammersee (Sept 2003).

Javier Ortega:

2003

The Interplay between Insurance and Assistance in Unemployment Compensation Systems (with Laurence Rioux). IZA (Bonn), November.

Le marché du travail français dans (ou à travers) le miroir britannique et espagnol [The French labour market in (or through) the British and Spanish looking glass.], CERC (Paris), November.

European Central Bank Conference, "Labour Supply in Europe", Frankfurt, June.

2002

"Working Time Regulation, Firm Heterogeneity, and Efficiency, presented at The Research Institute for Industrial Economics, Stockholm, November; LSE, London, January; DAEUP Conference, Berlin, March.

Maite Martinez-Granado:

2003

2nd DAEUP workshop: Discussant of "Why We Should Also Measure Worklessness at the Household Level" by Paul Gregg, Berlin, 28-9 March.

ESPE Meeting 2003: "Consumption, Income, and the Self-Employment Decision", New York, 13-15 June.

Barbara Petrongolo:

2005

A test between unemployment theories using matching data, All Souls College, Oxford, October 2003, IZA Workshop on Search and Matching on the Labor Market: Recent Developments and Avenues for Future Research, Bonn, November 2003, and Université de Toulouse, January 2005.

2003-2004

Scale effects in markets with search, UCL Applied Micro seminar.

Gender segregation in employment contracts, CEP/LSE Labour Workshop, Banco de España.

Minimum wages and compliance in a model with search on-the-job, SED Conference, Florence, July 2004.

DAEUP workshop: Discussant of "Job Search with Non-Participation" by Paul Fritjers and Bas van der Klaauw, Berlin, 28-9 March.

SED Conference, Paris, June: "Scale Effects in Markets with Search", invited paper.

EEA-ESEM Conference, Stockholm, August: "Gender Segregation in Employment Contracts".

Christopher Pissarides:

2003

NBER Summer Institute.

Laurence Rioux:

2003

A structural non-stationary model of labour supply: Stigmatization of the unemployed by job offers or wage offers?, with Stefan Lollivier.

SED Congress in Paris.

ESEM Congress in Stockholm.

Labour Market Models Conference in Denmark.

Do workers correctly evaluate their job security? a European comparison, with Alexandre Deloffre.

Crest seminar in Paris.

CEPR workshop « A dynamic approach to Europe's unemployment problem » in Bristol.

ASSET meeting in Barcelona.

Gilles Saint-Paul:

2004

Social networks and labor market transitions, joint with Yann Bramoullé, presented at the T2M meeting, Orléans, January 2004, and at the DAEUP meeting, April 2004.

Etienne Wasmer:

2003

Workshop on Search and Matching, IZA, Bonn, Germany, November.

Labour Market Frictions and Macroeconomic Dynamics, Conférence CIRPEE- UQAM, October.

CEPR Changing Conditions for Education and Training Conference in Uppsala, September.

Pierre Cahuc, F Postel-Vinay and Jean-Marc Robin:

2003

'Wage Bargaining with On-the-job Search: A Structural Econometric Model', ESSLE conference in Ammersee (Sept 2002), ERC conference in Chicago (Oct 2002), the Banco de Portugal conference (May 2003), the SED conference in Paris (June 2003).

VI REFERENCES AND BIBLIOGRAPHY

Weblinks

Workshop website (announcement, schedule, list of participants, downloadable papers):

http://www.wiwi.hu-berlin.de/wpol/schumpeter/workshop_agency-work/index.html

CEPR announcement/brief description of workshop:

http://www.cepr.org/research/Networks/LESER/DAEUP_Announcement.doc

CEPR Policy Paper 11: A Dynamic Approach to Europe's Unemployment Problem: Policy Report: <http://www.cepr.org/pubs/books/PP11.asp>

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Bachmann, R. (2005a), "Skill mismatch in equilibrium unemployment", Humboldt University Berlin, *mimeo*.

Bachmann, R. (2005b), "Labour market dynamics in Germany: The role of on-the-job search", Humboldt University Berlin, *mimeo*.

Beaudry P, & F Collard (2002). "Why Has the Employment-Productivity Tradeoff among Industrialised Countries Been So Strong?" NBER Working Paper 8754.

Bertrand, M & F Kramarz (2002). "Does Entry Regulation Hinder Job Creation? Evidence from the French Retail Industry," *The Quarterly Journal of Economics*, MIT Press vol 117(4), pp 1369-1413.

Biscourp, P & F Kramarz (2004). "Employment, Skill Structure and International Trade: Firm-level Evidence for France", INSEE Serie de Documents de Travail du CREST no. 2004-28.

Boeri, T & P Garibaldi (2002). "Shadow Activity and Unemployment in a Depressed Labour Market," CEPR Discussion Paper No. 3433.

Boeri, T. and M. Burda (2004) "Preferences for Rigid versus Individualized Wage Setting" CEPR Discussion Paper 4444, June.

Boeri, T, & JI Conde-Ruiz & G Vincenzo (2004). "Cross-Skill Redistribution and the Trade-Off Between Unemployment Benefits and Employment Protection, CEPR Discussion Paper No. 4711.

Boeri, T. and M. Burda (2005) "Why is there Excess Coverage?" mimeo.

Borgarello, P Garibaldi & L Pacelli (2003). "Employment Protection Legislation and the Size of Firms: A Close Look at the Italian Case," IZA Discussion Paper No. 787.

Bramoullé, Y & G Saint-Paul (2004). "Social Networks and Labour Market Transitions," IZA Discussion Paper No. 1215.

Burda, M, Kvasnicka, M. (2005) "Zeitarbeit in Deutschland: Trends und Perspektiven", *Perspektiven der Wirtschaftspolitik*, forthcoming.

Burgess, S and H Turon (2005). "Unemployment Dynamics in Britain," in *Economic Journal*, vol 115, pp 423-448, April 2005.

Cahuc, P & F Fontaine (2002). "On the Efficiency of Job Search with Social Networks," CEPR Discussion Paper No. 3511.

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VII. ANNEXES

Annex 1. Project deliverables

NUMBER	DELIVERABLE TITLE	DELIVERY DATE	NATURE	DISTRI-BUTION LEVEL	DATE ACHIEVED
D1	Team leaders meet at Workshop 1: Kick-off meeting	2	Completed	LTD	20-21 Sept 01
D2	Creation of Network Web-page (to be updated during the life of the project)	3	Completed	GEN	Nov 1 01
D3	Preparation of critical review of main issues to be dealt with by the project	7	Completed	GEN	31-Mar-03
D4	First scientific papers produced for all workpackages as CEPR Discussion Papers or departmental working papers	8	Completed	GEN	31 May 02
D5	Participants meet at Workshop 2	10	Completed	LTD	31 May - 1 June 2002
D6	First scientific papers published in academic journals for all workpackages	15	Completed	GEN	31 Dec 02
D7	More scientific papers produced for all workpackages as CEPR Discussion Papers or departmental working papers	16	Completed	GEN	31 Jan 03
D8	Participants meet at Workshop 3	18	Completed	LTD	28-29 March 03
D9	More scientific papers produced for all workpackages as CEPR Discussion Papers or departmental working papers	20	Completed	GEN	31 May 03
D10	More scientific papers produced for all workpackages as CEPR Discussion Papers or departmental working papers	28	Completed	GEN	31 Jan 04
D11	Participants meet at final project conference	30	Completed	LTD	16-17 April 04
D12	More scientific papers published in academic journals for all workpackages	33	Completed	GEN	30 Jun 04

D13	Publication of a policy report drawing together the project's results and policy conclusions	34	Completed	GEN	28 Feb 05
D14	Series of short, open, non-technical presentations in various locations in order to disseminate the results of the research	34-36	Completed	GEN	Berlin, 27-28 Jan 05 London, 27 Jan 05 Brussels, 25 Feb 05, Madrid, 28 Feb 05

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