

VATT-JULKAISSUJA 32 VATT-PUBLICATIONS

Towards Higher Employment: the Role of Labour Market Institutions

EDITORS

Seija Ilmakunnas
Erkki Koskela

Valtion taloudellinen tutkimuskeskus
Government Institute for Economic Research
Helsinki 2002

ISBN 951-561-392-2
ISSN 0788-4990

VALTION TALOUELLINEN TUTKIMUSKESKUS
Government Institute for Economic Research
Hämeentie 3, 00530 Helsinki, Finland
Email: forename.surname@vatt.fi
www.vatt.fi

Gummerus Kirjapaino Oy
Saarijärvi 2002

Cover: Markku Böök

Preface

Academic research has much to offer to policy makers. Even though economic research can seldom provide clear-cut and unambiguous answers, it can often give a framework for assessing alternatives. Potentially, the impact on public debate is decisive.

Against this background, the Ministry of Finance initiated a conference on labour market institutions and employment. The aim was to identify what recent research can provide when it comes to effectively reducing unemployment in a sustainable way.

The conference offered a forum for the dissemination of results of academic research, which has advanced significantly in recent decades. Analytically, for example, the use of search theory has provided a much deeper understanding of the ways in which such things as tax and benefit systems potentially affect behaviour in the labour market. Also, even if unemployment is a general problem in Europe, some countries have managed to achieve a better labour market performance than others. The experiences of two such countries, the Netherlands and Denmark, were reviewed at the conference. Learning from successful experiences is in line with the aim of promoting the transferability of best practices across Europe.

The conference was jointly organised by the Ministry of Finance, the Government Institute for Economic Research and the Labour Institute for Economic Research in Helsinki, in November 2000, at the House of the Estates. Professor Erkki Koskela acted as the chairman of the organising committee. The audience of the two-day event consisted of researchers, other experts and policy makers.

The committee succeeded in engaging high-level experts who presented analytical empirical work on unemployment insurance and incentives, taxation and employment, active labour market policies, the employment objectives of the European Summit in Lisbon, and labour market reforms in the Netherlands and Denmark. These presentations were followed by comments and a general discussion.

I hope that the publication of these contributions will provide input into the public discussion and help develop better understanding of the issues and policy choices involved. This is increasingly important, given the accelerating pace of structural change and the challenges that this poses for the functioning of the labour markets.

Helsinki, January 2002

Johnny Åkerblom

Under-Secretary of State, Ministry of Finance

Acknowledgements

As editors of this book we want to thank the numerous persons and institutions whose joint effort has made this publication possible. This book is essentially based on the papers presented at the conference "Labour Market Institutions and Employment" held in Helsinki in November 2000. The conference was organised as a team effort, and special thanks are due to the other members of this team – Pertti Kohi, Tomi Kyrrä, Juhana Vartiainen and Riitta Latvio.

We would also like to thank all those who have contributed to this book, for their very amenable co-operation during the editing process. In finalising the book we have benefited greatly from Riitta Latvio's efficient method of adapting the manuscripts for publication. We are also very appreciative of Pirkko Valppu for her useful help at this stage. Finally, special thanks are due to Jason Garner for language editing.

Our appreciation also goes out to the institutions and organisations whose contributions made the conference and this publication possible. The conference was financed by the Ministry of Finance, and the book editing was financed jointly by the Government Institute for Economic Research and The Employees' Foundation. The contributions made by The Bank of Finland, The Central Organisation of Finnish Trade Unions and The Confederation of Finnish Industry and Employers are also gratefully acknowledged.

Helsinki, January 2002

Seija Ilmakunnas

Erkki Koskela

Contributors

Susanne Ackum Agell

Office of Labour Market Policy Evaluation (IFAU), Box 513, 751 20
Uppsala, Sweden. Email: susanne.ackum_agell@ifau.uu.se

Tito Boeri

Università Bocconi – IGIER, Via Salasco, 5, 20136 Milano, Italy. Email:
tito.boeri@uni-bocconi.it

Tor Eriksson

The Aarhus School of Business, Department of Economics, Fuglesang
Allé 4, DK-8210 Aarhus V, Denmark. Email: tor@asb.dk

Joop Hartog

Faculty of Economics and Econometrics, University of Amsterdam,
Roeterstraat 11, 1018 WB Amsterdam, the Netherlands. Email:
hartog@fee.uva.nl

Martti Hetemäki

Ministry of Finance, P.O. Box 28, 00023 Government, Finland. Email:
martti.hetemaki@vm.vn.fi

Pasi Holm

Federation of Finnish Enterprises, P.O. Box 999, 00101 Helsinki,
Finland. Email: pasi.holm@suomen.yrittajat.fi

Bertil Holmlund

Department of Economics, Uppsala University, Box 513, SE-751 20
Uppsala, Sweden. Email: bertil.holmlund@nek.uu.se

Kari Hämäläinen

The Government Institute for Economic Research (VATT), P.O. Box
269, 00531 Helsinki, Finland. Email: kari.hamalainen@vatt.fi

Pekka Ilmakunnas

Helsinki School of Economics, P.O. Box 1210, 00101 Helsinki, Finland.
Email: pekka.ilmakunnas@hkkk.fi

Seija Ilmakunnas

The Central Pension Security Institute, 00065 The Central Pension
Security Institute, Finland. Email: seija.ilmakunnas@etk.fi

Markus Jäntti

Department of Economics, University of Tampere, P.O. Box 607, 33101
Tampere, Finland. Email: markus.jantti@uta.fi

Jaakko Kiander

The Government Institute for Economic Research (VATT), P.O. Box
269, 00531 Helsinki, Finland. Email: jaakko.kiander@vatt.fi

Erkki Koskela

Department of Economics, University of Helsinki, P.O. Box 54, FIN-00014 University of Helsinki, Finland. Email: erkki.koskela@helsinki.fi

Reija Lilja

Labour Institute for Economic Research, Pitkänsillanranta 3 A (6th floor) 00530 Helsinki, Finland. Email: reija.lilja@labour.fi

Martin Lundin

Office of Labour Market Policy Evaluation (IFAU), Box 513, 751 20 Uppsala, Sweden. Email: martin.lundin@ifau.uu.se

Marja-Liisa Parjanne

Ministry of Social Affairs and Health, P.O. Box 33, 00023 Government, Finland. Email: marja-liisa.parjanne@stm.vn.fi

Heikki Räisänen

The Government Institute for Economic Research (VATT), P.O. Box 269, 00531 Helsinki, Finland. Email: heikki.raisanen@vatt.fi

Juhana Vartiainen

Labour Institute for Economic Research, Pitkänsillanranta 3 A, 00530 Helsinki, Finland. Email: juhana.vartiainen@labour.fi

Niels Westergaard-Nielsen

The Aarhus School of Business, Department of Economics, Fuglesang Allé 4, DK-8210 Aarhus V, Denmark. Email: nwn@cls.dk

Contents

Chapter 1 Summary	13
Seija Ilmakunnas and Erkki Koskela	
Employment and Labour Market Institutions:	
Experiences from Europe	15
Chapter 2 Unemployment Benefit System	29
Bertil Holmlund	
Unemployment Insurance and Incentives	31
Comments	54
Pasi Holm	54
Reija Lilja	57
Chapter 3 Taxation and Employment	61
Erkki Koskela	
Labour Taxation and Employment in Trade Union Models:	
A Partial Survey	63
Comments	86
Pekka Ilmakunnas	86
Markus Jäntti	90
Chapter 4 Active Labour Market Programmes	95
Susanne Ackum Agell and Martin Lundin	
Notes on Swedish Labour Market Policy	97
Kari Hämäläinen	
The Effectiveness of Labour Market Training in Different	
Eras of Unemployment	113
Comments	136
Tor Eriksson	136
Heikki Räisänen	138

Chapter 5 Prospects for European Employment	141
Tito Boeri	
How Far from Lisbon?	143
Comments	159
Jaakko Kiander	159
Juhana Vartiainen	163
 Chapter 6 Successful Labour Market Reforms	167
Joop Hartog	
Over the Hill: the Dutch Way Out of Labour Market Misery	169
Niels Westergaard-Nielsen	
20 Years of Labour Market Policies in Denmark	189
Comments	212
Martti Hetemäki	212
Marja-Liisa Parjanne	215

CHAPTER 1
SUMMARY

EMPLOYMENT AND LABOUR MARKET INSTITUTIONS: EXPERIENCES FROM EUROPE

**Seija Ilmakunnas and
Erkki Koskela**

Unemployment insurance and incentives	17
Labour taxation and employment	19
Active labour market policy	21
Lisbon employment objectives	23
Successful labour market reforms	25

European unemployment has shown a rising trend during the last twenty-five years, while the development has been the reverse in the United States. On the other hand, there have been, and still are, differences across countries in Europe. A strong example of this phenomenon has been the development of unemployment in two Iberian countries, Portugal and Spain. In Portugal, the unemployment rate has fluctuated at a relatively low level, while Spain has shown the highest unemployment in Europe. These observations have naturally raised the question of how to explain two facts: high average European unemployment and differences across European countries. It has been suggested that different economic shocks in Europe and the United States could explain different unemployment development. In this context people have often referred to productivity shocks and oil crises in the 1970s and higher real interest rates in the 1980s in Europe. It is hard to argue, however, that such things as shock differences within Europe could explain different trends and levels in unemployment.

Another argument has stressed the potential role of labour market institutions. On average, they are 'rigid' in Europe and 'flexible' in the United States. While it is not totally clear what we mean by labour market institutions, usually a list of the features of the labour market, which are discussed in this context, incorporates the following: employment protection legislation (i.e. laws and regulations covering employees' rights), the social security system and the properties of unemployment benefit systems in particular, labour taxes, and the structure of wage bargaining in unionised labour markets typical to Europe (see Nickell and Layard (1999) for a survey of the role of these institutional features from the point of view of unemployment).

One argument stressing the role of labour market institutions has focused on the unemployment benefit system by claiming that liberal unemployment benefit systems, though they are good from an insurance point of view, weaken incentives to search for jobs and also give rise to higher wages due to better outside options for unemployed workers. For both of these reasons, higher unemployment tends to be associated with higher unemployment benefits and their longer duration and higher eligibility. It has also been argued that higher labour taxation will have – via the wage negotiation mechanism in unionised economies – a tendency to increase total labour costs of firms, and thereby contribute to higher unemployment. These two issues – the role of unemployment benefits and labour taxation – are reviewed by Bertil Holmlund in Chapter 2 and Erkki Koskela in Chapter 3, respectively. They both focus on the theoretical analysis of these phenomena and also provide surveys of what we know on the basis of empirical results about the relationships between unemployment and the unemployment insurance system on the one hand, and between unemployment and labour taxation on the other.

In addition to the unemployment benefit system and labour taxation there are other policy measures that countries have used in order to fight against unemployment. In the search for remedies for high unemployment in Europe, there has been growing interest in the so-called 'Active Labour Market Policies' (ALMP), such as labour market training by trying to upgrade the skills of unemployed people, and direct job creation programmes in the form of either public sector employment or subsidisation of private sector work (for a theoretical survey and some empirical evidence, see. e.g. Calmfors and Skedinger 1995). Sweden has been the country, which has put most emphasis on various active labour market policy programmes. Therefore, it is of interest to evaluate what have been the impacts of various labour market policy programmes in Sweden. Susanne Ackum Agell and Martin Lundin provide a brief survey of the empirical research in Chapter 4. Kari Hämäläinen, in turn, studies labour market training in the case of Finland, both at the end of the boom period in the late 1980s and during the great depression Finland experienced in the early 1990s.

During the period of high unemployment, politicians and other policy makers started to become increasingly worried about the unemployment issue. The European summit in Lisbon, in March 2000, decided that Europe should subscribe to the ambitious goal of raising the employment rate by almost 10 percentage points in less than ten years. In Chapter 5, Tito Boeri asks: are the goals set out in Lisbon attainable? And if so, what should be done? He argues that attaining the Lisbon targets very much depends on the pace and comprehensiveness of ongoing reforms of European labour

markets and social policy institutions.

Even though the trend in European unemployment has, on average, increased, there have been different developments in some countries. Two examples of this phenomenon are the Netherlands, on one hand, and Denmark on the other. In the recent history, their unemployment rates have decreased and now the Netherlands and Denmark are countries with a relatively low level of unemployment by European standards. This is particularly the case in the Netherlands. These developments raise an important question: what has happened in these countries in terms of labour market and welfare state reforms? In Chapter 6, these issues are analysed in the case of the Netherlands by Joop Hartog and in the case of Denmark by Niels Westergaard-Nielsen, respectively.

We now move on to provide brief summaries of the papers presented in the book and also refer to comments made by discussants.

Unemployment insurance and incentives

Unemployment insurance systems have been actively studied by economists over the last two decades. Most research has concentrated on the question of how unemployment insurance systems affect behaviour, notably the duration of unemployment. Aspects such as how a socially optimal unemployment insurance system should be designed have been subject of less research. Bertil Holmlund's paper gives a selected survey of the main research themes, both in terms of theoretical findings and empirical results related to various aspects of unemployment insurance systems (Chapter 2).

What is the impact of unemployment insurance on the incentives of the unemployed to look for a job? Unemployment benefits raise the reservation wages of the unemployed (the wages that will make the unemployed willing to accept a job) and thus extend the duration of unemployment. On the other hand, the reservation wages of the unemployed whose period of eligibility for unemployment benefits is nearing its end – or who have ceased to qualify for the benefits – will decrease. There is a lot of documented evidence in empirical studies of both effects, even though the main emphasis has been on the former case.

Another channel through which unemployment insurance systems can have an impact is wage formation. A popular way to study this is to use models of wage bargaining between the labour market partners. Since higher unemployment benefit increases the outside option of trade union members, this will lead to a higher wage rate and increase unemployment, *ceteris paribus*. International and Finnish empirical research results support

this view. A recent study by Ljungqvist and Sargent (1998) has examined ways in which the unemployment insurance system influences adjustment of labour markets to economic shocks. They show that negative economic shocks are more likely to lead to growth in long-term unemployment the longer the duration of the period during which benefits can be obtained, and they conclude that this is typical to Europe.

What are to be the socially optimal levels and time profiles of unemployment insurance benefits? The answer to this level question depends both on the positive question of how strongly the unemployment benefit affects the reservation wages of the unemployed, and on the normative question of the extent to which societies want to rely on an insurance scheme. If the sensitivity of the reservation wages is high, the optimal benefit replacement ratio needs to be low, *ceteris paribus*. The more the insurance aspect of the system is emphasised, the higher the benefit level should be. Hence, there is a trade-off between the insurance provision and unemployment: if the aim is better insurance, then unemployment is likely to grow, and vice versa.

What should be the optimal time profile of the unemployment insurance benefits from the social point of view? Should the benefit change with the duration of unemployment and, if so, then in which direction? Or should they remain the same? This has been studied over the past two decades using various approaches. Recently, Fredriksson and Holmlund (2001) have shown, within a plausible framework (in which the unemployment insurance system affects both the incentive towards job-seeking and wage formation) that a declining time path in the benefits is better than a constant benefit over time, as it ensures better incentives to look for a job while still providing some insurance.

In his survey, Holmlund also deals with the monitoring of the unemployed and the funding of the unemployment insurance system. Monitoring costs money, but makes it possible to offer higher benefits without creating disincentives. As for the funding of the system, if unemployment insurance schemes are government-financed, this may have a tendency to lead to higher wages and higher unemployment, as the cost of unemployment can partly be transferred to a third party. Holmlund writes: "The prevailing unemployment insurance systems in Finland, Denmark and Sweden can be reformed so as to become more conducive to wage moderation". Holmlund's view is that it would be worth considering reducing the role of the government in financing the unemployment insurance system. This would moderate wage formation and thereby decrease equilibrium unemployment.

The comments on this paper were given by Pasi Holm and Reija Lilja. Holm refers to the studies that have been conducted about how

widespread unemployment traps are in Finland. He also mentions the use of active labour market measures in meeting the employment condition required in order to be eligible for unemployment insurance benefits. Lilja points out that the aim of labour market reforms in Finland has been to make the unemployed seek employment more actively, and underlines the importance of, and the need for, further empirical studies of the Finnish case.

Labour taxation and employment

Chapter 3 deals with the effects of labour taxation on employment, both in terms of the theoretical approach and in terms of what we know on the basis of empirical analyses. Erkki Koskela's theoretical discussion of issues of labour taxation is based on the so-called 'union bargaining framework', where wages are determined in negotiations between the trade unions and representatives of firms, after which firms make decisions on employment. In Europe, where the rate of unionisation is high and/or where the coverage of collective bargaining agreements is very high, this type of approach can be considered natural.

Koskela's paper starts by pointing out the differences in unemployment developments in the United States and Europe over the last quarter of a century, and the differences across European countries, with comparisons between Spain and Portugal being a typical example. The unemployment rate in Europe has been higher than that of the United States since the early 1980s, while before that, the situation was quite the reverse. On the other hand, the unemployment rates in Spain and Portugal have been very different even though, being neighbouring countries, they have experienced quite similar economic shocks. Spain has suffered from the highest unemployment rate in Europe, while Portugal's unemployment rate has been one of the lowest.

Where do these differences come from? A fairly common view is that 'a good proportion' of the high unemployment in Europe and the cross-country differences can be explained by referring to the interaction between economic shocks and labour market institutions (cf. Blanchard and Wolfers 2000) and differences in labour taxation (cf. Daveri and Tabellini 2000; Nickell and Layard 1999). Koskela's paper deals with the potential role of labour taxation in explaining unemployment.

In what way might labour taxation affect wage negotiations, and thereby employment? Firstly, income taxes play a part in wage negotiations, because if labour is taxed differently and at a higher rate

than unemployment benefits, an increase in the tax rate leads to a rise in wages and thus reduces employment. However, it is worth pointing out that if the tax rates for earned income and unemployment benefits are the same, lowering these rates has no impact on employment but only results in a fall in government tax revenue.

Secondly, if the income tax scheme becomes more progressive, but the government tax revenue remains unchanged, the wage formation is moderated and employment is boosted. This is because higher tax progression makes the trade-off between the wage rate and employment more favourable to employment.

Thirdly, payroll taxes both have a direct impact and an indirect effect on labour costs through wage negotiations, with the overall impact left to be empirically evaluated. If firms can shift any rise in labour costs due to higher payroll taxes to employees in full in wage negotiations – in the form of lower wages - then payroll taxes do not have any effect on employment. Union bargaining models do not support this view, however.

Finally, although a good deal of attention has been placed on the overall tax wedge, i.e., the sum of income taxes and the payroll taxes relative to overall labour costs, the structure of taxation can also have an impact on employment. This is the case particularly if the tax bases of different types of taxes diverge due to various kinds of tax exemptions. If the focus in labour taxation is shifted towards a narrower tax base in a tax-revenue neutral way, the labour costs go down and employment improves. Why might this be the case? Because higher taxation of a narrower tax base will increase the amount of tax exemption, which, in turn, has a wage-moderating effect.

In the latter part of the paper, Koskela evaluates empirical research with international and Finnish data related to the above hypotheses. In broad terms, the results can be summarised as follows: 1) labour taxation has a negative impact on employment; 2) progressive labour taxation has a positive effect on employment, as higher progressive taxes would seem to have a negative impact on wage formation, and 3) there is some evidence (at least from Finland and the UK) – though this has not been systematically studied using international data – that the structure of labour taxation matters as well, along the lines presented earlier. While the evidence regarding various aspects of labour taxation is fairly uniform, it is not very strong in all cases. Hence there is a need for further research by using better data sets.

In their comments, Pekka Ilmakunnas and Markus Jäntti raise, among other things, the following points: how robust are the estimation results in statistical terms? Were the tax variables that were used as independent

variables in the models exogenous? And if not, does this affect the results? Furthermore, empirical research using so-called linked employer-employee panel data might be beneficial. A closer integration of union bargaining and matching models is also likely to occur in the empirical analysis of taxation and employment.

Active labour market policy

Aspects of active labour market policy measures are analysed in Chapter 4. The paper by Susanne Ackum Agell and Martin Lundin sums up the recent studies on the effects of active labour market policy in Sweden. As we observed earlier, Sweden is an interesting case, since it is the country where the emphasis on this type of policy has been most notable and strongest in terms of relative expenditure on the part of government. In the 1990s, Swedish labour market policy achieved wider scope than ever before: from time to time almost 5 per cent of the total labour force participated in different labour market programmes.

This reflects the 'bridging over policy' adopted in Sweden in the fight against unemployment. At the same time, many other countries, such as New Zealand and the UK, have relied more on structural reforms in the labour market. According to Ackum Agell and Lundin, the current cornerstones of the active labour market policy (ALMP) are the following: firstly, participation in active measures is favoured over passive receiving of unemployment compensation, and secondly, ALMP should counteract bottlenecks during the boom.

The effects of active labour market measures are considered both at micro and macro level. At micro level, the authors consider the effects of the labour market measures on those individuals who participate. When the individual effects are considered, the studies reviewed here seem to indicate that the labour market training in Sweden has been less successful in the 1990s in comparison with the 1980s. Even negative employment effects of these measures have been found. Furthermore, traditional subsidised jobs have also proven quite ineffective. The authors refer to international studies suggesting that measures involving a great number of participants at a low cost per participant are not effective. This is likely to reflect the declining returns in large programmes.

The macro economic studies examine the impact on aggregate employment and, implicitly, also account for crowding out effects. They may rise, for instance, when jobs created for a certain category of the unemployed simply replace jobs for other categories of the unemployed.

These crowding out effects are at least potentially very important in the context of labour market policies. Ackum Agell and Lundin review the crowding out effects both with constant wages and with endogenous wages. The active measures may raise the wage claims if the unemployed are typically guided to measures where e.g. the compensation may be higher than the standard unemployment insurance benefit. A regular (although not entirely robust) finding in Swedish studies is that open unemployment seems to dampen down wage claims more than employment with the help of an ALMP measure.

Kari Hämäläinen presents, in the same chapter, his study where Finnish micro data is used to analyse the employment effects of labour market training over three different periods between 1988–1989, 1991–1992 and 1993–1994. The first period represented a period of overheating in the economy; the 1991–1992 period was a time when the unemployment rate rocketed, and the last period was a time when unemployment had settled at a high level.

The results show that labour market training increased chances of employment in the late 1980s by an average of over 20 percentage points, and, in over 80 per cent of cases where a person took part in labour market training, the effect on employment was positive. By 1994, the average impact had fallen to just over 5 percentage points, and the number of participants benefiting from the measures fell below 70 per cent. The effect on employment is also analysed separately for representative cases with good prospects for employment (good education, short history of unemployment, etc.) and for those with poor prospects for employment. In conditions of high unemployment, labour market training proved to be most effective when targeted to persons with the poorest chances of employment.

Why does the effect of labour market training decrease as unemployment rises? There are several possible explanations for this. Firstly, the motivation of participants in training can be poor in conditions of high unemployment. Secondly, mass training cannot be tailored to meet the needs of individual participants. The third explanation highlights the fact that in conditions of high unemployment, more skilled jobseekers are available on the markets and the role of labour market training as a signal may thus be weaker. Hämäläinen also mentions the reforms in labour administration carried out in the 1990s – adoption of performance guidance and the dismantling of the government monopoly in providing training – as possible background factors. Notably, the former reform could have influenced the selection of participants to training courses and resulted in ‘sorting the wheat from the chaff’ in labour market training.

In his comment, Tor Eriksson raises a fundamental question on the objectives of active labour market measures. If the aim is to deal with cyclical unemployment, then expanding the activities hardly complies with the nature of the European unemployment problem. In his view, it is important to be able to evaluate which of the theories explaining unemployment is correct, because policy decisions differ depending on the answer. Heikki Räisänen points out the other positive effects of labour market training, such as improved skills, supply of skilled labour, acquisition of information technology skills, language skills required by specific minorities such as immigrants, etc. Both commentators seem to share the view that the conclusions drawn from Swedish experience are also applicable in other fairly similar countries, such as Finland.

Lisbon employment objectives

The European Council meeting, held in March 2000 in Lisbon, set out the objective of strengthening employment in the EU Member States during the coming decade. The goal is to raise the employment rate from an average of 62 % in 1999 to 70 % by 2010. To date, only the United Kingdom, the Netherlands, Sweden and Denmark are able to meet the goal, and the Mediterranean countries (where young people and women in particular suffer low employment rates) are the furthest from the target. This is the starting point for Tito Boeri's paper in Chapter 5.

In Boeri's view, in order to achieve this target, part-time work and temporary jobs need to be made more widespread and more jobs of low pay and low productivity also need to be created. In other words, we need reforms that promote flexible and easily adjustable labour markets, changes in the bargaining institutions, greater flexibility in working hours, wider wage dispersion and reforms in the welfare and tax system, to provide better incentives for labour force participation. Developments to date suggest that the call for flexibility on the labour markets has been implemented – for the most part – only in the case of new employment contracts.

To meet the EU employment target, policy measures are therefore necessary. Boeri asks whether this is politically viable, and furthermore, whether or not European integration and EMU affect the welfare state systems and collective bargaining institutions (see e.g. Saint-Paul 2000 for an analysis of political economy aspects of labour markets reforms).

There are those who doubt whether such reforms can be carried out because the governments of different member states wish, for political

reasons, to adhere to existing practices. This may be because slow growth makes it more difficult to implement the reforms, as the need for insurance benefits increases, and because growing economic integration gives rise to the problem of 'free riders'. However, there are also those who claim that, due to growing economic integration, greater freedom of movement in economic activities is created, thus increasing cross-country tax and fiscal competition and thereby damaging the foundations of the welfare state by narrowing down the tax base. Are there any indications that we might have moved in one of these two directions? Boeri demonstrates that, to some extent, unemployment insurance benefits have, on average, been reduced in recent years, but that on the other hand, benefits related to some other social security system have improved. Experiences in the recent past thus do not support the view that the welfare state is in the process of being scaled down.

Protection against unilateral termination of employment has weakened most of all in the euro area. The changes have been marginal, however, and have had no impact on contract rights in permanent positions, but, as Boeri points out, the trend is, however, towards more flexibility. On the other hand, incentives for labour force participation have grown more in the euro area than elsewhere, whereas in pension reforms, benefits have increased. Boeri poses the question as to whether there is evidence that convergence towards a common European social security model has taken place in the recent past. The answer is that convergence does exist in different forms, but that monetary union has not seemed to play any part in it. This could, however, be due to the short history of monetary union.

What about the collective bargaining system of the labour markets? Chances of reaching the targets set at the Lisbon European Council also depend on the development of the negotiation systems. It would appear that in order to reach higher employment rates, more low paid jobs need to be created and wage differentials must be allowed to become wider. And what is happening to the trade union movement in Europe? The trade union membership rates have fallen in the past two decades in most European countries, while the coverage of collective bargaining agreements has been increasing. This has created the problem of free riders and tends to weaken the negotiating power of the trade unions.

Are the Lisbon European Council employment targets viable? Boeri closes his presentation by observing that reforms are underway, but that the positive prospects associated with economic and monetary union have not, so far, been realised in this context.

In his comment Jaakko Kiander points out that in Europe there are examples of a rapid fall in unemployment without any significantly

dramatic institutional changes in the structure of the labour markets. This indicates that, in addition to structural reforms, Europe needs an economic policy that fosters growth and employment. Juhana Vartiainen comments on the origin of the "European rigidities". A large welfare state can also be seen as a rational insurance scheme that insulates the individual households from the full effect of global volatility. He also underlines the relevance of collective agreements on wage flexibility at macro level.

Successful labour market reforms (the Netherlands and Denmark)

Chapter 6 is devoted to the lessons from labour market reforms in two countries – the Netherlands and Denmark. Both countries have experienced a significant decline in unemployment. Joop Hartog examines labour market developments in the Netherlands from the 1970s to the late 1990s, mainly focusing on the period beyond 1982, when a labour market agreement was struck in Wassenaar. The rate of unemployment fell from 12 per cent to 4 per cent during this period. The policy fields analysed cover the following areas: government retrenchment, wage restraint by the social partners, increasing labour market flexibility and social security reforms.

Hartog's view is that moderate wage developments and tight fiscal policy were influential in the Netherlands in reducing unemployment. In comparison, reforms in social security were relatively ineffective.

Hartog highlights the importance of incentives in the bargaining system, underlining that the key point is for employers to have a say regarding which trade unions they wish to make agreements with. Although trade union membership rates are fairly low in the Netherlands (27 % in 1999), agreements generally cover the whole of the industrial sector where settlements are reached. Wage restraint also essentially relies on the central organisations and co-ordinated efforts between the organisations. This prevents wage-wage linkages between trade unions from arising (see also Nickell and Van Ours 2000).

The labour market organisations succeeded in securing wage restraint, but were unsuccessful in implementing social security reforms. The labour market organisations have a tradition of playing a key role in operating and supervising unemployment, sickness and disability insurance. Attempts were made already in the 1980s to make the benefit regimes less attractive. The incentive reforms have not been particularly effective as the reduction in the replacement ratio has been offset by supplements being included in collective bargaining agreements. The Wassenaar Agreement also

comprised a reduction in working hours, the removal of obstacles to temporary employment and improved conditions for part-time work (within the context of determining social security benefits). In Hartog's view, the impact of shorter working hours has been fairly modest in reducing unemployment, whereas the increase in temporary and part-time jobs has been important. With the rise in part-time jobs, women's participation in the labour markets has increased and has balanced the effects of wage policy on household income levels.

The main focus in Niels Westergaard-Nielsen's paper on Denmark – where unemployment showed a remarkable reduction since 1993–1994 – was both to describe and to evaluate recent changes in passive and active labour market policies. He examined passive labour market policies within the context of unemployment insurance, post-employment pay and the sabbatical leave system. The latter two were seen as characteristic to Denmark, while the unemployment insurance scheme is basically qualitatively similar to that of Finland, for example. But the Danish compensation structure has the highest maximum benefit replacement ratio in the world with 90 % of compensation for the lowest wage levels.

The length of the benefit period has varied over time. Earlier, the maximum period was nine years, but 'eternal' in practice because subsidised employment could be used to renew the right to daily allowances. The current maximum is four years. The aim is to create a model where one year's unemployment is followed by activation measures (and unemployment insurance). There has been a clear tightening on the conditions for obtaining unemployment benefits, but none of the reforms for adult people have improved the economic incentives to search for a job.

The post employment pay system has been in effect since 1979. This scheme ensures that those aged from 60 to 67 can stay on unemployment insurance until they become eligible for normal old-age pension. The sabbatical leave systems were introduced in 1994. The condition for eligibility was that an unemployed person can be offered the open position belonging to the person taking sabbatical leave.

The main principle in active labour market policy is that individuals have the right and obligation to take part in activation measures after two years of unemployment. The idea has been to reduce the period of unemployment insurance without activation measures. The only reform where the benefit replacement system has been affected is the introduction of a specific "youth programme", where young people may remain unemployed for only 6 months without being subject to active labour market measures.

Niels Westergaard-Nielsen concludes his description of Danish labour

market reforms by saying "some of the elements in the labour market reforms from 1994 onwards have increased the reservation wage (leave schemes, activation, individual plans) while others have meant that the reservation wage has been reduced (shortening of the benefit period, youth program)". Therefore the total effect of these reforms is an empirical question.

He critically surveys studies measuring individual effects of activation and then turns to look at the total effect of various labour market policies on the transition from unemployment to employment. He estimates determinants of probability that an unemployed person gets a job and also checks whether there are systematic changes over time. The overall conclusion made by Westergaard-Nielsen is that the new labour market policies from mid-1990s have been fairly successful in reducing unemployment, but a large part of those formerly counted as unemployed are now subject to different activation and education programmes. These programmes, however, have not themselves increased the likelihood that an unemployed person gets a job. Westergaard-Nielsen ends up by saying "the single most important factor for increasing individual employment prospects is higher economic growth".

In his comments, Martti Hetemäki draws the following conclusions from the Dutch and Danish case. First, real wage moderation has been of crucial importance. Secondly, incentive effects of the tax-benefit system have also played an important role. However, the favourable incentive effects have partly been offset by the fact that the reservation wages, especially at the lower end of the wage scale, have not been reduced. Furthermore, it is not only the generosity of the benefits that matters, but also the eligibility criteria of these systems. Marja-Liisa Parjanne, in turn, evaluates the significance of part-time work, which – when converted to a full-time equivalent – shows that the employment rate in the Netherlands is, in fact, rather modest (the fourth lowest in the EU member states). She argues that it is not enough to decrease the unemployment rate but that the participation rate of the working age population must also be increased in order to guarantee the sustainable financing of welfare expenditure.

References

- Blanchard, O. – Wolfers, J. (2000): The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence, Economic Journal 110, C1–C33.*
- Calmfors, L. – Skedinger, P. (1995): Does Active Labour-Market Policy Increase Employment? Theoretical Considerations and Some Empirical Evidence, Oxford Review of Economic Policy 11, 91–109.*

- Daveri, F. – Tabellini, G.* (2000): Unemployment, Growth and Taxation in Industrial Countries, *Economic Policy* 30, 49–88.
- Fredriksson, P. – Holmlund, B.* (2001): Optimal Unemployment Insurance in Search Equilibrium, *Journal of Labor Economics* 5, 325–353.
- Ljungqvist, L. – Sargent, T.* (1998): The European Unemployment Dilemma, *Journal of Political Economy* 106, 514–550.
- Nickell, S. – Layard, R.* (1999): Labor Market Institutions and Economic Performance, in Ashenfelter, O. – Card, D. (eds.): *Handbook of Labor Economics*, Vol. 3C, Elsevier, Amsterdam, 3029–3084.
- Nickell, S. – van Ours, J.* (2000): Falling Unemployment: the Dutch and British Cases, *Economic Policy*, 135–180.
- Saint-Paul, G.* (2000): *The Political Economy of Labour Market Institutions*, Oxford University Press.

CHAPTER 2

UNEMPLOYMENT BENEFIT SYSTEM

UNEMPLOYMENT INSURANCE AND INCENTIVES

Bertil Holmlund

1	Introduction	31
2	Job search and unemployment insurance	32
3	Contracts, unions and unemployment insurance	36
4	Equilibrium unemployment and unemployment insurance	38
5	The welfare economics of unemployment insurance	43
6	Concluding remarks	49

1 Introduction

The economics of unemployment insurance (UI) has been an active research area for more than two decades. Most of the research has been concerned with positive analysis, such as the effects of UI benefits on the duration of unemployment.¹ Much less interest has been devoted to the welfare issues concerning the design of an *optimal* UI system. The ultimate rationale for public UI is to provide income insurance for risk-averse workers. A welfare analysis of UI policies therefore requires a unified treatment of the insurance benefits provided by UI as well as the adverse incentive effects.

This paper presents a selective overview of some main themes and results in the theoretical and empirical research on UI. The numerous studies in the field have identified many routes whereby UI may affect labour market behaviour. This is a major achievement compared to where we were three decades ago. There are, however, many uncertainties regarding the magnitudes of various behavioural effects. Moreover, the research on the welfare economics of UI is of rather recent origin.

The main approach to the analysis of UI has been through job-search theory, where the focus has been how UI affects the search behaviour among individual unemployed workers. Section 2 of the paper reviews the basic theoretical predictions and some of the empirical research. Section 3 discusses contracting models of the labour market, including models with unions. In these models, the focus is shifted towards how UI may affect wage and employment contracts between the firm and its workforce. One

¹ See Atkinson and Micklewright (1991) and Holmlund (1998) for two recent surveys and assessments of the literature on UI and unemployment.

interesting issue that the contracting framework brings to the fore concerns the financing of UI. Section 4 deals with the relationship between UI and equilibrium unemployment. Some issues in the welfare economics of UI are discussed in section 5 of the paper. Section 6 concludes.

2 Job search and unemployment insurance

Job-search theory

The development of job-search theory provided economists with a useful tool for exploring individual behaviour during unemployment. The theoretical contributions have greatly influenced empirical work on unemployment in general, and microeconometric work on unemployment duration in particular.

Mortensen (1977) presented the seminal paper on the impact of UI benefits on individual job search behaviour; see also Mortensen (1990) and van den Berg (1990). Mortensen derived several results using a model of sequential search, where he incorporated institutional features of UI systems, such as a fixed duration of benefit payments and an eligibility requirement that a certain amount of work must precede insured unemployment. Mortensen also allowed for (exogenous) lay-off risks associated with accepted jobs and endogenous choice of search effort by the unemployed worker, in addition to the usual choice of reservation wage. The wage-offer distribution was taken as stationary and known by the unemployed searcher.

A first result derived was that the worker's reservation wage should decline as he approaches the date at which benefits expire; hence we would expect to find the exit rate increasing over the spell of (insured) unemployment. Second, an increase in the benefit level should make it more attractive for presently non-eligible workers to accept jobs and, thereby, qualify for benefits in the future; the result is thus that the exit rate from unemployment to employment *increases* for workers who are not qualified for benefits; a response known as the "entitlement effect". Third, a rise in the benefit level will cause a newly unemployed worker to *increase* his reservation wage, but induce an insured worker close to benefit exhaustion to *reduce* his reservation wage. The exit rate thus decreases for newly unemployed workers but increases for workers who have come close to benefit exhaustion. The last property follows from the fact that a higher benefit level increases both the value of continued search during unemployment and the value of accepting an offer. The immediate value of higher benefits is small for workers close to benefit exhaustion, as they are

almost in the same situation as workers not qualified for UI.

Mortensen's analysis highlighted that more generous UI benefits need not necessarily have overall adverse incentive effects on job acceptance decisions. For some workers, in particular those who do not qualify (or who have ceased to qualify), higher benefits increase the attractiveness of work, relative to unemployment. The effect of higher benefits on the duration of unemployment is therefore, in general, ambiguous.

Although Mortensen's analysis added important realistic features to the UI analysis, one might argue that it still lacks realism in certain important respects. One critical assumption is that unemployment benefits are essentially a subsidy to leisure, possibly subject to the restriction that the maximum duration of benefit payments is fixed. Workers who reject job offers can continue to live on the dole; there is thus no 'work test' whereby benefits can be withdrawn if workers reject job offers. It is clear that incentive effects will be unimportant if a work test is effective, so that job rejections are punished by benefit withdrawals. However, although existing UI systems include work tests, there is, in practice, still some scope for individual job refusals without losing benefits.

Job search theory has been developed in several directions in order to shed light on other effects of UI. For example, there has been some work on the links between job search and labour supply. The fact that UI benefits are typically tied to previous earnings implies that the employed worker can influence his future benefit level by his choice of work hours. Higher UI benefits may therefore increase labour supply among employed workers (Yaniv 1982). A rise in UI benefits will probably also encourage labour force participation since it increases the relative rewards from participation, compared to non-participation (Hameross 1980). It is conceivable that this participation effect may increase the number of effective job searchers in the labour market and hence, in part, offset the usual disincentive effects of UI.

Empirical work

To what extent have the key predictions of job search theory been supported by the empirical studies? Lancaster and Nickell (1980) reviewed some of the early empirical work and concluded that the theory was well supported: "We would regard the size of the effect of benefits (on unemployment duration) as being now a rather firmly established parameter". The review in Layard et al. (1991) concluded (p. 255) that the "basic result is that the elasticity of expected duration with respect to benefits is generally in the range 0.2–0.9 depending on the state of the labour market and the country concerned..."

The conclusion by Lancaster and Nickell (1980) was clearly premature. The effect of benefits on unemployment duration is far from being a firmly established parameter comparable in robustness to, say, estimates of the returns to schooling. Some of the most careful (and best-known) studies do find significant effects on unemployment duration from higher benefits (see for example Narendranathan et al. 1985), but there are also a number of studies that have been unable to detect significant effects (see Pedersen and Westergård Nielsen 1993, for a survey). In fact, there is – as we have seen – no strong theoretical reason to expect unambiguous results if the entitlement effect is non-trivial.

The empirical results regarding the impact of duration of fixed potential benefit largely favour the theoretical prediction: exit rates from unemployment seem to increase as unemployed insured workers approach the time when benefits are due to expire. Moffit (1985), Meyer (1990) and Katz and Meyer (1990) have reported evidence from the United States; Ham and Rea (1987) from Canada and Carling et al. (1996) from Sweden. Although these results are good news for search theory, there is scope for alternative (implicit-contract) interpretations according to which employers recall laid-off workers just before their benefits run out. We will return to the implications of UI in contracting models.

One intriguing result in Mortensen's theory is that workers close to benefit exhaustion will respond by *lowering* the reservation wage when benefits are increased. This prediction has typically been ignored in empirical research. It has been common to include measures of benefits or replacement rates without allowing for a different effect between those who have just entered the unemployment pool and those who are close to benefit exhaustion. If the theory is correct, the estimates of benefit effects are likely to be sensitive to the duration composition of the samples at hand. Katz and Meyer (1990) report unsuccessful attempts to confirm this effect.

The effect of UI on workers' transition to employment is most often thought of as working through the unemployed worker's reservation wage; possibly also through search effort. There is not much direct evidence on the importance of these potential mechanisms, however. Feldstein and Poterba (1984) provided some direct evidence on the responsiveness of the reservation wage to benefits by using information on reported reservation wages along with information on benefits, and noted a significantly positive effect. Harkman et al. (1997) reported qualitatively similar results in a study on Swedish data. The few available results concerning the impact of benefits on search effort do not give conclusive results. For example, Jones (1989) reports that higher benefits reduce search effort among benefit recipients, whereas Harkman et al. (1997) are unable to find any effect from benefits.

A fundamental problem in many of the microeconometric studies in this field is the lack of truly *exogenous* benefit variation throughout unemployed individuals. Benefits are typically tied to previous earnings; something that makes it difficult to disentangle the impact of benefits from the factors that affect earnings. In the United States, researchers have been able to exploit exogenous state-level variation in benefits, a procedure that has not been available in other applications.

Studies that make use of information on policy *changes* as natural experiments are rare in this field. Two recent studies on Swedish data – Harkman et al. (1997) and Carling et al. (2001) – have used a quasi-experimental design to gain information on how benefit changes have affected transitions out of unemployment.² The slump in the Swedish economy in the early 1990s resulted in a huge government budget deficit that paved the way for a number of policy decisions to cut expenditure and increase revenues through higher taxes. Unemployment insurance (UI) emerged as one of the targets for expenditure cutting. In the early 1990s, the maximum replacement rate among workers eligible for UI amounted to 90 percent of previous earnings. The replacement rate was reduced to 80 percent on the 1st of July 1993 and was further reduced to 75 percent from the 1st of January 1996.

Harkman et al. (1997) examined the effects of the cut from 90 to 80 percent and found modest – albeit imprecisely estimated – support for the hypothesis that the cut in replacement rates from 90 to 80 per cent in 1993 increased transition rates from unemployment to employment and, in particular, to non-participation. Carling et al. (2001) investigated the effects of the cut from 80 to 75 per cent on the 1st of January 1996. The key strategy for identifying the effect of the benefit reform was to exploit the fact that only a fraction – albeit a majority – of unemployed insured workers was affected by the cut in replacement rates. Carling et al. compared the conditional probability of escaping from unemployment to employment before and after the 1st of January 1996 for those affected by the cut – the “treatment group” – with the escape rate for those who were not affected – the “control group”. The results suggest that the benefit cut increased the escape rate by about 10 percent, which is a relatively strong effect compared to what has been found in other studies. Evidence of anticipatory behaviour among the unemployed was also detected: the effect of the cut in replacement rates appeared to already be in operation several months before its actual implementation in January 1996.

² Hunt (1995) and Steiner (1997) report results from similar strategies, using German data.

In the United States, a number of true social experiments of relevance for UI policies took place in the 1980s (see Meyer 1995, for a summary and an evaluation). Individuals were randomly assigned to treatment groups and control groups. The treatment groups were subject to certain programs and incentives, such as cash bonus payments for finding jobs quickly and keeping them for a given period of time. A consistent finding from these experiments was that the bonus treatments reduced the time spent on UI rolls. Meyer (1995) concludes: "...the bonus experiments should convince any hardened sceptics that monetary incentives have a substantial effect on job finding."

In conclusion, there is a fair amount of support for the hypothesis that more generous benefits increase the duration of unemployment among insured workers. However, the "benefit effect" is hardly a firmly established parameter. There are implications of the search theory that have rarely been tested, such as the role of the entitlement effect among workers close to benefit exhaustion. From a policy perspective, the most severe limitation of the microeconometric studies on unemployment duration is their partial-equilibrium nature. We need to consider whether the partial-equilibrium results necessarily carry over to the general equilibrium. This is an issue to which we will return later.

3 Contracts, unions and unemployment insurance

Job-search theory portrays unemployed workers as searching for offers among prospective new employers. Feldstein (1976) challenged this perspective. He pointed out that employers *rehired* a substantial fraction of the unemployed. Feldstein estimated that as much as 75 percent of all layoffs in US manufacturing were "temporary" in the sense that the workers were rehired. For this case, job search theory is not the most useful approach. UI still matters, but through other routes than job search.

Feldstein (1976) developed the basic implicit-contract model to examine the implications of UI with respect to the level of benefits and the financing of benefits. The model features a firm with a pool of "attached" workers facing uncertain product demand. The firm and the workers have to agree on a contract that specifies employment, wages and, perhaps, work hours for every possible realisation of demand. For example, the contract specifies wages and employment in booms as well as slumps. The number of laid-off workers in each state of demand is simply given by the difference between the number of attached and employed workers. The model is particularly useful for investigating the role of *experience rating* in UI. In broad

conformity with the system practised in the United States, Feldstein assumed that firms that lay off workers have to finance part of the UI benefits that their workers are eligible to. The model implies that a rise in the UI subsidy – a decline in experience rating – causes a reduction in employment.

The general validity of Feldstein's result concerning experience rating has been questioned. For example, Burdett and Wright (1989) have relaxed the assumption of a fixed pool of workers attached to a firm and allowed the firm to choose the number of workers. This modification has important implications. It transpires that higher experience rating does not only reduce lay-off rates, but also the number of attached workers. The intuitive explanation is that higher experience rating increases labour costs, which is bound to reduce the number of workers that the firm is willing to hire. The effect on average employment is ambiguous in general, and may, plausibly, be negative. Finally, it can be noted that simulations undertaken by Mortensen (1994), using the Mortensen and Pissarides (1994) equilibrium model of job creation and job destruction, suggest that full experience rating would produce a small *increase* in unemployment, a result driven by the fact that experience rating effectively discourages *hirings* by making lay-offs more costly to firms.

The early empirical work on temporary lay-offs seemed to suggest a strong case for the idea that benefits were an important explanation for the prevalence of temporary lay-offs in the United States. Feldstein (1978) used micro data and explained the probability of being temporarily laid off by, *inter alia*, the UI replacement rate. His results indicated strong effects: UI benefits were estimated to explain 50 per cent of all temporary lay-offs in the US. These results were, however, questioned by Topel (1983), who argued that one has to distinguish between whether or not benefits are subject to experience rating; it is *subsidised* UI payments that matter in lay-off decisions. Topel measured the extent of UI subsidisation across different states in the United States and found that subsidised UI, i.e., incomplete experience rating, accounted for around 30 per cent of all spells of temporary lay-off unemployment. Non-subsidised benefits were found to have a negligible impact on firms' lay-off behaviour. A recent study by Anderson and Meyer (2000), examining the effects of introducing experience rating in the state of Washington in the US in 1985, also finds support for the hypothesis that experience rating reduces lay-offs.

The implicit-contract models considered by Feldstein and others have much in common with standard models of utility-maximising trade unions (see Oswald 1985, and Pencavel 1991, for surveys). A popular model considers a trade union as attempting to maximise its members' expected

utilities, typically subject to the restriction that profit-maximising firms determine employment. One of the implications is that the union's preferred wage increases in the benefit level, as a higher benefit level reduces the cost of unemployment to the members. This result for the monopoly-union case carries over to many conventional models with bargaining over wages.

Again, it is important to consider whether the implications from a partial-equilibrium analysis remain – at least qualitatively – intact when we turn to the general equilibrium. Some minor and plausible extensions of Feldstein's contract model have reversed a key policy conclusion concerning the financing of UI benefits. Are the implications from union models concerning benefits also fragile when it comes to minor changes in underlying assumptions? We discuss the issue by using two standard models of equilibrium unemployment, namely a union-bargaining model and a search-matching model.

4 Equilibrium unemployment and unemployment insurance

Union-bargaining models

A popular model of unemployment features an economy with decentralised wage negotiations between symmetric firms and unions, subject to the "right-to-manage" constraint that employment is determined by firms (see for example Nickell 1990 for details). The negotiated wage in the single-union-firm bargain will be set as a mark-up on a measure of "outside" labour market opportunities, captured by the general wage, the unemployment rate (a proxy for labour market tightness) and the benefit level. A higher benefit level thus increases the negotiated wage at the firm (or sectoral) level. When all union-firm pairs raise their negotiated wages, unemployment is bound to increase. Suppose that the benefit level is adjusted to the general wage (w) through a fixed replacement rate, and that the worker's utility function takes the form $U = (1/\sigma)w^\sigma$, with $\sigma \leq 1$. One can then derive an expression for the symmetric-equilibrium unemployment rate (u) that takes the form:

$$u = \frac{\kappa\sigma}{1 - \rho^\sigma} \quad (1)$$

The replacement rate is denoted ρ , where $\rho \in (0,1)$. κ is a measure of the workers' bargaining power, in a broad sense. With fixed capital, perfect competition in the product market and a constant labour share, κ is constant and given as $\kappa = \beta(1 - \gamma)/[(1 - \beta)\gamma + \beta]$, where γ is the labour share and β is the

measure of the union's power in the (Nash) bargain, with $\beta \in (0, 1)$.

The unemployment rate is very sensitive to changes in the replacement rate in this model. Moreover, each percentage point increase in the replacement rate has a bigger effect on unemployment, the higher the initial unemployment rate. When workers are risk neutral ($\sigma = 1$) we have $d \ln u / d \ln(1 - \rho) = -1$. If one takes this model seriously enough to simulate it, it generates very large unemployment responses to changes in replacement rates. Suppose that workers have a degree of relative risk aversion of 2 ($\sigma = -1$) and choose a value of κ so as to generate an unemployment rate of 8 per cent when the replacement rate is 50 per cent. A rise in the replacement rate from 50 to 60 per cent generates an increase in the unemployment rate by almost 4 percentage points with these assumptions. A rise from 50 to 80 per cent implies a rise in unemployment from 8 to 32 per cent. The magnitudes of these effects seem implausibly large considering the fact that actual replacement rates do vary substantially between countries without huge differences in unemployment rates.

Equilibrium search models

A search-matching model of the type developed in Pissarides (1990) features a constant-returns-to-scale matching function that summarises the interactions between unemployed job searchers and vacancies. Workers are either employed or unemployed and care about the expected present value of lifetime utility. Vacancies are opened as long as they yield positive expected profits. Firms' recruitment behaviour provides a relationship between the real wage cost and labour market tightness, defined as the ratio between the number of vacancies and the number of unemployed. Wages are set in decentralised bargains between workers and firms, where higher labour market tightness increases the negotiated wage.

Table 1 presents some simulation results from a calibrated version of this model. UI benefits are financed by a proportional payroll tax. The model has been calibrated so as to generate 8 per cent unemployment with risk-neutral workers and a replacement rate of 50 per cent. The effects of varying the replacement rate are given in the first column for the risk-neutral case; the remaining columns show simulated unemployment rates when workers are risk-averse. All parameters except σ are kept constant across the columns.

Table 1. Equilibrium unemployment (%) and replacement rates (%) in the search-matching model

Replacement rate	$\sigma = 1$	$\sigma = -0.1$	$\sigma = -1$
20	6.1	3.8	2.3
30	6.6	4.6	3.2
40	7.2	5.5	4.2
50	8.0	6.5	5.3
60	9.1	7.8	6.8
70	10.8	9.7	8.8
80	13.6	12.7	12.0
90	20.2	19.6	19.1

Note: σ is a measure of relative risk aversion R , i.e. $\sigma = 1-R$.
Source: Holmlund (1998).

The results from this exercise suggest a marked non-linear relationship between unemployment and the replacement rate, albeit less strong than in the bargaining model previously discussed. A rise in the replacement rate from 50 to 60 per cent would, by these examples, increase unemployment by little more than 1 percentage point. A rise from 80 to 90 per cent would increase unemployment by 7–8 percentage points.

Mortensen (1996) reports simulation results of UI policies in a parameterised version of the Mortensen and Pissarides (1994) model, which is an extended version of the Pissarides (1990) matching model, to allow for endogenous job creation and job destruction. The effects of higher UI benefits are very large in this model. A rise in the replacement rate from 30 to 40 per cent would increase unemployment by at least 4 percentage points, and, possibly, by more than 10 percentage points, according to these simulations. The most likely reason as to why benefit hikes apparently have much stronger impact in Mortensen's experiments than in those reported in Table 1 is because Mortensen imputes a non-trivial value to leisure. This means that the "total" replacement rate, including the value of leisure, is much higher than the rate provided by UI. If the value of leisure is set to 40 per cent of labour productivity (roughly Mortensen's assumption) in our simulations, we get results very similar to his.

Unfortunately, economists know virtually nothing about a 'reasonable' estimate of the leisure value of unemployment. A liberal interpretation of some empirical evidence on unemployment and psychological well-being suggests that the value may well be negative (see, for example, Blanchflower and Oswald 1997). Results from policy simulations that hinge crucially on assumptions concerning unobservable factors should therefore be used with more than the usual caution.

Empirical work

How do the numbers from simulations of equilibrium models compare to available empirical results? The microeconometric studies of unemployment duration are of only limited use here, as they do not capture general-equilibrium effects. More relevant are studies that compare economies with different benefit regimes, and possibly also studies that exploit time series in order to examine how unemployment in a single economy responds to changes in UI policies.

The generosity of UI benefits seems to have increased gradually since the 1960s in most OECD countries. The OECD has calculated a summary measure of benefit generosity that takes into account benefit levels as well as the length of benefit periods.³ Benefit generosity has, according to these calculations, doubled between the mid-1960s and the mid-1990s. The summary measure is a somewhat crude indicator, but the basic message is clear: unemployment benefits have become substantially more generous in most OECD countries over the past three decades. The rising trend in benefits relative to earnings must be considered as a candidate explanation of the rising trend in unemployment in most OECD countries.

There have been a few attempts to use cross-country data to explain unemployment differences by unemployment benefits and other variables; the work by Layard et al. (1991) perhaps being the best known. In a simple cross-country regression, explaining average unemployment for the period 1983–88 in 20 OECD countries, they find that the replacement rate enters with a significant coefficient of 0.17. Layard et al. also note a significant positive effect from the maximum duration of benefit payments. Scarpetta (1996) reports results from a more ambitious study that makes use of panel data for the period 1983–93. A key result in this study is that higher replacement rates increase unemployment; the estimated coefficient is 0.13, implying that an increase by 10 percentage points would increase unemployment by 1.3 percentage points. These results are broadly in line with the magnitudes implied by the simulation results in Table 1, for replacement rates in the range of 50 to 70 per cent.⁴ Nickell (1998) reports results, using cross-country panel data for the period 1983–1994, implying

³ The OECD has computed replacement rates for three different duration categories (one, two or three years, and four or five years of unemployment). These calculations are applied to three family situations and two different levels of previous earnings. The summary measure is the mean of 18 computed replacement rates. The net (after-tax) replacement rates are higher than the gross rates, sometimes substantially (see Martin 1996).

⁴ Most equilibrium models of unemployment ignore the fact that benefits are typically paid for a limited time period rather than forever. This makes it difficult to relate the OECD summary measure to the replacement rates used in parameterised models.

that "a 10 percentage point increase in the benefit replacement rate and one year on the duration of entitlement generates a 25 percent increase in unemployment".⁵

The empirical results from studies that use time series for single countries have produced diverse results concerning the effects of UI policies, although typically in the expected direction. For example, Manning (1993) estimated unemployment equations for Britain and found significantly positive replacement rate effects. Forslund (1995) found similar results for Sweden. Other studies have derived positive benefit effects on unemployment via estimated real wage equations, for example Layard and Nickell (1985).

It may be important here to consider the possibility that unemployment-increasing effects of more generous benefits need not necessarily also have adverse effects on employment. The reason is that a generous benefit system encourages labour force participation that, in turn, may contribute to a rise in employment that partly offsets the rise in unemployment. Indeed, the empirical work on panel data for OECD countries reported by Nickell and Layard (1999) finds adverse benefit effects on total employment that are only marginally significant.

When evaluating these and similar studies, one cannot easily ignore the possibility of reverse causality. Is the rise in unemployment driven by more generous UI systems? Or has the rise in unemployment increased the political pressure to make UI more generous? Benefit variables are often treated as endogenous in empirical studies, but it is an open question as to whether the identification problems really have been solved.

UI and unemployment persistence

Most theoretical investigations of how UI affects unemployment have focused on steady states rather than dynamic adjustment. Some recent work in the search and matching framework has suggested that UI may have important implications for how unemployment adjusts to shocks. The paper by Ljungqvist and Sargent (1998) is one example; the recent paper by Marimon and Zilibotti (1999) is another.

Ljungqvist and Sargent (1998) develop a model where workers experience stochastic accumulation and depreciation of skills. Unemployed workers face a risk of skill loss and their UI benefits are based on the wage in their most recent job. The model is used to simulate the dynamic behaviour of two economies, referred to as a "laissez-faire" and "welfare state". The

⁵ Note that a 25 per cent increase would imply, for example, a rise in the unemployment rate from 8 to 10 percentage points.

welfare state features a benefit replacement rate of 70 per cent of previous earnings, whereas there are no benefits in the laissez-faire economy. It transpires that the steady states of the two economies are very similar, but the dynamic responses to shocks differ substantially. A transient economic shock causes a prolonged period of long-term unemployment in the welfare state while adjustment is fast in the laissez-faire economy. The reason for this difference appears to be that the unemployed in the welfare state adjust their reservation wages more slowly, and search less intensively, than the unemployed in the corresponding laissez-faire economy without benefits. The two economies also differ markedly with respect to their responses to an increase in the measure of "economic turbulence". Unemployment in the laissez-faire economy stays roughly constant whereas unemployment in the welfare state increases sharply as more workers experience large skill losses while being entitled to 70 per cent of their previous earnings.

The above-mentioned papers have identified effects of UI that have largely been ignored in the previous literature. The possibility that generous benefits can cause persistence of severe unemployment has not been modelled carefully in earlier research.⁶ And the observation that technological shocks may interact with generous UI to produce high unemployment is novel. In general, the simulations of parameterised search and matching models are useful as exercises to identify effects that are not easily derived from simpler analytical models, but there is much more to be done before they can be used to confidently predict how an economy will respond to UI policies. For example, it is disturbing that some results depend heavily on assumptions made concerning unobservable factors, such as the value of leisure. Many of these models are also seriously incomplete as guides to how policies *should* be undertaken – the reason being that they feature risk-neutral agents and thereby ignore the benefits from income insurance as a means to smooth consumption.

5 The welfare economics of unemployment insurance

The economics of UI has, first and foremost, been concerned with positive analysis of the effects of various UI policies. Much less attention has been devoted to the normative issue, i.e., what is the *optimal* level of UI benefit in an economy with risk-averse workers? Despite the moral-hazard

⁶ There is some empirical evidence that long-term benefits magnify the increase in unemployment following disinflationary policies; see Ball (1996).

problems related to wage-setting and job-search incentives, the optimal UI policy may well involve quite high replacement rates if workers are risk-averse and do not have access to credit markets.

The conventional approach to the welfare analysis of UI is to contrast the consumption-smoothing role of UI benefits with the moral hazard effects that are thought to reduce effective labour supply and to probably reduce employment and output. This is clearly a worthwhile exercise, but one should also recognise the possibility that UI can perhaps *raise* total output despite the usual moral hazard effects. A recent paper by Acemoglu and Shimer (2000) makes this point and argues that UI encourages *risk-taking*, i.e., encourages workers to seek higher productivity jobs and encourages firms to create such jobs. The idea is formalised and built into a quantitative model that is calibrated on US data. The authors find that increased generosity of the prevailing UI system in the US would increase unemployment, as the conventional wisdom predicts. However, total output and welfare would also increase as more generous UI encourages workers to hold out for more productive jobs. These are interesting results that fit well with an old idea that UI may improve matching between workers and jobs in the labour market.

The optimal UI system would presumably offer lower replacement rates if workers had access to the capital market. A few recent papers have addressed the welfare implications of UI, using general-equilibrium search models that allow for capital markets. For instance, Costain (1997) develops a model with endogenous search effort and precautionary savings. The set up of the wage bargain is greatly simplified by ignoring that the wage in general will depend on outside opportunities; hence, the benefit level will not directly affect the outcome of the bargain. Despite this simplification, the model is much too complicated to solve analytically and the results are based on numerical calibrations. According to Costain: "Optimal (replacement) ratios in the range of 30 percent to 40 percent seem to arise very easily". Valdivia (1996) reports similar results with a somewhat different wage setting rule than the one adopted in Costain's papers. Neither of these papers considers the optimal sequencing of benefits, however.

The optimal time profile of benefit payments

The seminal papers on optimal UI appeared in the late 1970s (Baily 1978; Flemming 1978; Shavell and Weiss 1979). These papers analysed the problem of UI design in an optimal taxation framework; more generous benefits caused lower search intensity and hence longer spells of unemployment. Shavell and Weiss focused, in particular, on the optimal sequencing of benefits. Their analysis, based on a model of the individual

worker's search behaviour, suggested that benefits should decline over the spell of unemployment, provided that the unemployed can influence their job-finding probabilities. Baily's two-period analysis analogously suggested a case for a redundancy payment, i.e., a lump-sum transfer to the worker at the start of the unemployment spell.

Recently, a number of papers have extended the analysis of Shavell and Weiss. One strand of the literature stays within the Shavell and Weiss framework in the sense that these focus solely on the behaviour of the worker. Hopenhayn and Nicolini (1997) enlarge the set of policy instruments by considering a wage tax after re-employment, in conjunction with the sequence of benefit payments. According to their analysis, benefits should decrease throughout the unemployment spell and the tax upon re-employment should increase with the length of the spell. The result that benefits should fall monotonically over the unemployment spell is, however, called into question by Wang and Williamson (1996). They add another source of moral hazard by examining an environment where a worker's employment status depends on the choice of effort. The transition rate from unemployment to employment increases with search effort; analogously, the probability of remaining employed increases with work effort. The optimal UI in this setting involves a large drop in consumption in the first period of unemployment (so as to discourage shirking), and a large re-employment bonus (so as to encourage search effort). The implied time profile of UI compensation is non-monotonic; compensation increases initially and then falls throughout the spell.

Another strand of the recent literature on benefit sequencing has approached the issue by incorporating some aspects of firm behaviour. Davidson and Woodbury (1997) examine whether benefits should be paid indefinitely or for a fixed number of weeks. The analysis is set in a search and matching framework, albeit with a fixed number of jobs and exogenous wages. Their argument is that the optimal UI program should offer risk-averse workers *indefinite* benefit payments, a conclusion that seems to suggest that most existing UI programs with finite benefit periods are sub-optimal.⁷ Cahuc and Lehmann (1997) ignore job search but allow for endogenous wage determination through union-firm bargaining. They find that a constant time sequence yields a lower unemployment rate than a program with a declining time profile; the reason being that a decreasing benefit schedule increases the welfare of the short-term unemployed at the

⁷ Davidson and Woodbury do not offer formal proof of their conjecture, however.

expense of the long-term unemployed and, therefore, wage pressure rises.⁸

Fredriksson and Holmlund (2001) address the question of the optimal sequencing of benefits using an equilibrium model of search unemployment along the lines of Pissarides (1990). They allow for endogenous search effort among unemployed workers and, in contrast to Shavell and Weiss (1979), Hopenhayn and Nicolini (1997), Wang and Williamson (1996) and Davidson and Woodbury (1997), incorporate endogenous wage determination and free entry of new jobs. The UI program affects search effort as well as the wage bargains. In a search-equilibrium framework, as well as in other models of equilibrium unemployment, there is a link between benefits and wages, which, in turn, implies a relationship between benefits and job creation.

Fredriksson and Holmlund ask whether a declining time profile of benefit payments dominates, in welfare terms, a program with indefinite payments of a constant wage replacement rate. The answer to this question turns out to be an unambiguous ‘yes’, provided that discounting is ignored. The result is driven by a feature recognized from models of individual worker search, which implies that the effect of higher benefits on the individual worker’s search behaviour depends on whether he presently qualifies for UI or not. A rise in benefits will, generally speaking, increase search effort among those not insured, as this will bring them, more quickly, to employment that results in eligibility for future UI payments. A declining benefit sequence exploits this “entitlement effect” by providing incentives for active search among workers not currently entitled to benefits.

With discounting, the optimality of a declining benefit sequence cannot be established analytically. The reason for the ambiguity lies in the fact that a declining sequence increases the welfare of the short-term unemployed at the expense of the long-term unemployed, which, in turn, induces stronger wage pressure than a flat (or increasing) sequence. According to the numerical calibrations, however, this “wage-pressure effect” is dominated by the case for exploiting the entitlement effect. Moreover, the numerical experiments suggest that the optimal degree of differentiation should be substantial. The welfare gains of switching from a uniform benefit structure to a two-tiered one appear to be non-trivial.

⁸ Cahuc and Lehmann (2000) is a more recent version of the model that allows for endogenous job search. The model then becomes too complicated to yield analytical results. The numerical simulations indicate that a declining time profile tends to encourage search effort and thereby reduce unemployment.

Monitoring, sanctions and workfare

Real-world UI systems typically operate in conjunction with some degree of *monitoring* of the search activity of benefit recipients. Monitoring usually takes place through public employment agencies. For example, job seekers have to show up with some regularity at the employment offices, and there must be personnel available to meet with the seekers. A worker who fails to meet certain search requirements – failure to show up at the office or failure to show up at a scheduled interview with a prospective employer – may be exposed to a *sanction*; for example, a cut in benefits. Recent evidence from The Netherlands suggests that such sanctions can have substantial incentive effects on job-search efforts among the unemployed; see Abbring et al. (1998) and van den Berg et al. (1998).⁹

Monitoring intensity and benefit generosity are two instruments that are closely related. An effective monitoring system can sustain generous UI compensation. In the extreme, effective monitoring can completely eliminate moral hazard and the optimal compensation rate may be close to 100 per cent of foregone income, i.e., full insurance. Such a policy is unlikely to be optimal, however. Monitoring requires real resources, such as personnel-intensive employment offices. One would therefore expect that the optimal UI policy would involve some degree of “self-monitoring” among benefit recipients, i.e., a replacement rate sufficiently low to induce active job search in the presence of imperfect monitoring.

The optimal mix of monitoring, sanctions and benefit generosity has not, so far, been subject to much research. However, the recent paper by Boone and van Ours (2000) attempts to make some progress in this respect. A crucial parameter here is the cost of monitoring. Monitoring is likely to improve welfare, unless monitoring costs are very high.

A further aspect of monitoring considers the possibility of using *workfare* as a screening device. Suppose, realistically, that workers differ in their valuation of leisure and, thereby, in the amount of effort they put into active job search. Some people may search aggressively and some hardly search at all because they place a high value on their leisure time. The government may then have an incentive to reward those actively searching and punish those who fail to meet some predetermined search requirement. One way of doing so would be to use workfare, i.e., to offer jobs to the unemployed and require job acceptance in exchange for benefits. This would function as a work test where those who place a high value on leisure would reject the offers and thereby lose their entitlement to benefits.

⁹ The estimates imply that temporary benefit cuts in the range of 5 to 30 per cent create increases in job-finding rates of 77 per cent (the metal industry) and 107 per cent (the banking industry). Similar estimates are reported for exits out of welfare.

Workfare may, under some conditions, be welfare-improving, even if the output produced by program participants is negligible. Hansen and Tranaes (1999) present a formal analysis of workfare in a model where individuals have the same productivity but differ with respect to their preferences for leisure. There are two types of individual, referred to as workers (with low disutility of labour) and non-workers (with high disutility of labour). The government knows the distribution of individual characteristics, but not the preferences of a particular individual. Job-search and job acceptance decisions are also private information to the individuals. The paper examines whether the introduction of workfare can be Pareto improving, i.e., whether it is possible to improve welfare for one type of individual without worsening conditions for the other type. The main result is that workfare works as a welfare-improving screening device if individuals are sufficiently heterogeneous with respect to their valuation of leisure. By introducing a work requirement, the government can induce non-workers to personally opt out of the UI system since they have a strong preference for leisure. This makes it possible to raise the UI benefits, which represents a welfare improvement for workers.

Active labour market policies in some countries have characteristics that may be described as workfare. Of course, the costs of maintaining a workfare system are not trivial; a feature that needs to be taken into account when designing an appropriate combination of UI and workfare.

The financing of UI

How should UI be financed? There is some – although perhaps not conclusive – US evidence that experience rating discourages lay-offs and may contribute to lower unemployment, compared to a system without experience rating. Does it follow that stringent experience rating is optimal? Not necessarily. A welfare analysis of the financing of UI involves a number of considerations.

First, one could argue that the insurance motive for UI calls for intersectoral risk sharing. Some adverse employment shocks are sector-specific and it is unlikely to be optimal to place the whole burden of adjustment on workers in the sector exposed to an adverse shock. The risk sharing argument thus suggests that experience rating can be taken too far. “Complete” experience rating, where workers and/or firms in sector j finance 100 percent of the UI benefits paid out in sector j , is unlikely to be an optimal system.

This being said, it seems clear that some degree of experience rating can serve a useful role. One argument has to do with efficient resource allocation. Absence of experience rating implies subsidies to sectors with

permanently higher unemployment than the average (and net taxes on sectors with lower unemployment). Industries differ in the degree of seasonal and cyclical unemployment, and to the extent that these differences can be measured they should affect the structure of UI financing. High seasonal unemployment in an industry should imply higher UI taxes (or UI premiums) on workers and/or firms in this industry compared to industries without seasonal unemployment.

Another argument revolves around the need for wage moderation, and is especially relevant for countries where the UI system is administered by UI funds in close cooperation with labour unions. Finland, Denmark and Sweden are the obvious examples. The UI funds in these countries are heavily subsidised. In fact, the marginal cost to the firm or the worker of raising unemployment is zero in the Swedish system. This is not a system that provides incentives for wage moderation since the costs of higher unemployment, induced by higher wage costs, are not internalised by the wage setters. By reducing the subsidies to the UI funds, and, in particular, subsidies at the margin, it would be possible to encourage wage moderation and to bring about higher employment; see for example Holmlund and Lundborg (1988, 1999). This argument is especially relevant when wages are determined at the sectoral (industry) level. The argument carries less weight if wage negotiations are centralised at the national level; in this case one would expect wage setters to internalise the implications for unemployment expenditure of their settlements.

Although there is no strong argument for Europe to copy the US experience rating system, there is a case for increasing wage setters' awareness of the employment consequences of their decisions. Reforms of the financing of UI should try to find ways to establish a direct connection between the costs of unemployment and the taxes (or social security contributions) that are raised to cover the costs of higher unemployment. The prevailing UI systems in Finland, Denmark and Sweden can be reformed so as to become more conducive to wage moderation.

6 Concluding remarks

The weight of the evidence suggests that increased benefit generosity causes longer spells of unemployment and probably higher overall unemployment as well. But there remains a considerable degree of uncertainty regarding the magnitudes of these effects.

There are also various fine details of UI policies (such as the choice between a change in benefit levels and a change in benefit duration)

where we have little empirical ground for making strong predictions as guidelines to policy makers. What would happen to unemployment (duration) if, say, benefit levels were increased while benefit durations were shortened by a prescribed length of time? Although there have been attempts to answer such questions in some empirical studies (Katz and Meyer 1990), we are a long way from a situation where economists can, with any confidence, provide policy makers with reliable menus for choice among key UI parameters.

Policy prescriptions regarding UI should recognise the ultimate rationale for UI, namely its provision of income insurance to risk-averse individuals. It is only recently, however, that equilibrium approaches to unemployment have taken the insurance motive for UI seriously. Simply looking at changes in unemployment is not sufficient to gauge the welfare effects of UI policies. The recent work on the productivity effects of UI underlines this point.

References

- Abbring, J. – van den Berg, G. – van der Ours, J.* (1998): The Effect of Unemployment Insurance Sanctions on the Transition Rate from Unemployment to Employment, Working Paper, Tinbergen Institute, Amsterdam.
- Acemoglu, D. – Shimer, R.* (2000): Productivity Gains From Unemployment Insurance, European Economic Review 44, 1195–1224.
- Andersen, P. – Meyer, B.* (2000): The Effects of the Unemployment Insurance Payroll Tax on Wages, Employment, Claims and Denials, Journal of Public Economics 78, 81–106.
- Atkinson, A. – Micklewright, J.* (1991): Unemployment Compensation and Labor Market Transitions: A Critical Review, Journal of Economic Literature 29, 1679–1727.
- Baily, M. N.* (1978): Some Aspects of Optimal Unemployment Insurance, Journal of Public Economics 10, 379–402.
- Ball, L.* (1996): Disinflation and the NAIRU, NBER Working Paper 5520.
- Blanchflower, D. – Oswald, A.* (1997): The Rising Well-being of the Young, NBER Working Paper 6102.
- Boone, J. – van Ours, J.* (2000): Modeling Financial Incentives to Get Unemployed Back to Work, CentER Discussion Paper 2000–02, Tilburg University.
- Burdett, K. – Wright, R.* (1989): Optimal Firm Size, Taxes, and Unemployment, Journal of Public Economics 39, 275–287.
- Cahuc, P. – Lehmann, E.* (1997): Equilibrium Unemployment and the Time Sequence of Unemployment Benefits, Working Paper 97.49, Université de Paris I, Panthéon-Sorbonne.
- Cahuc, P. – Lehmann, E.* (2000): Should Unemployment Benefits Decrease with the Unemployment Spell? Journal of Public Economics 77, 135–153.
- Carling, K. – Edin, P-A. – Harkman, A. – Holmlund, B.* (1996): Unemployment Duration, Unemployment Benefits, and Labor Market Programs in

- Sweden, *Journal of Public Economics* 59, 313–334.
- Carling, K. – Holmlund, B. – Vejsiu, A.* (2001): Do Benefit Cuts Boost Job Finding? Swedish Evidence from the 1990s. *Economic Journal*, October.
- Costain, J.* (1997): Unemployment Insurance in a General Equilibrium Model of Job Search and Precautionary Savings, manuscript, Department of Economics, University of Chicago.
- Davidson, C. – Woodbury, S.* (1997): Optimal Unemployment Insurance, *Journal of Public Economics* 64, 359–387.
- Feldstein, M.* (1976): Temporary Layoffs in the Theory of Unemployment, *Journal of Political Economy* 84, 937–957.
- Feldstein, M.* (1978): The Effect of Unemployment Insurance on Temporary Layoff Unemployment, *American Economic Review* 68, 834–846.
- Feldstein, M. – Poterba, J.* (1984): Unemployment Insurance and Reservation Wages, *Journal of Public Economics* 23, 141–167.
- Flemming, J. S.* (1978): Aspects of Optimal Unemployment Insurance: Search, Leisure, Savings and Capital Market Imperfections, *Journal of Public Economics* 10, 403–425.
- Forslund, A.* (1995): Unemployment: Is Sweden Still Different? *Swedish Economic Policy Review* 2, 15–58.
- Fredriksson, P. – Holmlund, B.* (2001): Optimal Unemployment Insurance in Search Equilibrium, *Journal of Labor Economics* 19, 370–399.
- Ham, J. – Rea, S.* (1987): Unemployment Insurance and Male Unemployment Duration in Canada, *Journal of Labor Economics* 5, 325–353.
- Hamermesh, D. S.* (1980): Unemployment Insurance and Labor Supply, *International Economic Review* 21, 517–527.
- Hansen, C. T. – Tranæs, T.* (1999): Optimal Workfare in a Society of Workers and Non-workers, mimeo, EPRU, University of Copenhagen.
- Harkman, A. – Jansson, F. – Källberg, K. – Öhrn, L.* (1997): Arbetslösheitsersättningen och arbetsmarknadens funktionssätt (Unemployment Insurance and the Functioning of the Labor Market), The Swedish National Labor Market Board.
- Holmlund, B.* (1998): Unemployment Insurance in Theory and Practice, *Scandinavian Journal of Economics* 100, 113–141.
- Holmlund, B. – Lundborg, P.* (1998): Unemployment Insurance and Union Wage Setting, *Scandinavian Journal of Economics* 90, 161–172.
- Holmlund, B. – Lundborg, P.* (1999): Wage Bargaining, Union Membership, and the Organization of Unemployment Insurance, *Labour Economics* 6, 397–415.
- Hopenhayn, H. – Nicolini, J. P.* (1997): Optimal Unemployment Insurance, *Journal of Political Economy* 105, 412–38.
- Hunt, J.* (1995): The Effect of Unemployment Compensation on Unemployment Duration in Germany, *Journal of Labor Economics* 13, 88–120.
- Johnson, G. – Layard, R.* (1986): The Natural Rate of Unemployment: Explanation and Policy, in O. Ashenfelter and R. Layard (eds.), *Handbook of Labor Economics*, North-Holland.
- Jones, S.* (1989): Job Search Methods: Intensity and Effects, *Oxford Bulletin of Economics and Statistics* 51, 277–296.
- Katz, L. – Meyer, B.* (1990): The Impact of the Potential Duration of Unemployment Benefits on the Duration of Unemployment, *Journal of Public Economics* 41, 45–72.
- Lancaster, T. – Nickell, S.* (1980): The Analysis of Re-employment Probabilities for the Unemployed, *Journal of the Royal Statistical Society* 143, 141–165.

- Layard, R. – Nickell, S.* (1986): Unemployment in Britain, *Economica* (Supplement), S121–S169.
- Layard, R. – Nickell, S. – Jackman, R.* (1991): *Unemployment: Macroeconomic Performance and the Labour Market*, Oxford University Press.
- Ljungqvist, L. – Sargent, T.* (1998): The European Unemployment Dilemma, *Journal of Political Economy* 106, 514–550.
- Manning, A.* (1993): Wage Bargaining and the Phillips Curve: The Identification and Specification of Aggregate Wage Equations, *Economic Journal* 103, 98–118.
- Marimon, R. – Zilibotti, F.* (1999): Unemployment vs. Mismatch of Talents: Reconsidering Unemployment Benefits, *Economic Journal* 109, 266–291.
- Martin, J.* (1996): Measures of Replacement Rates for the Purpose of International Comparisons: A Note, *OECD Economic Studies*, No 26, 99–115.
- Meyer, B.* (1990): Unemployment Insurance and Unemployment Spells, *Econometrica* 58, 757–782.
- Meyer, B.* (1995): Lessons from the U.S. Unemployment Insurance Experiments, *Journal of Economic Literature* 33, 91–131.
- Moffit, R.* (1985): Unemployment Insurance and the Distribution of Unemployment Spells, *Journal of Econometrics* 28, 85–101.
- Mortensen, D.* (1977): Unemployment Insurance and Job Search Decisions, *Industrial and Labor Relations Review* 30, 505–517.
- Mortensen, D.* (1990): A Structural Model of Unemployment Insurance Benefit Effects on the Incidence and Duration of Unemployment, in Y. Weiss and G. Fishelson (eds.), *Advances in the Theory and Measurement of Unemployment*, Macmillan.
- Mortensen, D.* (1994): Reducing Supply-Side Disincentives to Job Creation, in *Reducing Unemployment: Current Issues and Policy Issues*, proceedings from a symposium sponsored by the Federal Reserve Bank of Kansas City.
- Mortensen, D.* (1996): Search Equilibrium Approaches to Labor Market Policy Analysis, paper presented at the 1996 meeting of the European Association of Labour Economists, Chania, Crete.
- Mortensen, D. – Pissarides, C.* (1994): Job Creation and Job Destruction in the Theory of Unemployment, *Review of Economic Studies* 61, 397–415.
- Narendranathan, W. – Nickell, S. – Stern, J.* (1985): Unemployment Benefits Revisited, *Economic Journal* 95, 307–329.
- Nickell, S.* (1990): Unemployment: A Survey, *Economic Journal* 100, 391–439.
- Nickell, S.* (1998): Unemployment: Questions and Some Answers, *Economic Journal* 108, 802–816.
- Nickell, S. – Layard, R.* (1999): Labor Market Institutions and Economic Performance, in O. Ashenfelter and D. Card (eds.), *Handbook of Labor Economics*, Vol. 3C, North-Holland.
- Oswald, A.* (1985): The Economic Theory of Trade Unions: An Introductory Survey, *Scandinavian Journal of Economics* 87, 160–193.
- Pedersen, P. – Westergård-Nielsen, N.* (1993): Unemployment: A Review of the Evidence from Panel Data, *OECD Economic Studies*, No 20, 65–114.
- Pencavel, J.* (1991): *Labor Markets under Trade Unionism*, Basil Blackwell.
- Pissarides, C.* (1990): *Equilibrium Unemployment Theory*, Basil Blackwell.
- Scarpetta, S.* (1996): Assessing the Role of Labour Market Policies and Institutional Settings on Unemployment: A Cross-Country Study, *OECD Economic Studies*, No 26, 43–98.
- Shavell, S. – Weiss, L.* (1979): The Optimal Payment of Unemployment

- Insurance Benefits over Time, *Journal of Political Economy* 87, 1347–1362.
- Steiner, V.* (1997): Extended Benefit-Entitlement Periods and the Duration of Unemployment in West Germany, Discussion Paper No 97–14, ZEW, Mannheim.
- Topel, R.* (1983): On Layoffs and Unemployment Insurance, *American Economic Review* 73, 541–559.
- Valdivia, V.* (1996): Evaluating the Welfare Benefits of Unemployment Insurance, manuscript, Department of Economics, Northwestern University.
- Van den Berg, G.* (1990): Nonstationarity in Job Search Theory, *Review of Economic Studies* 57, 255–277.
- Wang, C. – Williamson, S.* (1996): Unemployment Insurance with Moral Hazard in a Dynamic Economy, *Carnegie Rochester Conference Series on Public Policy* 44, 1–41
- Yaniv, G.* (1982): Unemployment Insurance Benefits and the Supply of Labor of an Employed Worker, *Journal of Public Economics* 17, 71–87.

COMMENTS

Pasi Holm

The recession of the early 1990s in Finland prompted discussion of the unemployment traps and the incentives to search for a job. The level of unemployment and the duration of unemployment spells are influenced by supply of labour, i.e. search incentives of non-workers, and demand for labour by firms and the public sector. In his paper, Holmlund considers the effects of unemployment insurance both on the search for a job and on the labour demand via wage formation, and considers some welfare aspects of unemployment insurance systems. In the following I will review some of the aspects presented by Holmlund and then move on to briefly consider a couple of Finnish labour market issues.

Aspects of unemployment insurance

According to the classical analysis of Mortensen, unemployment insurance, on the one hand, increases a short-term unemployed person's reservation wage for which he/she is willing to accept a job offer. This, in turn, probably prolongs the duration of his/her unemployment spell. On the other hand, unemployment insurance decreases the reservation wage of a long-term unemployed person approaching the benefit expiry date. Hence, we would expect to find the exit rate increasing over the spell of insured unemployment. After surveying empirical studies, Holmlund states that "there is a fair amount of support for the hypothesis that more generous unemployment insurance increases the duration of the unemployment spell among insured unemployment".

The effects of unemployment insurance on employment (demand for labour) via the wage formation can, for example, be studied in the framework of the union-bargaining models. The negotiated wage in the bargaining of a single-union firm will be set as a mark-up on a measure of "outside" labour market opportunities, depending on the unemployment benefit level. A higher benefit level thus increases the negotiated wage and, accordingly, decreases employment (labour demand). After surveying empirical studies, Holmlund concludes that – at least in the long-run – the unemployment benefit level has a positive effect on the unemployment rate.

The rest of the paper considers the welfare economics of unemployment insurance. The basic rationale for the (partly) public unemployment insurance is to provide income insurance for risk-averse workers. A welfare analysis of unemployment insurance therefore requires a unified analysis of trade-off between the insurance benefits and their adverse incentive effects.

Some Finnish issues

The paper is very comprehensive, covering almost all important economic aspects of the unemployment insurance system. Two points relating to debate in Finland in the late 1990s are worth discussing. The first considers how many unemployed people were in the unemployment trap in early 1990s. The second one deals with the interaction between the duration of unemployment insurance and the active labour market policies.

The key challenge for Finnish governments of the 1990s was to considerably decrease the mass unemployment. Unemployment is influenced by job opportunities (demand for labour) as well as by the activity of labour in finding a job (supply of labour). The unemployed person lacks economic incentives to search for a job when he/she is in the unemployment trap. The unemployment trap develops when the unemployment benefit and the other social security benefits grant a level of income to an unemployed person that makes it hard or impossible for that person to improve his/her household's disposable income by accepting employment.

One way to analyse whether the unemployment is mainly due to lack of demand for labour or to insufficient supply of labour is to measure how common a problem the unemployment trap is.

Using an empirical analysis based on the individual panel data covering the years 1987–1993, Holm et al. (1999) realised that about 15 % of the unemployed people in Finland were in the unemployment trap. Almost all of those caught in the unemployment trap received earnings-related unemployment insurance. Their household's disposable income was much higher than that of the unemployed people receiving the basic unemployment benefit.

The emphasis of the unemployment-reducing policy measures of the 1990s was to improve supply of labour rather than to increase the demand for labour. Additionally, the major cuts made in the social security of the population of working age were targeted at those who received the basic unemployment insurance. The argument was that they did not have sufficient incentives to search for jobs.

When analysing the effects of the unemployment benefit system on the incentive to search for a job, one should carefully consider the interaction between the benefit system and the labour market policy measures.

The official entitlement period for unemployment insurance in Finland is 500 working days, i.e. about 2 calendar years. By participating in the active labour market policy measures, unemployed people are, however, almost able to re-qualify for unemployment insurance.¹⁰ The effective entitlement

¹⁰ Re-qualifying is possible after 10 months' work during a period of two years. The duration of the typical relief work is six months.

period for unemployment insurance is therefore, in many cases, longer than the official entitlement period. This mechanism of the Finnish unemployment insurance system and its interaction with the pension rules affect the incentives of the ageing unemployed as shown by Pyy-Martikainen (2000). Her empirical results, based on the individual panel data from the early 1990s, show that economic incentives have a strong impact on the choice of exit channel from unemployment among the ageing unemployed. Those receiving the earnings related unemployed insurance seem to be less likely to become employed in the open labour market than those receiving the basic unemployment benefit. Furthermore, the ageing unemployed may consider the active labour market policy measures and the unemployment pension as substitute exit channels for each other.

References

- Holm, P. – Kyyrä, T. – Rantala, J. (1999): Household Economic Incentives, the Unemployment Trap and the Probability of Finding a Job, International Tax and Public Finance, 6, 361–378.*
- Pyy-Martikainen, M. (2000): Työhön vai eläkkeelle? Ikääntyvien työttömien valinnat työmarkkinoilla, Research Report 66, Government Institute for Economic Research, Helsinki, Finland.*

Reija Lilja*Introduction*

In recent debate on the persisting high unemployment rates in Finland, the focus has been on the potential negative-incentive effects related to our UI system. It is easy to see that such a focus has been inspired by Bertil Holmlund's contributions in this field of research. For me, too, it has been a pleasure to read these contributions, since in discussing his results, Bertil Holmlund always endeavours to point out the crucial assumptions on which they are based (and never fails to mention alternative results from other studies). This 'common sense' approach can also be seen in his presentation of today.

My comments focus only on a very small fraction of this very comprehensive presentation, i.e., the issues that have cropped up in the recent Finnish debate on our UI system.

The optimal time profile of benefit payments

To address the question of the optimal sequencing of benefits I focus only on the results presented by Fredriksson and Holmlund (2001), who allow for endogenous search effort among unemployed workers and incorporate endogenous wage determination and free entry of new jobs.

Fredriksson and Holmlund ask whether a declining time profile of benefits dominates, in welfare terms, a program with indefinite payments of a constant wage replacement rate. Their answer is yes, provided that discounting is ignored. A more realistic model with discounting (unemployed job seekers probably cannot afford to have a discount rate that equals zero) is not able to establish the optimality of declining benefit sequence analytically, but numerical experiments suggest that there are nontrivial welfare gains available by switching from a uniform benefit structure to a two-tiered one.

The above results are driven by assumptions on job seekers' search activity. It is assumed that an increase in UI benefits will, in general, reduce the search effort of the insured unemployed job seekers and increase search effort among those not insured. The two-tiered system exploits the latter, so-called "entitlement effect", by providing incentives for active search among those job seekers who are not currently entitled to benefits.

The fact that the declining time profile of benefits is optimal in certain circumstances does not mean that other time profiles cannot be optimal. For example, a constant time profile of benefits may be optimal if job search is effectively monitored by the UI administration. Bertil Holmlund refers to recent evidence from the Netherlands, which suggests that

sanctions related to the failure to show up at a scheduled interview with a prospective employer can have substantial incentive effects on job search among the unemployed.

Furthermore, we can also see from Bertil Holmlund's presentation that workfare (i.e. offering jobs to the unemployed and requiring job acceptance in exchange for benefits) may, under some conditions, be welfare-improving even if the output produced by program participants is negligible.

In Finland, the UI benefits remain the same for 500 days (older unemployed job seekers can get an extension to this period). After this, the unemployed job seekers can apply for means-tested labour market support, which is (normally) substantially smaller than UI benefit. The existing UI system in Finland is, thus, a kind of a two-tier system.

It seems that the policy line chosen in Finland in the 1990s, was to increase monitoring of the search activity of benefit recipients. New instruments for active job search were introduced and penalties related to job rejections became tougher (Lilja and Savaja, 1999). The present UI system involves workfare elements; job seekers can lose their UI benefits for relatively long periods if they refuse a job offer.

About empirical evidence

Even though estimates from micro data are of limited use for analysing general-equilibrium effects of UI benefits on unemployment, they are useful in highlighting the behaviour of job seekers. As we saw above, assumptions about job seekers' behaviour are also needed in the general-equilibrium approach. In fact, when one wants to use the general-equilibrium results for policy recommendations, it would be useful to know what kind of empirical support can be provided for the assumptions that these results rely so heavily upon.

Bertil Holmlund points out that existing evidence suggests that increased benefit generosity causes longer spells of unemployment and, probably, higher overall unemployment as well. But, by the same token, he says that there remains a considerable degree of uncertainty regarding the magnitudes of these effects; they vary from country to country and from one model specification to another. In empirical analyses on the effects of UI benefits, the need to take into account specific institutional features that exist in each country has been also emphasised by Atkinson and Micklewright (1991).

According to existing empirical analyses, the effects of UI benefits on job search appear to be rather small in Finland (Eriksson, Jensen and Pedersen, 1999). Kettunen (1993) shows that the replacement ratio had a (minor) negative effect on the probability of re-employment during the first three

months of the unemployment spell (after which this effect became negligible). Rantala (1998) and Kyrrä (1999) show, on the other hand, that expected returns to employment are an important determinant of the probability of becoming employed. Empirical evidence on Finnish job seekers' behaviour is, however, scarce. There is not enough information to be able to reliably evaluate the potential beneficial/negative effects occurring as a result of altering our present UI benefit system. More research is needed. Finnish policy making cannot be based on analyses that our colleagues have made on the Swedish labour market, no matter how good these analyses might be.

Concluding remarks

Bertil Holmlund points out that simply studying changes in unemployment is not sufficient for gauging the welfare effects of UI policies. Policy descriptions regarding UI should, therefore, not forget the ultimate rationale for UI; its provision of income insurance to risk-averse individuals. I could not agree more.

References

- Atkinson, A. – Micklewright, J. (1991): Unemployment Compensation and Labor Market Transitions: A Critical Review, *Journal of Economic Literature* 29, 1679–1727.
- Carling, K. – Holmlund, B. – Vejsiu, A. (2000): Do Benefit Cuts Boost Job Finding? Swedish Evidence from the 1990s, manuscript, Department of Economics, Uppsala University. Forthcoming in *Economic Journal*, October 2001.
- Fredriksson, P. – Holmlund, B. (2001): Optimal Unemployment Insurance in Search Equilibrium, *Journal of Labor Economics*, April.
- Eriksson, T. – Jensen, P. – Pedersen, P. J. (1999): "Søgeadfaerd og søgestrategier i de nordiske lande", in *Dagpengesystemene i Norden og tilpasning på arbeidsmarkedet*, (Unemployment insurance systems in Nordic countries and labour market adjustment), Nordisk Ministerråd, TemaNord 1999:572.
- Kettunen, J. (1993): Re-employment of Finnish Unemployed Workers, The Research Institute of the Finnish Economy ETLA, Series A 17.
- Kyrrä, T. (1999): Post-unemployment wages and economic incentives to exit from unemployment, Government Institute for Economic Research VATT, VATT Research Reports No. 56, Helsinki.
- Lilja, R. – Savaja, E. (1999): Översikt över systemet för arbetslöshetsskydd i Finland, (An overview of the unemployment benefit system in Finland) The Research Institute of the Finnish Economy ETLA, Discussion Papers, No. 680.
- Rantala, J. (1998): Labour market policy and the probability of leaving unemployment (in Finnish), Government Institute for Economic Research VATT, VATT Research Reports No. 44, Helsinki.

CHAPTER 3

TAXATION AND EMPLOYMENT

LABOUR TAXATION AND EMPLOYMENT IN TRADE UNION MODELS: A PARTIAL SURVEY

Erkki Koskela*

1 Reasons for unemployment	63
2 Labour taxation and employment in trade union models: theoretical aspects	66
3 Labour taxation and employment: some empirical evidence	74
4 Some concluding remarks	81

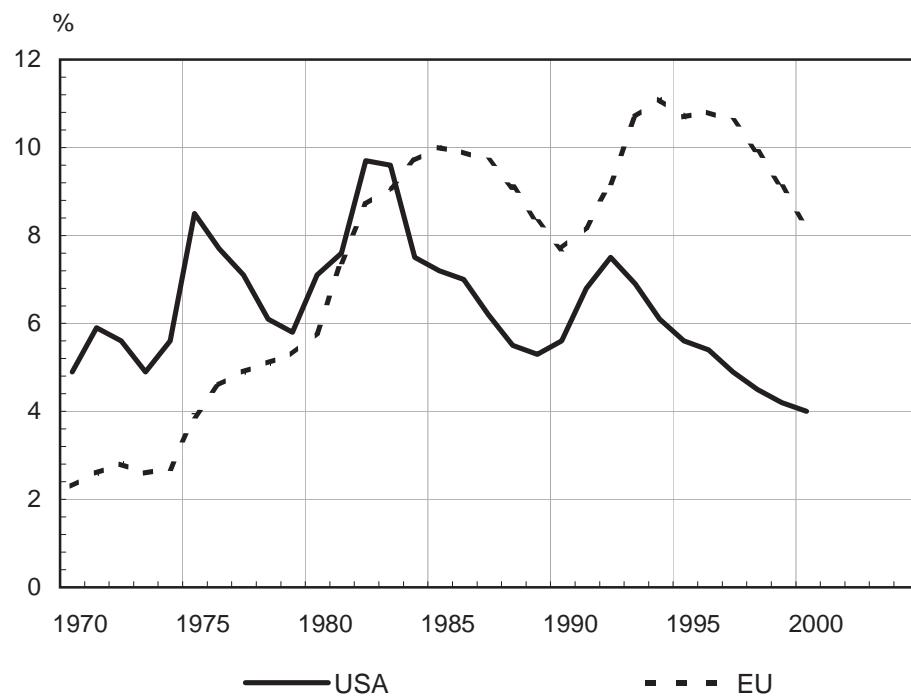
1 Reasons for unemployment

Over the last 30 years or so, unemployment in Europe has developed quite differently from what we have seen in the United States. Since the early 1970s, the unemployment rate in Europe has had a tendency to rise, with the exception of a boom in the late 1980s. In the United States, the unemployment rate started to go down at the beginning of the 1980s, with the minor exception of the early 1990s (see Figure 1). Even though there has been a rising trend in average European unemployment, there are differences across countries in Europe. A particular example of this phenomenon has been the development of unemployment in two Iberian countries, Portugal and Spain. Figure 2 indicates how, from the late 1980s, the unemployment rate in Spain was about 20 per cent over a long period, while Portugal's unemployment rate fluctuated between 4 and 8 per cent during the same period.

What could explain these two facts, i.e., high average European unemployment compared with the development in the United States and the differences across European countries? Originally, economists suggested two alternative explanations. According to one view, different economic shocks in Europe and the United States could explain different unemployment development. In this context, productivity shocks and oil crises in the 1970s, not to mention higher European real interest rates in the 1980s (when monetary policy was tightened to mitigate inflation) are often

* I would like to thank Bertil Holmlund, Seija Ilmakunnas, Pekka Ilmakunnas, Markus Jäntti and David Mayes for useful comments on earlier drafts. The usual disclaimer holds. The paper was written when I visited the Research Department of the Bank of Finland. I thank the Research Department for its great hospitality.

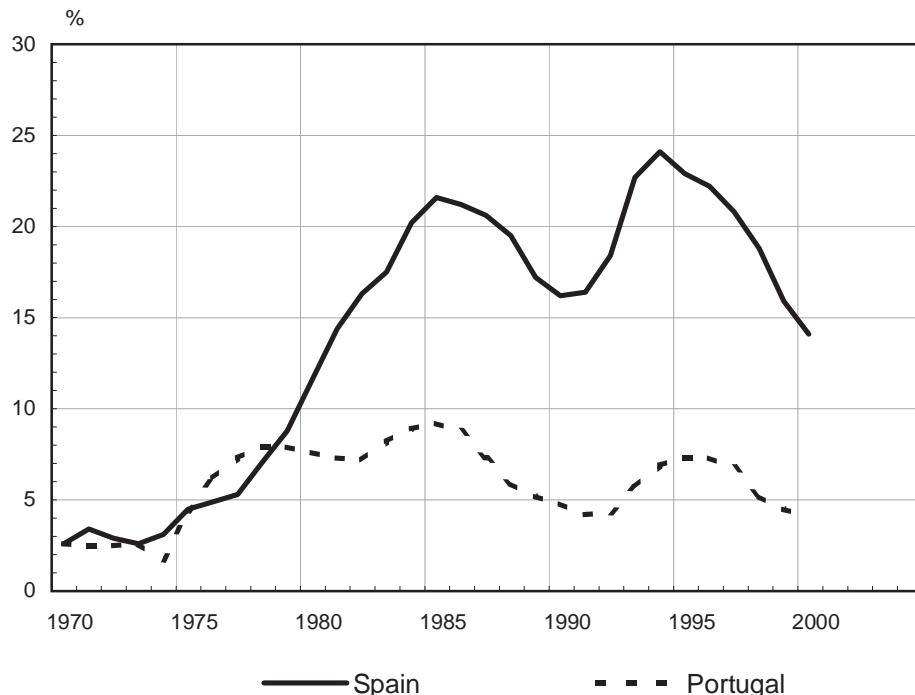
Figure 1. Unemployment: USA versus EU



Source: Eurostat.

referred to as potential shocks that explain unemployment differences. While these shocks may explain the rise of unemployment for some time, it is hard to argue convincingly that these can account for a continuing rise in European unemployment. Moreover – and more importantly – they cannot explain experiences of different countries; shock differences have simply been too small.

The second argument stressed the potential role of labour market institutions. Though labour markets are not homogenous in Europe, they are, generally speaking, “rigid” in Europe and “flexible” in the United States – in terms of employment protection legislation, properties of unemployment benefit systems and wage flexibility. Here, rigidity means high employment protection, liberal unemployment benefit systems and rigid wages. This labour market institution view was presented e.g. by the OECD (1994). A problem with such an explanation is this: in Europe the rigidity of labour markets was very high in the early 1970s when the unemployment rate was still low. Subsequently, labour markets have become more flexible while, at the same time, unemployment rates have increased.

Figure 2. Unemployment: Spain versus Portugal

Source: Eurostat.

Recent research has provided some preliminary evidence in favour of the view that accounting for the interaction between economic shocks and labour market institutions can go a long way to explain both the higher European unemployment rate and cross-country differences within Europe. The idea here is simple: when the labour markets are more rigid, the higher unemployment effects are associated with negative economic shocks. For instance, when the benefit replacement ratio is very high and the duration of unemployment benefits long, negative economic shocks tend to give rise to long-term unemployment, which is, for various reasons, hard to eliminate when economies start to recover. For empirical evidence of this view, according to which rigidities may cause hysteresis, see Blanchard and Wolfers (2000) and Ball (1999).¹

Recently, Bover, Garcia-Perea and Portugal (2000) have presented further evidence for this view by making a systematic analysis of Spanish and

¹ Ljungqvist and Sargent (1998) provide an interesting and complementary theoretical analysis of how an improvement in unemployment compensation programmes may reduce the capability of economies to adjust to adverse economic shocks.

Portuguese labour market institutions. Their analysis reveals that Spain and Portugal have been like night and day in this regard. In Spain, the actual level of employment protection is higher, the unemployment benefit system is more generous for workers (in terms of eligibility criteria, the benefit replacement rate and benefit duration), trade unions are stronger and wage flexibility is lower. As Spain and Portugal have experienced more or less similar economic shocks as neighbouring countries, a natural explanation for the difference in unemployment rates is that the impacts of economic shocks depend on labour market institutions. This is not, however, the whole story. As has been shown by Blanchard and Portugal (2001), a similar unemployment rate in Portugal and the United States can hide different labour market details.

In literature on the determinants of unemployment, the potential role of labour taxation has recently started to gain more attention. Why might labour taxation matter in this respect? First, a rise in wage taxation will tend to lead to higher wages and, thereby, to higher labour costs. Second, a rise in the payroll taxes levied on firms might also lead to higher labour costs if the payroll tax increases do not lead to a corresponding fall in the before-tax wage rate. In this paper we review both theoretical and empirical literature associated with the relationship between labour taxation and unemployment. More specifically, we are interested in three sets of issues. First, how do labour taxes affect wage formation and employment? Second, does the structure of labour taxation matter: i.e., is the labour tax wedge – the sum of income and payroll tax rates divided by the total labour costs – a sufficient statistic for describing the way that labour taxation behaves? Third, does the progression of labour taxation affect wage formation and, thereby, employment?

We shall proceed as follows: section 2 provides a brief survey of some theoretical issues associated with the relationship between labour taxation and employment, while section 3 presents a selected review of empirical evidence. Finally, there are some concluding remarks.

2 Labour taxation and employment in trade union models: theoretical aspects

There are alternative approaches to model employment and its relationship to taxes, i.e.: (i) the competitive labour market approach, (ii) the efficiency wage hypothesis, which states that wages are not only a cost factor, but also an incentive device (see e.g. Shapiro and Stiglitz 1984), (iii) search and matching models, which emphasise the labour market frictions i.e., job

creation, job destruction and technological changes (see e.g. Pissarides 2000) and (iv) union-bargaining models. The competitive labour market approach does not seem to be a realistic way to view European labour markets with high unemployment rates. The other approaches (ii–iv) complement each other by stressing different aspects of the labour market phenomenon. In order to chart the potential role of labour taxes I shall use a union bargaining approach, which emphasises the role of trade unions in wage setting and determining employment. Undoubtedly, this is the natural approach to take for the European case, where either the union density rate of workers and/or the coverage of collective bargaining agreements are very high.² In fact, in most cases, the results can be shown to be valid in other models of labour market behaviour which provide alternative and complementary explanations of unemployment.

The right-to-manage approach for wage and employment determination

For presentation purposes we shall use the so-called right-to-manage approach (RTM) according to which the wage rate is negotiated between representatives of employees and employers, while the firms subsequently and unilaterally determine employment.³ Next, we shall briefly describe the main elements of the RTM approach with respect to labour taxes.

A. Firm behaviour

We postulate the following profit function for the representative firm:

$$\pi = pY - \tilde{w}L - rK, \quad (1)$$

where Y = output, L = employment, K = capital stock, p = producer price, $\tilde{w} = w(1+s)$ = the gross wage, s = payroll tax rate, and r = the price of capital. The production function is assumed to be of CES-type in a simplified form:

$$Y = f(L, K) = \left[L^{\frac{\sigma-1}{\sigma}} + K^{\frac{\sigma-1}{\sigma}} \right]^{\frac{\sigma}{\sigma-1}}, \quad (2)$$

where σ is elasticity of substitution between labour and capital. We assume that firms have price-setting power in the goods markets and that the

² See e.g. OECD Employment Outlook 1997. Outside the United States and Japan, most workers in the OECD have their wages determined by collective agreements, which are negotiated at the plant, firm, industry or national level. In some countries, the union density rate has recently decreased, but at the same time, the coverage of collective bargaining agreements has remained at a very high level or even become wider. In continental Europe, collective bargaining coverage is typically 90 %, thus making trade union models relevant in analysis.

³ Using the monopoly union model, where the trade union fixes the wage rate and firms subsequently determine employment, or the efficient bargain model, where both the wage rate and employment are subject to simultaneous negotiation, yields qualitatively similar results.

demand for goods is of the constant elasticity type $Y = D(p) = p^{-\varepsilon}$, where ε is the price elasticity of goods demand. It can be shown that the wage elasticity of labour demand resulting from the profit maximisation is of the form:

$$\frac{L_{\tilde{w}}}{L} = \eta_{L,\tilde{w}} = -\sigma + x(\sigma - \varepsilon), \quad (3)$$

where $x \equiv \tilde{w}L / cY$ describes the cost share of labour and $c = c(\tilde{w}, r)$ the unit costs of production.⁴ As we will indicate later on, the properties of wage elasticity of labour demand are an important aspect in terms of how labour taxation influences wage formation, labour demand and equilibrium unemployment.

B. Trade unions and wage determination

The objective function of trade unions is written as the sum of the welfare of employed and unemployed trade union members and, for the sake of simplicity as the linear function:

$$V^* = [w(1-t) + ta]L + b(N-L), \quad (4)$$

where N = labour force, b = outside option for unemployed, t = income tax rate levied on employed members of the trade union, and a = tax exemption. In keeping with the literature, we assume that the threat points for the firm and the trade union are $\pi^0 = 0$ and $V^0 = bN$ respectively. Therefore, the Nash maximand for the wage negotiation can be written as:

$$\underset{w}{\text{Max}} \Omega = V^\beta \pi^{1-\beta} \quad \text{s.t. } \pi_L = 0, \quad (5)$$

where $V = V^* - V^0 = [w(1-t) + ta - b]L$ and β describes the relative bargaining power of the trade union. We can solve the Nash bargaining problem implicitly to give:

$$w^N = \left(\frac{b - ta}{1 - t} \right) \frac{(\beta \eta_{L,\tilde{w}} + (1 - \beta)x(1 - \varepsilon))}{\beta(1 + \eta_{L,\tilde{w}})}. \quad (6)$$

According to (6) the negotiated wage rate depends on the outside option of the trade union b , the wage elasticity of labour demand $\eta_{L,\tilde{w}}$, the relative bargaining power β as well as the taxation parameters t , a and s . The proportional payroll tax will only affect the wage formation if it modifies the wage elasticity of labour demand $\eta_{L,\tilde{w}}$. It is well known that if the

⁴ See e.g. Hamermesh (1993).

production function is of the Cobb-Douglas type, the wage elasticity is not affected by the proportional payroll tax rate. Next, we shall discuss the role of these factors.

On the determinants of wage formation

First, it is easy to see that a higher outside option and higher relative bargaining power of the trade union lead to a higher wage rate, i.e. $w_p, w_b > 0$. Second, an increase in tax exemption works like a subsidy so that the trade union is willing to accept a lower wage, the higher the tax exemption, i.e., $w_a < 0$. Third, one can see from equation (3) that an increase in the price elasticity of goods demand (i.e., the higher the degree of economic integration in the goods markets) raises the wage elasticity of labour demand. An increase in the wage elasticity of labour demand makes it harder for the trade union to extract rent from wage negotiations. This will lead to wage moderation, i.e. $w_\varepsilon < 0$.⁵

A. Income and payroll taxes

What about the effects of the constant income tax rate t and the constant payroll tax rate s ? As regards the income tax rate, it is easy to show that higher income tax increases the before-tax wage, but less than one-to-one. Hence, the tax burden of income taxation is divided for both sides of the labour market so that the income tax rate elasticity of the wage rate is between one and zero, i.e. $0 < \omega_t = \frac{w_t(1-t)}{w} < 1$. This means that the higher marginal income tax rate will increase the total labour costs. This result, however, depends on the assumption that the wage income is taxed at a higher rate than unemployment income. If the tax rates for these are the same, then the marginal income tax rate will have no effect on wage formation because the income tax rate does not affect the difference between the after-tax wage income and the after-tax unemployment income.⁶

As for the effect of the proportional payroll tax rate, it depends on the precise properties of the production function (2). If the production function is of the Cobb-Douglas type with the elasticity of substitution between labour and capital being one, then the payroll tax will have no effect on the negotiated wage rate. This is because – under the Cobb-Douglas production function – the wage elasticity of labour demand is constant and

⁵ In fact there is some (weak) empirical evidence supporting the view that higher economic integration will increase the wage elasticity of labour demand (see e.g. Slaughter 2001). See also Nickell (1999a).

⁶ See e.g. Koskela and Schöb (1999b).

the wage elasticity is the only channel through which the payroll tax might affect the wage formation. Under these circumstances, the total labour costs will increase one-to-one with the payroll tax rate.

What happens if the elasticity of substitution differs from being one? First, it can be shown that the change in the cost share of labour with respect to the gross wage rate is given by:⁷

$$\frac{\partial x}{\partial \tilde{w}} = \frac{x}{\tilde{w}} (1-x)(1-\sigma) \begin{cases} > \\ < \end{cases} 0 \Leftrightarrow \sigma \begin{cases} < \\ > \end{cases} 1. \quad (7)$$

Therefore, the cost share of labour from the unit production costs is positively (negatively) related to the gross wage when the elasticity of substitution is smaller (higher) than one. By looking at the equation (3) one can see that under the plausible assumption $\sigma < \varepsilon$ a larger cost share of labour x implies higher wage elasticity of labour demand in absolute terms. Hence, when the elasticity of substitution is smaller than one, the trade union benefits less from demanding higher wages, and the wage rate falls. By contrast, when the elasticity of substitution exceeds one, the reverse happens: labour demand becomes less elastic and the trade union benefits more due to the demand for higher wages; thus the wage rate increases. Therefore we have:

$$w_s \begin{cases} < \\ = \\ > \end{cases} 0 \text{ as } \sigma \begin{cases} < \\ = \\ > \end{cases} 1. \quad (8)$$

We can also show that, under the assumptions made, the payroll tax elasticity of the wage rate is between zero and minus one, i.e. $-1 < \omega_s = \frac{w_s(1+s)}{w} \leq 0$. Thus the tax burden is divided between both sides of the labour market so that the higher payroll tax rate will increase the gross wage rate and vice versa.

B. Structure of labour taxation

Does it matter for wage formation – and thereby for labour demand – whether labour taxes are levied on firms or on members of the trade union? According to conventional wisdom, the answer is “no”. The only thing that would matter would be the tax wedge defined empirically as the gap between the real labour costs of the firm, on the one hand, and the real post-tax consumption wage of the worker on the other (see e.g. Layard, Nickell and Jackman 1991, 209–210). Abstracting from the value-added tax,

⁷ For details, see e.g. Koskela and Schöb (1999a) or Koskela and Schöb (2001).

this would mean that the structure of labour taxation is irrelevant.

Using the framework presented above, it can be shown that raising the income tax rate t and decreasing the payroll tax rate s so as to keep the tax revenue constant has the effect of decreasing the gross wage $\tilde{w} = w(1 + s)$ and thereby boosting employment, if $a > 0$. In this case, the tax base for the income tax is smaller than the tax base for the payroll tax.⁸ On the other hand, if the tax bases are equal, tax rates are proportional in the sense that the average tax rate is constant. In this case, the irrelevance theorem holds; the structure of labour taxation does not influence wage formation. We shall come back to the interpretation of these results in the next section.

C. Tax progression and wage formation

Does it matter whether taxes are proportional or progressive? We know from the case of competitive labour markets (where wage rate and hours of work are determined by demand for and supply of labour), that a tax-revenue neutral rise in progression – which makes the average tax rate steeper – will decrease labour supply. Therefore, the wage rate goes up and the unit costs of production become higher, and in open economies the competitiveness of industries deteriorates. This is because a higher marginal income tax rate compensated by a higher tax exemption will create a negative substitution effect on labour supply.

Does this result hold in the case of imperfectly competitive labour markets? The answer is "no". Under quite general conditions, higher tax progression will lead to wage moderation and thereby boost employment. This has been shown e.g. by Koskela and Vilmunen (1996) in popular models of trade union behaviour.⁹ A higher tax progression (a higher marginal tax rate compensated by a higher tax exemption that keeps the tax revenue of government constant) means that the slope of the average tax rate with respect to the tax base becomes steeper. Hence, a smaller share of an increase in the wage rate will be kept by the workers. This makes it beneficial for the trade unions to want a lower wage rate because the trade-off between the wage rate and employment becomes more favourable to employment.

Now we can come back to the earlier result according to which the labour tax wedge is not necessarily the correct statistic for describing the way that labour taxation behaves.

⁸ See Holm and Koskela (1997) and Koskela and Schöb (1999). This can also be shown to work under quite general assumptions, such as in the case of endogenous working hours, for example. See Holm, Kiander and Koskela (2001).

⁹ The wage moderating effect of tax progression has been shown to be a feature of other models which provide complementary explanations for equilibrium unemployment such as the efficiency wage models and matching models (for demonstrations, see e.g. Sorensen (1999), Pissarides (1998) and Ljungqvist and Sargent (1995)).

Whether or not payroll taxes and income taxes are equivalent in terms of the gross wages depends on whether a change in the structure of labour taxation affects tax progression, in the sense of how rapidly the average tax rate changes with the tax base. Tax progression may change for two reasons: first, if income changes as a result of the tax reform, the actual tax progression will change for any given tax schedule. Second, as the tax rate changes, the tax schedule may change for any given income.

Let us elaborate these considerations a little further: an appropriate and intuitive way to define (linear) tax progression is to look at the average tax rate progression, which is given by the difference between the marginal tax rate t and the average tax rate t^a , $ARP = t - t^a$. The tax system is progressive if ARP is positive, and tax progression becomes higher if the difference increases at a given income level.¹⁰ Defining the tax wedge for a worker with respect to the gross wage, the marginal tax wedge is given by:

$$\tilde{t} \equiv \frac{t + s}{1 + s} \text{ and the average tax wedge by:}$$

$$ARP = \tilde{t} - t^a = \frac{ta}{\tilde{w}}. \quad (9)$$

If there is no tax exemption – i.e. if $a = 0$ – then changes in the structure of labour taxation do not affect the average tax rate. But, in the presence of positive tax exemption, tax progression increases as a result of a tax revenue neutral shift ($dT = 0$) towards a higher income tax rate and a lower proportional payroll tax rate, because we get:

$$\frac{dARP}{dT} \Big|_{dT=0} = \frac{a}{\tilde{w}} \left[1 - \frac{t}{\tilde{w}} \frac{d\tilde{w}}{dt} \Big|_{dT=0} \right] > 0. \quad (10)$$

As the marginal income tax has a smaller tax base than the payroll tax, the increase in the income tax must be higher than the fall in the payroll tax, which increases the marginal tax rate for a given average tax rate.

To conclude, it is the effect that a change in the structure of labour taxation has on the progression of the tax schedule in the average tax rate sense, which is crucial. The result that must then be derived is that the structure of labour taxation is influential in as much as it affects the way that labour taxation progresses.

¹⁰ See e.g. Lambert (1993), Chapter 6 for a more detailed discussion of the various ways to characterise progressive taxation. Our discussion here has assumed – for the sake of simplicity – that the marginal tax rate t is constant. Of course, one (very commonly used) definition of tax progression is to say that taxation is progressive when the marginal tax rate increases with the tax base.

D. Labour taxation and corporatism

Earlier, when we discussed the potential effects of labour taxes on wage formation and employment we implicitly assumed that trade unions are decentralised in the sense that they do not account for (or perceive) the effects of taxes on the benefits they receive via the government budget. For instance, Summers, Gruber and Vergara (1993) have suggested that corporatist labour institutions – labour market institutions with a “high” degree of centralisation of wage bargaining – do recognize the link between the taxes the workers will pay and the benefits they receive via the government budget. Hence, as they argue, the distortionary effects of labour taxes in more corporatist economies should be smaller than in economies with more decentralised wage bargaining. Alesina and Perotti (1996) provide a complementary analysis focusing on the relationship between the distortionary taxation, the competitiveness of industries and the degree of corporatism.

On determinants of equilibrium unemployment

In the earlier analysis, the outside option for the members of trade union b has been taken as exogenous. If we are interested in the long-term equilibrium effects we have to allow for the endogenous outside option. A typical approach is to assume – for the sake of simplicity – that industries are symmetrical in the sense that $A_i = A$, so that the mark-up factor (describing the difference between the wage rate in unionised and competitive sectors) is the same across industries, where the mark-up factor can be written as:

$$A = \frac{\beta\eta_{L,\bar{w}} + (1-\beta)x(1-\varepsilon)}{\beta(1+\eta_{L,\bar{w}})}. \quad (11)$$

According to (11) the mark-up depends on the relative bargaining power of trade unions, the wage elasticity of labour demand, the cost share of labour and the price elasticity of goods demand.

In a context of general equilibrium the outside option can be defined as $b = (1-u) w^e + uB$,¹¹ where u is unemployment, w^e the wage rate elsewhere and B = the unemployment benefit. When restricted to the case of constant benefit the replacement ratio $q \equiv B / w$ and $w = w^e$ gives, from (6), the equilibrium unemployment rate:

¹¹ See Layard, Nickell and Jackman (1991).

$$u^N = \frac{1}{1-q} \left[1 - \frac{1-t+c}{A} \right], \quad (12)$$

where $c = ta/w$. The equilibrium unemployment rate has a positive dependence on, amongst other things, the benefit replacement ratio q and the income tax rate t . The effect of the payroll tax rate s depends on how it affects the mark-up factor A via the wage elasticity of labour demand. To be more precise, the higher the labour demand elasticity, the lower the mark-up factor. Hence, if, for example, the elasticity of substitution between capital and labour is smaller than the unity, then a higher payroll tax means a higher wage elasticity of labour demand and, thereby, lower equilibrium unemployment. The labour demand elasticity also increases with the price elasticity of the goods demand ϵ , which will therefore have a negative effect on equilibrium unemployment.

In the earlier analysis we assumed that changes in the income tax rate alter the relationship between income while in work and income while unemployed. This happens, for example, when the unemployed have access to other income sources, which are not subject to taxation, or if there are important leisure values associated with unemployment.¹²

3 Labour taxation and employment: some empirical evidence

After briefly sketching out various ways in which labour taxation might affect wage formation and thereby employment, we now turn to look at the empirical evidence of labour taxation from four points of view:

- how do income and payroll taxes affect the negotiated wage rate and, thereby, labour demand?
- is the tax wedge a sufficient statistic for describing the way labour taxes behave or is the structure of labour taxation influential after all?
- does the progression of labour taxes affect total labour costs?
- does the degree of corporatism in the labour markets affect the relationship between labour taxes and wage formation?

Concerning the first question, there is empirical evidence – though not always very strong – according to which both income taxes and payroll taxes have a negative effect on labour demand. This is because the incidence of labour taxes would seem to be levied on both sides of labour markets. Second, the income tax progression seems to have a wage-

¹² See e.g. Nickell and Layard (1999), p. 3048–3051 for a more detailed discussion.

moderating effect, which will boost employment. There is evidence from various countries, which conforms with this view. Usually, the argument has been that tax progression can only be justified from the equity (= income distribution) point of view, so that there is a trade-off between the equity and the efficiency aspects of labour taxation. In imperfectly competitive labour markets, however, progression also increases the efficiency of the functioning of labour markets so that, from society's point of view, it may be justifiable even without income distribution considerations. This is a finding that has, thus far, been given too little attention. Third, a small amount of evidence shows that the structure of labour taxation affects wage determination and employment. This is a particular issue that has not yet been much researched. In what follows we shall describe these three sets of findings in a more detailed way.¹³

What is the empirical international evidence regarding the effects of labour taxation on wage formation? Some recent studies have been carried out on this matter using international data, e.g., Nickell and Layard (1999), Nickell (1999) and Daveri and Tabellini (2000). Their results are consistent with each other and can easily be summarised as follows: the papers assume that what matters in the wage formation of labour taxation is the tax wedge, not the structure of taxation. Nickell and Layard (1999) and Nickell (1999b) have used data from 20 OECD countries over the period 1983–1994. In their research, they also controlled for other potential variables that might affect unemployment (see Table 15 in Nickell and Layard 1999). They conclude as follows: "...the balance of evidence suggests that there is probably some overall adverse tax effect on unemployment and labour input. Its precise scale, however, remains elusive". More recently, Daveri and Tabellini (2000) have studied the effects of labour taxes on labour demand and unemployment by using panel data from OECD countries over the period 1965–1995. This allows them to simultaneously exploit the time series and cross-country variations of the data and to distinguish among countries on the basis of their labour market institutions. According to their estimates, the observed rise of 14 percentage points, between 1965 and 1995, in labour tax rates in the EU could account for a rise in EU unemployment of roughly 4 percentage points (see Table 1 for some details). They resume their findings as follows: "We obtain evidence of a highly significant and very large effect of labour taxes on the unemployment rate in continental Europe ... the estimated coefficient of labour taxes ranges from about 0.3 to over 0.5 depending on the specification" (see Daveri and Tabellini (2000), p. 55). But as one can see from Table 1, their evidence from

¹³ See also the discussion in Leibfritz, Thornton and Bibbec (1997), p. 33–39.

Table 1. Unemployment and labour taxes (1965–1995, five-year averages)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. variable Estimation specification	u OLS Country- specific constants	Δu OLS Without constant	Δu GLS Without constant; with moving average correction	Δu OLS Without constant; lagged policy variables	u OLS Country- specific constants	Δu OLS Without constant	u 2SLS Country- specific constants; lagged policy variables	Δu 2SLS Without constant; lagged policy variables
Labour tax	0.25*** (0.107)	0.27 (0.221)	0.17 (0.194)	0.28 (0.193)	0.19** (0.097)	0.20 (0.181)	0.36*** (0.157)	0.42* (0.236)
ANGLO								
Labour tax	0.54*** (0.062)	0.54*** (0.120)	0.47*** (0.117)	0.46*** (0.102)	0.35*** (0.080)	0.29** (0.134)	0.59*** (0.089)	0.55*** (0.128)
EUCON								
Labour tax	0.11 (0.162)	0.12 (0.194)	0.16 (0.160)	0.23 (0.16)	0.02 (0.145)	0.02 (0.160)	0.16 (0.186)	0.30* (0.168)
NORDIC								
Unemployment benefit	0.14*** (0.051)	0.04 (0.070)	0.05 (0.056)	0.09* (0.054)	0.12**** (0.046)	0.08 (0.058)	0.15*** (0.057)	0.09* (0.053)
Employment protection	-1.00* (0.571)	-1.22 (0.734)	-1.15** (0.583)	-0.56 (0.622)	-1.03* (0.542)	-0.84 (0.649)	-1.02 (0.632)	-0.47 (0.614)
Benefit duration ^a	-	-	-	-	YES**	YES***	-	-
Growth	-	-	-	-	-	-	0.43 (0.424)	-0.21 (0.191)
N. obs.	84	70	70	70	84	70	84	70
Adj. R ²	0.93	0.26	0.18	0.35	0.95	0.51	0.92	0.35
RMSE	1.904	2.374	1.078	2.233	1.693	1.924	2.110	2.181
JB test for normality	0.11	0.05		0.07	0.66	0.000	0.06	
LM test: serial correlation	0.002	0.06		0.14	0.001	0.04	0.07	

Notes: The dependent variable is the unemployment rate u or the change in the unemployment rate Δu .

^aBenefit duration always interacts with time dummies, one for each five-year period. The statistical significance of its coefficient thus refers to the F-test on the joint significance of all estimated coefficients (one for every five-year period). Columns (1), (5), (8): all variables in levels. Columns (2), (3), (4), (6), (7), (9): all variables in first differences. Column (3): estimated by GLS allowing for MA(1) in the error term and correlation across countries (SAS Da Silva method). Column (7): estimated by 2SLS, with fixed effects and lagged tax and benefit rates in the unemployment equation. The growth equation is specified as in Table 12 in Daveri and Tabellini (2000), column (1). Column (8): estimated by 2SLS. The growth equation is specified as in Table 12 in Daveri and Tabellini (2000), column (2).

Fixed-effects intercepts not reported. Standard errors in parentheses.

* = 10 % level of significance.

** = 5 % level of significance.

*** = 1 % level of significance.

RMSE: Root Mean Square Error. JB test: Jacque-Bera test for normal residuals. A p-value below 0.05 rejects normality at a 95 % confidence interval. LM test: Lagrange Multiplier test corrected for degrees of freedom (Kiviet 1986). A p-value below 0.05 rejects the absence of serial correlation at a 95 % confidence interval.

Source: Daveri and Tabellini (2000).

Nordic countries, while of the same nature, is not statistically significant.

Honkapohja, Koskela and Uusitalo (1999) have used industry data from Finland to study the effect of income and payroll taxes on wage setting on the one hand, and the role of gross wages on labour demand on the other. In Table 2, the effects that the incidence of the changes in the income and

payroll tax have on nominal wage setting are presented across Finnish industries by using the annual data over the period 1960–1997. According to the SUR estimation results, the average elasticity of the nominal wage rate changes, with respect to changes in the payroll tax rate, is –0.21, while the corresponding figure with respect to the changes in the inverse of income tax is –0.56.¹⁴ Hence, while the incidence of income tax seems to be distributed fairly evenly between both parts of the labour markets, the incidence of the payroll tax would seem to fall more on employers.

What about the labour demand (or employment) elasticities in terms of the gross wage rates? Using the same Finnish industry data as in Table 2, results obtained by employing the SUR estimation are presented in Table 3. Not surprisingly, the long-term wage elasticities vary quite a lot across industries; the average long-term elasticity being –0.68. Using the labour demand function with the industry data is not necessarily, however, very reliable because of potential simultaneity problems between wages and income tax variable and output and labour demand. Therefore, we have also estimated labour demand functions using the panel data, which consists of 500 of the biggest Finnish enterprises over the period 1986–1997. Some sets of results are presented in Table 4, which indicates that wage elasticities are somewhat sensitive to the method of estimation. Since the data concerning Finnish industry is not representative, one should view the results with caution; the wage elasticities would seem to be a bit smaller than those we obtained by using time series industry data. All in all, the gross wage costs – affected by labour taxation – would seem to influence labour demand (and unemployment).

Usually, in studies on the effect that labour taxation has on wages and employment, researchers have used the tax wedge variable with the idea that it does not matter what the precise structure of labour taxation is. However, by using data from the United Kingdom, Lockwood and Manning (1993) noticed that the tax wedge does not work in the sense that the income and payroll taxes have different effects. The same finding, using industry data from Finland, was observed by Holm, Honkapohja and Koskela (1994, 1995), by Honkapohja, Koskela and Uusitalo (1999) (see Table 2) and, using aggregate data, by Pehkonen (1999). Tyrväinen (1995a) has provided some international – though not very strong – evidence along similar lines. This finding conforms with the view that the tax wedge is not a sufficient statistic for describing the way that labour taxation behaves, if

¹⁴ For relatively similar results using the same Finnish data set over a shorter period, see Holm, Honkapohja and Koskela (1995) and, using aggregate quarterly Finnish time series data over the period 1961–1994, see Pehkonen (1999) and Kiander and Pehkonen (1999).

Table 2. Wage equations from industry data

Equation	Industry	D log ((1+s)/q)	D log ((1-t)/p)	D log (u)	Trend	Constant	R ²
1	Forestry (2)	-0.392 (0.164)	-0.213 (0.275)	0.064 (0.047)	-0.0021 (0.0010)	0.098 (0.031)	0.536
2	Food, beverages, tobacco (3)	-0.248 (0.067)	-0.583 (0.089)	-0.015 (0.013)	0.050 (0.006)	0.809	
3	Textiles, clothing, leather (4)	-0.053 (0.034)	-0.711 (0.105)	-0.022 (0.018)	0.049 (0.008)	0.682	
4	Wood (5) Pulp and paper (6)	-0.053 (0.079)	-0.711 (0.102)	-0.022 (0.015)	0.049 (0.007)	0.682 (0.007)	
5	Printing, publications (7)	-0.322 (0.079)	-0.585 (0.102)	-0.029 (0.015)	0.037 (0.007)	0.794 (0.007)	
6	Chemical (8)	-0.036 (0.019)	-0.806 (0.087)	-0.022 (0.015)	0.038 (0.007)	0.767 (0.007)	
7	Clay, glass and stone (10)	-0.010 (0.042)	-0.677 (0.082)	-0.016 (0.014)	0.047 (0.007)	0.714 (0.007)	
8	Basic metal (11)						
9	Machinery, electronics (12)						
10	Transport equipment (13)						
11	Building (15)	-0.167 (0.116)	-0.529 (0.147)	-0.045 (0.022)	-0.0012 (0.0005)	0.068 (0.017)	0.709
12	Other construction (16)	-0.181 (0.092)	-0.620 (0.115)	-0.029 (0.014)	-0.0007 (0.0003)	0.057 (0.011)	0.813
13	Gas, electricity and water (14)						
14	Trade (17)						
15	Restaurants, hotels (18)						
16	Transportation (19)						
17	Finance, insurance (20)						
18	Estate, business services (21)						
19	Public, social, personal services (23)						
20	Average elasticity (weighted by employment)	-0.399 (0.082)	-0.368 (0.102)	-0.017 (0.014)	-0.0011 (0.0003)	0.057 (0.011)	0.816
21		-0.686 (0.134)	-0.236 (0.135)	-0.021 (0.016)	-0.0008 (0.0004)	0.058 (0.013)	0.778
22		-0.209	-0.564				

Dependent variable D log (w), standard errors in parentheses. w = nominal wage, s = payroll tax rate, q = producer price, p = consumer price,
t = average income tax rate, u = unemployment rate
Source: Honkapohja, Koskela and Uusitalo (1999).

Table 3. Employment equations from industry data

Dependent variable log (L), standard errors in parentheses.

Source: Honkapohja, Koskela and Uusitalo (1999).

Table 4. Employment equations from micro data: GMM-estimates

	(1)	(2)	(3)	(4)
D log N (t-1)	.036 (.021)	.773 (.110)	.751 (.103)	.711 (.055)
D log N (t-2)	.013 (.017)	-.108 (.025)	-.105 (.024)	-.092 (.020)
D log (w/q)	-.402 (.018)	-.358 (.036)	-.359 (.036)	-.181 (.057)
D log (w/q)(t-1)	-.125 (.020)	.158 (.063)	.151 (.060)	.092 (.044)
D log Y	.247 (.010)	.199 (.025)	.203 (.025)	.137 (.034)
D log Y (t-1)	.101 (.012)	-.101 (.034)	-.097 (.032)	-.078 (.023)
D log K	.064 (.008)	0.056 (.015)	.055 (.015)	.047 (.029)
	Year dummies	Year dummies	Year dummies Industry dummies	Year dummies
	OLS	GMM-instr. for lagged dependent variable	GMM-instr. for lagged dependent variable	GMM-instr. also for wage rate, capital and output
Wage elasticity (long-term)	-.555	-.598	-.587	-.235
Observations	2329	2329	2329	2329
Firms	410	410	410	410
M2 (d.f.)		.866 (352)	.857 (352)	.634 (352)
Sargan test (d.f.)		31.4 (25)	32.6 (25)	72.7 (66)

Dependent variable log (N), N = number of workers at the end of the year, Y = firm's value added, K = firm's capital stock, w = firm's wage rate, q = industry's producer price. Standard errors in parentheses. M2 is a test for AR(2). Sargan test is a test for validity of instruments.

Source: Honkapohja, Koskela and Uusitalo (1999).

the tax bases of income and payroll taxes are not equal due to tax exemptions. However, as the empirical evidence is not very strong, further research is needed.

What about the role of tax progression with respect to wage formation? Earlier, we noticed that in imperfectly competitive labour markets tax progression tends towards moderate wages and thus boosts employment. Does empirical evidence support this notion? The answer seems to be positive. There is evidence from Italy (Malcomson and Sartor 1987), from the United Kingdom (Lockwood and Manning 1993), from Sweden (Holmlund and Kolm 1995) and from Finland (Tyrväinen 1995a, 1995b, Honkapohja and Koskela 1999), which conforms with the hypothesis that

higher tax progression will moderate wage formation. The evidence from Denmark is much weaker. Lockwood, Slok and Tranaes (2000) have studied the effect of tax progression on wage formation by using Danish earnings data disaggregated by occupation, gender and earnings level. Their result is that it is income dependent as to whether tax progression moderates or exaggerates wage pressure.¹⁵

Finally, we should ask if there is any evidence along the lines originally suggested by Summers, Gruber and Vergara (1993), i.e., that labour taxation will have weaker effects on wage formation and employment in corporatist economies than in economies where the degree of centralisation of wage bargaining is lower. The empirical evidence in Alesina and Perotti (1996) conforms with this view. Moreover, one way to interpret the empirical findings by Daveri and Tabellini (2000), which we discussed earlier, is to say that the results of their research conforms with the notion that labour taxation has smaller distortionary effects in corporatist economies (see also empirical findings by Kiander, Kilponen and Vilmunen (2001)). This is an area where empirical findings are somewhat mixed and where further research is needed (see Calmfors (2001) for a more detailed discussion).

4 Some concluding remarks

What conclusions can we draw, on the basis of empirical research, regarding the relationship between labour taxes, wage setting, labour demand and unemployment?

First, there is empirical evidence – which is not necessarily particularly strong – that both income taxes and payroll taxes have a negative effect on labour demand. This is because the incidence of labour taxes would seem to be levied on both sides of labour markets. This conforms with our theoretical findings. Second, the income tax progression seems to have a wage-moderating effect, which boosts employment. There is evidence from various countries to support this view.

¹⁵ That appears to be a reasonable result, which cannot be analysed using aggregate data. Labour supply of workers may or may not be rationed. If the trade union negotiates the working hours "on behalf of the workers", then one can show that labour supply is rationed (see e.g. Holm, Kiander and Koskela 2001). On the other hand, if workers can decide their working hours, the situation is different. In the former case, the tax progression moderates, while in the latter case it exaggerates wage pressure. Hence, to the extent that the determination of working hours varies in different groups of workers, the impact of tax progression may vary as well (see Lockwood, Slok and Tranaes (2000) and Hansen, Pedersen and Slok (2000)). Empirical research with panel data from other countries could shed further light on the issues involved. This kind of data would make it possible to simultaneously study the effects of taxation on working hours, wage determination and employment. For a tax reform analysis focusing on working hours and using micro data from Finland, see e.g. Kuusmanen (2000). See also Ilmakunnas (1997).

Usually, the argument has been that tax progression can only be justified from the equity (= income distribution) point of view, so that there is a trade-off between the equity and efficiency aspects of labour taxation. In imperfectly competitive labour markets, however, progression also increases the efficiency of the functioning of labour markets so that it is justifiable without income distribution aspects. This is a finding that, thus far, has been given too little attention. Third, there is a small amount of evidence that the structure of labour taxation influences wage determination and employment. This is an issue that has not been empirically researched very thoroughly. It has usually been mentioned only as a finding against a common notion that the tax wedge is a sufficient statistic for describing the way that labour taxation behaves. This is certainly an important area for further empirical research.

All in all, most empirical research on the wage and employment effects of labour taxation has been carried out by using only aggregate time series or aggregate cross-country data. For various reasons (such as econometric problems associated with simultaneity between wages and tax variables and output and labour demand, not to mention the possibility that various parts of labour markets work differently) panel data set studies would be useful for providing more evidence about whether or not there are relationships.

To the extent that changes in labour taxation affect the relationship between income while working and income while unemployed (either because the unemployed have access to other income sources which are not subject to taxation or because there are important leisure values associated with unemployment) equilibrium unemployment, too, will be altered by changes in labour taxation. In terms of theoretical and supporting empirical research based on tax policies, we can draw the following conclusions. First, the tax-revenue neutral rise in labour tax progression – either in terms of income tax rate or in terms of payroll tax rate – will moderate negotiated wages, decrease the outside option for workers and thereby lead to lower equilibrium unemployment. Second, in terms of the employment effects of income taxation levied on workers, what matters is the relative tax rates of income employed and unemployed, respectively. If the tax rates are the same, tax rate changes will have no wage effect, so that equilibrium unemployment will remain unchanged, but government budget deficit will increase. Third, the structure of labour taxation may also exert an influence. Shifting taxation towards a narrower tax base due to tax exemption will increase total tax progression and will thereby boost employment for similar reasons to those we presented earlier in the context of tax progression. Hence, even without making trade-offs between the level of

government expenditure and labour taxation, it is possible to use tax policy to affect equilibrium unemployment. But finally, and more importantly, the degree of corporatism (= the degree of centralisation of wage bargaining) may be influential and, from this point of view, the role of taxation in various countries differs.

References

- Ball, L.* (1999): Aggregate Demand and Long-Run Unemployment, Brookings papers on economic activity, 1999:2, 182–251.
- Blanchard, O. – Portugal, P.* (2001): What Hides Behind an Unemployment Rate: Comparing Portuguese and U.S. Labor Markets, *American Economic Review*, 91, 187–207.
- Blanchard, O. – Wolfers, J.* (2000): The Role of Shocks and Institutions in the Rise of European Unemployment: the Aggregate Evidence, *Economic Journal*, 110, C1–C33.
- Bover, O. – Garcia-Perea, P. – Portugal, P.* (2000): Labour Market Outliers: Lessons from Portugal and Spain, *Economic Policy*, 31, 381–428.
- Calmfors, L.* (2001): Wages and Wage Bargaining Institutions in the EMU – A Survey of the Issues, CESifo Working Paper No. 520.
- Daveri, F. – Tabellini, G.* (2000): Unemployment, Growth and Taxation in Industrial Countries, *Economic Policy*, 30, 49–88.
- Hamermesh, D.* (1993): *Labor Demand*, Princeton University Press, New Jersey.
- Hansen, C. T. – Pedersen, L. H. – Slok, T.* (2000): Ambiguous Effects of Tax Progressivity – Theory and Danish Evidence, *Labor Economics*, 7, 335–347.
- Holm, P. – Honkapohja, S. – Koskela, E.* (1994): A Monopoly Union Model of Wage Determination and Taxes: An Empirical Application to the Finnish Manufacturing, *European Economic Review*, 38, 285–303.
- Holm, P. – Honkapohja, S. – Koskela, E.* (1995): Employment and Differential Payroll Taxes, Ministry of Social Affairs and Health Publications, 1995:11, Helsinki (in Finnish).
- Holm, P. – Kiander, J. – Koskela, E.* (2001): Tax Progression, Structure of Labour Taxation and Employment in a Bargaining Model with Endogenous Working Hours, Manuscript under preparation.
- Holm, P. – Koskela, E.* (1997): Tax Progression, Structure of Labour Taxation and Employment, *Finanzarchiv*, 53, 28–46.
- Holmlund, B. – Kolm, A.-S.* (1995): Progressive Taxation, Wage Setting and Unemployment: Theory and Swedish Evidence, *Swedish Economic Policy Review*, 2, 423–460.
- Honkapohja, S. – Koskela, E.* (1999): Finland's Depression: A Tale of Bad Luck and Bad Policies, *Economic Policy*, 29, 399–436.
- Honkapohja, S. – Koskela, E. – Uusitalo, R.* (1999): Employment, Labour Taxation and the Balance of the Public Sector, *Finnish Economic Journal*, 95, 74–95 (in Finnish).
- Iilmakunnas, S.* (1997): Female Labour Supply and Work Incentives, Labour Institute for Economic Research, Studies, 68, Helsinki.
- Kiander, J. – Kilponen, J. – Vilmunen, J.* (2001): Taxes, Growth and Unemployment in the OECD Countries – Does Collective Bargaining Matter? VATT Discussion Papers No. 235.

- Kiander, J. – Pehkonen, J.* (1999): Finnish Unemployment: Observations and Conjectures, *Finnish Economic Papers*, 12(2), 94–108.
- Koskela, E. – Schöb, R.* (1999a): Does the Composition of Wage and Payroll Taxes Matter under Nash Bargaining? *Economics Letters*, 64, 343–349.
- Koskela, E. – Schöb, R.* (1999b): Alleviating Unemployment: The Case for Green Tax Reform, *European Economic Review*, 43, 1723–1746.
- Koskela, E. – Schöb, R.* (2001): Optimal Factor Income Taxation in the Presence of Unemployment, *Forthcoming in Journal of Public Economic Theory*.
- Koskela, E. – Vilmunen, J.* (1996): Tax Progression is Good for Employment in Popular Models of Trade Union Behaviour, *Labour Economics*, 3, 65–80.
- Kuismanen, M.* (2000): Labour Supply and Income Tax Changes: A Simulation Study for Finland, *Bank of Finland Discussion Papers*, 5/2000.
- Lambert, P. J.* (1993): The Distribution and Redistribution of Income: A Mathematical Analysis, Manchester University Press, 2nd edition.
- Layard, R. – Nickell, S. – Jackman, R.* (1991): Unemployment. Macroeconomic Performance and the Labour Markets, Oxford University Press.
- Leibfritz, W. – Thornton, J. – Bibbex, A.* (1997): Taxation and Economic Performance, *Economics Department, OECD, WP No 176*.
- Ljungqvist, L. – Sargent, T.* (1995): Welfare States and Unemployment, *Economic Theory*, 6, 143–160.
- Ljungqvist, L. – Sargent, T.* (1998): The European Unemployment Dilemma, *Journal of Political Economy*, 106, 514–550.
- Lockwood, B. – Manning, A.* (1993): Wage Setting and the Tax System – Theory and Evidence for the United Kingdom, *Journal of Public Economics*, 52, 1–29.
- Lockwood, B. – Sløk, T. – Traaen, T.* (2000): Progressive Taxation and Wage Setting: Some Evidence from Denmark, *Scandinavian Journal of Economics*, 102(4), 707–723.
- Malcomson, J. – Sartor, N.* (1987): Tax Push Inflation in a Unionized Labour Market, *European Economic Review*, 31, 1581–1596.
- Nickell, S.* (1999a): Product Markets and Labour Markets, *Labour Economics*, 6, 1–20.
- Nickell, S.* (1999b): Finnish Unemployment: A View from Outside, *Finnish Economic Papers*, 12 (2), 62–81.
- Nickell, S. – Layard, R.* (1999): Labor Market Institutions and Economic Performance, in Ashenfelter, O. and Card, D. (eds): *Handbook of Labor Economics*, Vol. 3C, 3029–3084.
- OECD* (1994): Jobs Study: Taxation, Employment and Unemployment.
- OECD* (1997): Employment Outlook.
- Pehkonen, J.* (1999): Wage Formation in Finland, 1960–1994, *Finnish Economic Papers*, 12 (2), 82–91.
- Pissarides, C. A.* (1998): The Impact of Employment Tax Cuts on Unemployment and Wages: The Role of Unemployment Benefits and Tax Structure, *European Economic Review*, 42, 155–183.
- Pissarides, C. A.* (1999): Policy Influences on Unemployment: the European Experience, *Scottish Journal of Political Economy*, 46, 389–418.
- Pissarides, C. A.* (2000): Equilibrium Unemployment Theory, MIT Press.
- Shapiro, C. – Stiglitz, J. E.* (1984): Equilibrium Unemployment as a Worker Discipline Device, *American Economic Review*, 74, 433–444.
- Slaughter, M. J.* (2001): International Trade and Labor-Demand Elasticities, *Journal of International Economics*, 54, 27–56.

- Sorensen, P. B.* (1999): Optimal Tax Progressivity in Imperfect Labour Markets, *Labour Economics*, 6, 435–452.
- Summers, L. – Gruber, J. – Vergara, R.* (1993): Taxation and the Structure of Labor Markets, *Quarterly Journal of Economics*, CVIII, 385–411.
- Tyrväinen, T.* (1995a): Real Wage Resistance and Unemployment: Multivariate Analysis of Cointegrating Relations in 10 OECD Countries, *The OECD Jobs Study Working Paper No. 10*.
- Tyrväinen, T.* (1995b): Wage Determination, Taxes and Employment: Evidence from Finland, *Bank of Finland Studies E:3*.

COMMENTS

Pekka Ilmakunnas

Erkki Koskela has provided a useful summary of the state of the art in the analysis of taxation in labour union bargaining models. My comments are mostly concerned with some empirical regularities that the theory and empirical analysis in this area have not fully taken into account.

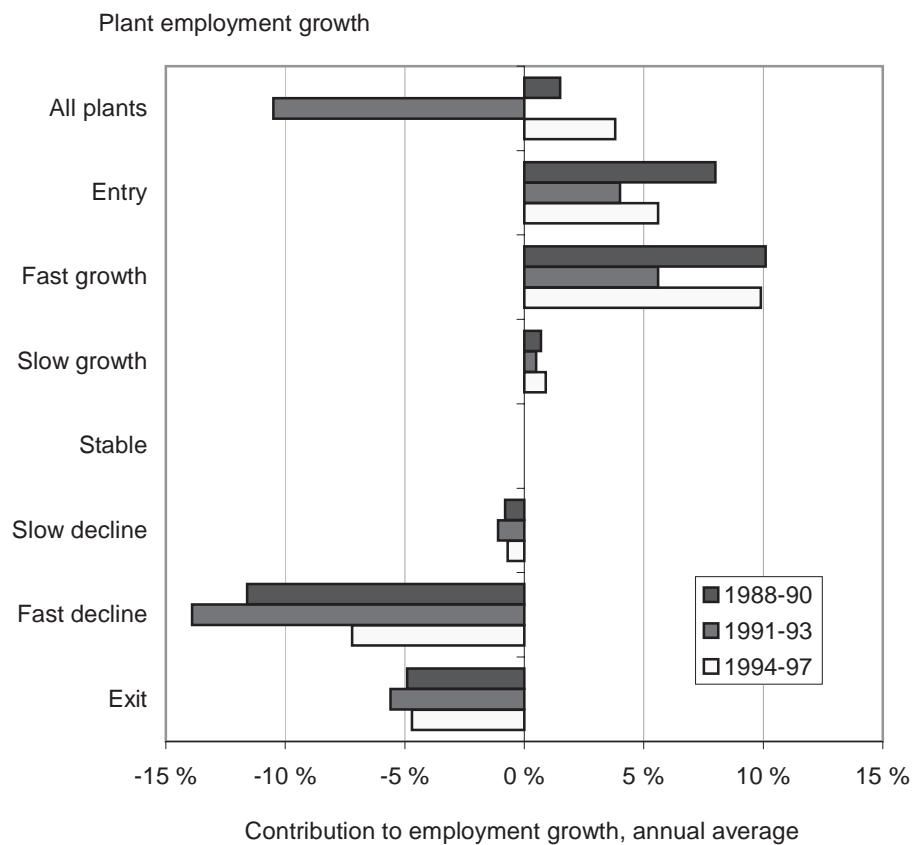
The models presented were based on the assumption of a representative firm. Also, in the empirical analysis the regressions describe the "average" firm and its response to wage and tax changes. With the new availability of large firm or plant level data sets, researchers have started to pay attention to the fact that real-life firms or plants are very heterogeneous. Even within narrowly defined industries, there is simultaneous entry and exit of firms, as well as job creation and job destruction among continuing firms. Also within growing or declining firms there is simultaneous hiring and separation of workers. Differences in plant employment growth are so great that they cannot be explained by differences in the level and change of real wage or labour taxes alone. It is likely that so-called idiosyncratic shocks dominate employment changes. These include technological change, competition, product and industry life cycles, etc.

The empirical observation of firm heterogeneity has also led theoreticians to consider models that account for this fact. In the theoretical evaluation of tax effects the traditional tool – the labour union bargaining model – does not allow for firm heterogeneity. The search and friction models allow for heterogeneity to some extent, although, at least in some cases, at the expense of assuming firms with only one worker. In many matching models bargaining takes place between individual workers and firms although recently, efforts have been made to integrate unions in these models (see, e.g., Mortensen and Pissarides 1999). Matching models also have the drawback that structural models derived from them tend to be fairly complicated to estimate, at least compared to labour demand models derived from the union models. In any case, it is likely that in the future we will see a closer integration of the two types of models, union bargaining and matching, in the theoretical and empirical analysis of taxation and employment.

To illustrate the challenge that this raises for economists, I present some figures on employment change in the Finnish business sector for the period 1988–1997 (based on Ilmakunnas and Maliranta 2001). Employment growth was calculated in over 100 000 plants. Following Davis, Haltiwanger and Schuh (1996), growth is measured as $[employment\ in\ year\ t - employment\ in\ year\ t-1] / employment\ in\ year\ t-1$.

in year $t-1$]/[average of employment in years t and $t-1$]. This way of calculating relative changes treats the entering and exiting plants symmetrically, since, for a new plant, the growth rate is 200 % and for an exiting plant it is -200 %¹. All other plants fall within these limits. The plants are classified by growth according to the following "regimes": exiting (growth equals -200 %), fast declining (between -200 % and -10 %), slowly declining (between -10 % and -2 %), stable (between -2 % and +2 %), slowly growing (between 2 % and 10 %), fast growing (between 10 % and 200 %), and entering plants (growth equals 200 %). The contribution of each growth regime to total employment change is the employment share of the group multiplied by the growth rate. Figure 1 shows these contributions in three time periods, the boom at the end of the 1980s, the recession years, and the recovery

Figure 1. *Plant growth regimes and their contribution to business sector employment growth, 1988–97*



¹ If E_t denotes year t employment, the growth rate is defined as $(E_t - E_{t-1}) / ((E_t + E_{t-1}) / 2)$. When a new plant is entering, $E_{t-1} = 0$ and the growth rate is 2 (200 %), but a usual relative change $(E_t - E_{t-1}) / E_{t-1}$ cannot be calculated. When an old plant is exiting, $E_t = 0$ and the growth rate is -2 (-200 %)¹, whereas the usual percentage change is -100 %.

from 1994 onwards. It can clearly be seen that, in different business cycle phases, the various groups of plants have had a different impact on employment. In recession, more plants exit and there are more and larger plants in the group of declining plants. Still, even during the recession, some plants are growing and new plants are entering. In the recovery, a larger share of the work force is in the group of growing plants, contributing to employment growth. On the other hand, even during the boom and recovery years there are plants that are laying off workers.

This heterogeneity may have important implications for the analysis of tax effects. Consider, for example, the effects of tax cuts on employment. For tax cuts to influence employment, they have to do one or more of the following: 1) speed up the growth of growing plants, 2) slow down the decline of declining plants, 3) encourage entry of new plants, and 4) discourage exit of old plants. In principle, tax cuts could also move firms that are laying off workers to the group of growing firms, or alternatively, tax increases could move some of the growing firms to the declining category. It is likely that taxes influence each of these cases differently. Additionally, taxes have indirect effects through their impact on aggregate demand, which may affect all firms more symmetrically. However, I concentrate here on the partial equilibrium effects.

It has been suggested that job creation and destruction behave asymmetrically. By creating an additional job, a firm gains the marginal revenue from increased production and incurs wage costs (including labour taxes) and job creation costs. Additionally, it avoids future job creation costs by already creating the job now, but possibly incurs job destruction costs if the firm declines in the future. On the other hand, if a firm that is declining decides to save a job, it gains the marginal revenue and incurs wage costs (including labour taxes) but saves the job destruction costs. It also saves future costs of creating the job again, but may face job destruction costs in the future as it postpones job destruction today. It can be argued (e.g. Campbell and Fisher 2000) that labour demand is likely to be more elastic with respect to wage, and hence also with respect to labour taxes, in firms that face adverse shocks (declining firms) than in firms that face positive shocks (growing firms).

The impact of wages and taxes on entry and exit is an unexplored area. To encourage entry, tax cuts would probably have to be large, since entry costs are high relative to job creation costs in continuing plants. Declining plants often face financial difficulties, and tax changes may therefore only have a marginal impact, compared to the finance constraints. In the extreme case of exit, firms often face bankruptcy, which may be difficult to prevent with labour taxes.

The elasticity of labour demand with respect to wage or taxes is therefore likely to be different in the different growth regimes. An "average" wage or tax elasticity is the employment-share weighted sum of the labour demand elasticities of plants in different regimes. Since the employment shares of the growth regimes change over the business cycle, the average elasticity with respect to wage or taxes also varies over the cycle. If the argument presented above holds, in a recession the employment share of declining plants with high labour demand elasticity grows and, as a result, the wage and tax elasticity of employment increases. The converse would happen during a boom. The result that aggregation over heterogeneous micro units causes nonlinearities at the macro level is, of course, familiar from aggregation theory.

The implication of this argument for the empirical evaluation of tax effects is that it is always better to use micro data, if available, and try to take into account firm heterogeneity. With more aggregate (macro or industry-level) data, one can at least allow for the tax and wage elasticities to change over time.

References

- Campbell, J. R. – Fisher, J. D. M. (2000): Aggregate employment dynamics with microeconomic asymmetries, *American Economic Review* 90, 1323–1345.
- Davis, S. J. – Haltiwanger, J. C. – Schuh, S. (1996): *Job Creation and Destruction*, Cambridge: MIT Press.
- Iilmakunnas, P. – Maliranta, M. (2001): The Turnover of Jobs and Workers in Finland, Ministry of Labour, forthcoming.
- Mortensen, D. T. – Pissarides, C. A. (1999): New developments in models of search in the labor market, in Ashenfelter, O. C. – Card, D. (eds.): *Handbook of Labor Economics*, Vol. 3B.

Markus Jäntti

Professor Koskela's survey on labour taxation and employment is an interesting survey of evidence regarding the impact of labour taxes on employment and unemployment. The theoretical basis of the paper is a fairly simple right-to-manage (RTM) model, where firms that operate on only partially competitive goods markets set the level of employment, but labour unions choose the wage level – and therefore, indirectly, the unemployment rate. While the model is a much-simplified version of the Nordic and Finnish labour markets, it is sufficient to suggest a number of ways in which payroll and income taxes may affect employment. I shall argue below, however, that there are some problems with the model simplifications. These problems are, by and large, dealt with in the review of empirical evidence that constitutes the latter part of Professor Koskela's paper.

My comments concern three aspects of Professor Koskela's paper: what omitted details of the Finnish case may or may not add insights into the theoretical basis; what kind of econometric problems arise in estimating regressions that link taxes to wages and employment; and finally, what policy consequences can be drawn from this kind of work.

The model

The right-to-manage model that Professor Koskela uses is an elegant way to capture the main elements of highly unionised labour markets with collective bargaining and firms that operate under imperfect competition. Some aspects are not captured – for instance, there is little role for individual labour supply decisions (see Fuest and Huber 2000; Sørensen 1999). It would be interesting to see if the bargaining framework could be extended to include, perhaps as participation restrictions, individual-level hours decisions. Such future work is not at issue here. What is at issue, however, is whether or not the model, as formulated in this context, fails to capture some aspects which may, in fact, have a major influence on decisions. I would argue that two important characteristics of the Finnish labour markets are missing.

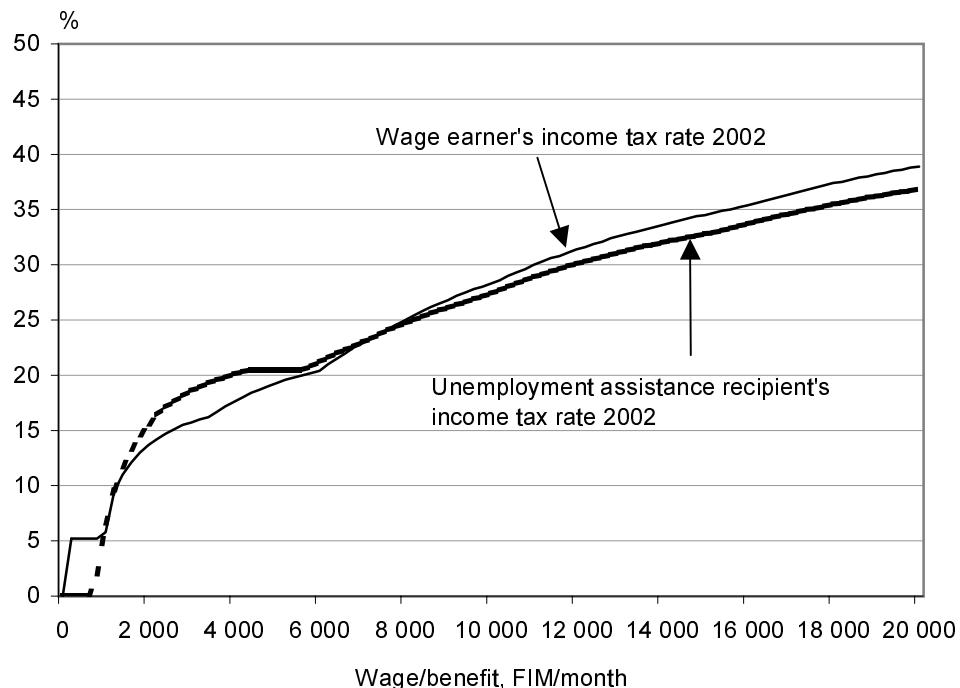
The first is the tax treatment of the outside option of the unemployed. In Professor Koskela's paper (see equation 4), proportional taxes are levied on labour income (after the deduction) but the outside option is not taxed. Income taxes affect the negotiated wage through the exemption and through the fact that increases in the tax rate make a given wage before taxes less valuable relative to the outside option. If the outside option (which later turns out to be a weighted average of wages in competitive labour markets and, perhaps more importantly, of unemployment benefits)

is taxed at an equal proportional rate, the result changes and taxes only matter because of the exemption. When the exemption goes to zero, income taxes cease to affect the negotiated wage. The theoretical results thus depend on the precise details of the income tax and benefit system.

Two features of the Finnish tax-benefit system immediately come to mind. Firstly, the tax schedule is progressive, not only through the exemption as in the present case. This case is discussed by Professor Koskela in the empirical part. The model assumption, that the outside option is not taxed, could be thought of as a simplification of tax progression (the negotiated wage is higher than unemployment benefits since otherwise the union opts out). However, as Professor Koskela clarifies, progressivity introduces a whole new story.

Secondly, unemployment benefits in the model are of the flat-rate type and are not taxed. In fact, low values of unemployment benefits, such as the flat rate unemployment assistance, are taxed at a higher rate than are wage and salary incomes of the same amount, as there are exemptions that can only be made from the latter. Figure 1 shows how this works in 2002. This difference at low levels of earnings and unemployment benefits has

Figure 1. Income tax rates of a wage earner and an unemployment assistance recipient in 2002



Source: Asumistuen yhteensovittamistyöryhmän raportti 2001.

increased over the 1990s in an explicit policy effort to increase labour supply at the individual level. As far as I can tell, this would tend to reduce the value of the outside option and lead, through wage moderation, to increased employment.

The tax rates cross at some point as the effect of the exemption decreases and the employee part of certain labour taxes take over. Above the cross-over point, however, the difference in tax rates is only a few percentage points, not the full tax rate as assumed in the model. Thus, it would seem that the relevant empirical variable that captures the effects of income taxes would be the difference between taxes paid on earnings and on unemployment benefits, a variable whose size, and possible variation over time, is of a wholly different order of magnitude than the average tax rate per se that is now commonly used.

A final point concerns the labour union's objective function. In a highly unionised economy with centralised collective bargaining, the union probably takes into account what taxes are used for, namely government services and income transfers. If the government budget were unaffected by the outcome and benefits accrue to union members and non-members alike, the benefit side would be washed out of the solution to the bargaining problem. Since none of these conditions is likely to hold, the outlay side of the government budget may have an effect on the negotiated wage.

Estimation problems

There are some thorny problems involved in estimating the wage and employment elasticities of taxes. Some of the evidence reviewed by Professor Koskela is based on time-series regressions that use quarterly data. The labour income tax variable that is used is, in general, the overall income tax rate, which only gets defined once a year (income taxes in Finland are defined on an annual basis). It is unclear to what extent there is within-year variation in the tax rate and how, in that case, this is being generated (see Pehkonen 1999).

The other problem with using the average tax rate to explain wages and employment is that the average tax rate is a function of these two variables. The average tax rate may vary because the tax schedule changes or because wages and/or employment change. This induces, as Professor Koskela notes, a serious simultaneity problem. It is very difficult to envision a way to control for this using instruments, not least because the tax schedule itself may respond (by government income policy) to the negotiated wage settlement. Counterfactual calculations of the endogenous element of the change in tax rate between 1989 and 1998 suggest that a substantial proportion of the change can be attributed not to tax policy but to labour markets (Jäntti 2000).

Policy consequences

The effect of labour taxes on employment is of great intellectual interest. It is, however, also of great policy interest. Indeed, part of the results that concern Finland, reported by Professor Koskela, emanate from a report written for the Ministry of Finance (Honkapohja et al. 1999). There is a widespread consensus in Finland that reducing labour taxes will increase employment and reduce unemployment. Many of the points raised here by Professor Koskela have been totally overlooked in both academic and policy circles, as well as in the media. A sceptic might go as far as to claim that only those views from the research literature that support the political consensus make it to public debate. Some of the current results, e.g., that increased tax progressivity may increase employment run counter to the current practice of reducing taxes across the board.

Maybe the old joke that with four economists present there may be five points of view has induced academic economists to simplify their message to policy makers. In view of Professor Koskela's conclusions, however, such simplifications may have dire consequences. Suppose, for instance, that a revenue neutral increase in labour income tax progressivity leads to an increase in employment. Since citizens care about the level of publicly provided services, a policy maker might choose to do exactly this rather than simply reduce the overall tax rate, which will lead to unpopular cuts in services (if the budget is balanced). Policy makers and the public are entitled to the whole story.

Concluding comments

There may be reasons to reduce rates of labour taxation other than their employment impact. Reduced taxes are a political objective in themselves. Policy makers may fear that high tax rates, especially on high earners, lead to brain drain and that lower taxes on capital than labour lead to more capital-intensive production. It is also believed that tax evasion tends to increase with higher taxation and, conversely, that reducing taxes might lead to reduced evasion. These are legitimate goals, of course, but should not be confused with the substantive issue at hand. It is far less clear that labour income taxes are detrimental to employment than is commonly believed. A good case can be made – and is by Professor Koskela – that the tax structure may be changed with little change in tax revenue, in ways that are favourable to employment.

References

- Asumistuen yhteensovittamistyöryhmän raportti* (2001): Monisteita 86, Ympäristöministeriö, Helsinki.
- Fuest, C. – Huber, B.* (2000): Is tax progression really good for employment? A model with endogenous hours of work, *Labour Economics* 7(1), 79–93.
- Honkapohja, S. – Koskela, E. – Uusitalo, R.* (1999): Työllisyys, työn verotus ja julkisen sektorin tasapaino, *Tutkimukset ja selvitykset* 1/99, Valtiovarainministeriö, Helsinki.
- Jäntti, Markus* (2000): Regressing wages and employment on the average tax rate, Unpublished manuscript, Åbo Akademi.
- Pehkonen, Jaakko* (1999): Wage formation in Finland, 1960–94, *Finnish Economic Papers* 12(2), 82–93.
- Sørensen, P. B.* (1999): Optimal tax progressivity in imperfect labour markets, *Labour Economics* 6(3), 435–452.

CHAPTER 4

ACTIVE LABOUR MARKET PROGRAMMES

NOTES ON SWEDISH LABOUR MARKET POLICY¹

**Susanne Ackum Agell
and Martin Lundin²**

1	Introduction	97
2	Individual effects	99
3	Macroeconomic effects	103
4	Lessons on decentralised labour market policy	106
5	Finally	107

1 Introduction³

Inflation is public enemy number one, Gösta Rehn once said. In avoiding inflationary bottlenecks in the labour market, active labour market policy was a necessary complement to a solidaristic wage policy. The workers cast out from non-profitable sectors under compressed wage structure, would, by active labour market programmes (ALMP), be steered into expanding sectors with heavy demand for labour. During a period of re-structuring they would receive unemployment compensation. In Rehn-Meidner's scenario, active labour market policy was a way to avoid inflationary bottlenecks under surplus demand for labour in parts of the economy.

In the 1990's, Swedish labour market policy attained wider scope than ever before: 2 891 000 persons were registered in employment services. From time to time, over 200 000 persons – almost 5 per cent of the total labour force – participated in different labour market programmes.⁴ A considerable part of those out of work during that time participated in one labour market programme or another. Participation in measures was therefore not confined to small severely hit groups; rather, a considerable part of the population was involved in measures.

¹ This paper is largely based on Ackum Agell (1994, 1995, 1996, and 1998) and Ackum Agell et al. (2000).

² We wish to thank Anders Forslund, Anders Harkman, Eva Johansson, Sara Martinsson and Kristian Persson for reading and giving useful comments on an earlier version of this paper. Any policy recommendations are based on our own judgements and are not necessarily shared by the institute we work for.

³ For theoretical references on what to expect from ALMP see e.g. Layard et al. (1991), Calmfors (1994), Calmfors et al. (2001). For a much more in-depth analysis of the theoretical and empirical evidence of Swedish ALMP see Calmfors et al. (2001).

⁴ Excluding special measures targeted at the disabled.

While many countries (e.g. England, Holland and New Zealand) opted for a wide range of structural reforms on the labour market to fight against mass unemployment, the Swedish government instead chose to “bridge over” the mass unemployment of the 1990’s, combining this with certain structural reforms (in the hope that the unemployed and the new jobs could be matched at short notice when the cycle turned). This “bridging over” policy has had two features. The first involves asserting the employment line within labour market policy (i.e. participation in active measures is favoured over passive receiving of unemployment compensation). The other has been investment in adult education, the so-called “skill shift” (Kunskapslyftet). Two goals are thus evident in the Swedish active labour market policy at present, so it should, on the one hand, help to keep labour supply as effective as possible during recession and, on the other, counteract bottlenecks during a boom.

How successful the (Swedish) active labour market policy is in “bridging over” the periods of recession remains to be seen. As no other country has invested so much in active measures in order to reduce open unemployment, there are no lessons to be learned from abroad. However, the first observation to be made is certainly that employment has grown significantly in recent years, while the economy has not suffered from particular inflationary pressures. Recently, however, incipient bottlenecks have been reported in parts of the economy while unemployment has remained at (by Swedish standards) a high level. Complete assessment of this experiment is going to take some time.

In this paper our aim is, without claiming to be exhaustive, to sum up what the economics (with emphasis on Swedish experiences) has to say about the effects of the active labour market policy.⁵ We shall proceed as follows: in section 2 we shall present the individual effects of participating in ALMP and in section 3 we shall discuss the macroeconomic effects. In section 4 we shall discuss how the organisation of ALMP affects their effectiveness. Section 5 will sum up.

⁵ Government accounts and ministry reports have also discussed the formation and development of the Swedish labour market policy; see e.g. Riksdagens revisorer (1994), SOU 1993:43 and SOU 1996:34. In addition to these studies, expert appendices and conclusive surveys on the state of art in the field have been produced; see e.g. Calmfors (1994), Edin and Holmlund (1994), Forslund (1992), Holmlund (1993), Holmlund et al. (1993), Jackman (1994), Martin (1998) and OECD (1993). There is quite an extensive supporting literature for justifying intensification of the policy. Yet the impacts of the policy, as shall subsequently become clear, have remained surprisingly little studied and it should be noted that the results are, as yet, uncertain.

2 Individual effects

In this section we shall discuss the effects of labour market programmes on participating individuals. We have chosen to present the results in four different parts: the effects of employment services, labour market training and subsidised jobs, job search and the way in which the employers view the unemployed and those who participate in programmes.

Employment services

An important part of labour market policy, often forgotten when speaking about activating policy, is employment services. As far as we know, there were no systematic evaluations on this aspect of labour market policy in the 1990's. Employment services certainly represent one of the few measures to give positive results on job finding possibilities internationally; see e.g. Martin (1998). Likewise, earlier Swedish studies show positive results from intensified employment services. There is hardly reason to think that premises would have been radically different over the 1990's. In spite of a drastic fall in employment, new appointments were still made and new jobs emerged.⁶

Labour market training and subsidised jobs

Experiences suggest that, at the upturn of a cycle, vacancies do not always appear in regions with high unemployment. Likewise, they may not pop up within those branches, where the pool of the unemployed is concentrated. If the design of the Swedish labour market policy is put into the perspective that the unemployed lose part of their vocational skills (or are hindered from developing them because of new technologies adopted at work) it can be claimed that targeted labour market training, as well as subsidised jobs, aim at preventing a person's vocational skills from deteriorating or becoming outdated during the period out of work. How effective are these different measures in improving an unemployed person's position in the regular labour market?

Before discussing the interpretation of the results from the twentieth century studies on individuals, it is necessary to take note of an important work by Carling and Larsson (2000). They claim that the development of the Swedish labour market policy from the 1980's onwards has entailed an evaluation problem. Answering the fundamental question – i.e., what are the effects of participating in measures compared to never having

⁶ Andersson (1999) and Persson (1999) show this in studies on gross employment flows on the Swedish labour market.

participated nor intending to participate in measures? – is difficult using the available data. The reason for this is that there seldom exists a control group which is certain never to participate in a measure. Those job seekers not participating in a measure at a given moment in time (who usually form a natural control group) are almost sure to participate at some stage in the future, given that they continue their search for a job and are thereby eligible for measures. Therefore they do not represent a world without ALMP and do not make up a natural control group, which is a prerequisite for dealing with the classic evaluation problem. Consequently, results from most of the Swedish evaluation studies considering a time period from the middle of the 1980's onwards, should be interpreted with caution. It cannot be disregarded that studies often address the effect of participating in a measure *at a certain point in time and not later*, rather than addressing the classic issue of the effects of participation vis-à-vis non-participation.

Labour market training

Vocational labour market training is the most analysed measure in Sweden. For most of the 1980's, participation in labour market training increased the odds of an unemployed person getting regular employment; moreover, wages for the new job turned out to be higher than those which a person without comparable training received; see e.g. Axelsson (1989). This positive impact seems to have been short lived, becoming negligible and later even negative in its influence, for those who participated in training during the end of 1980's and the beginning of the 1990's; see Regnér (1997). Among other explanations, there have even been claims that labour market training has been used to prevent outflow from unemployment compensation. It is plausible that work experience schemes (*arbetslivsutveckling*, ALU), launched in 1993, were designed to prevent that outflow.

Over the 1990's, a whole range of new training measures were launched. One of them is the national IT programme (SWIT). The Central Organisation for Industries and the branch organisation for IT firms together set up a society called "SWIT vocational training" which was commissioned by the Swedish government to organise labour market training. The target was to supply professional competence for IT professions worst hit by labour shortage. Johansson and Martinson (2000) compare IT training organised by SWIT and the National Labour Market Board (AMS) respectively. They find that those who had participated in SWIT training (as opposed to that of the Labour Market Institute) had a better chance of getting a job after completing the training. According to Johansson and Martinson, a plausible explanation for this is that SWIT participants had more intensive contacts with potential employers before and during the training.

Subsidised jobs

Traditionally subsidised jobs have also proven quite ineffective, irrespective of the time period considered, in contributing to the job finding probability and wages of the unemployed; see SOU 1993:43. The wide scale, low cost per capita programmes of the ALU and Youth Practice initiated during the 1990's recession constitute another problem in this respect. This does not seem so odd, however, when considering the number of persons involved (approx. 4 per cent of the labour force over long periods in the 1990's) and the money spent on them. Also remarkable in this connection is the fact that international studies suggest that measures involving a great number of participants at low cost per participant (characteristics of ALU and Youth Practice) hardly strengthen the position of an unemployed person on the regular labour market, if indeed at all; see e.g. OECD (1993) and Martin (1998). There are still relatively few evaluations of the subsidised jobs during the 1990's in Sweden. A comparative survey exists, namely AMS (1999). Results from specially organised temporary jobs, such as ALU, Relief Work (beredskapsarbete) and Work Placement Schemes (arbetsplatsintroduktion, API) compare unfavourably with those resulting from Start Up Grants (starta eget-bidrag) and Recruitment Subsidies (rekryteringsstöd).

A relatively high share of those employed through the help of economic support (such as recruitment subsidies) manage to hold on to their jobs as well, which suggests that this kind of measure may be of some help. The trick here is to avoid the so-called dead-weight losses, meaning that a firm receives support to employ a person it would have hired anyway. According to research, this may constitute a considerable problem; see AMS (1998).

In international studies, start-up grants for entrepreneurs setting up a business of their own have proven to be a successful measure; see Martin (1998). This seems to be true for Sweden, too. Firms established by unemployed people do survive as well as other new firms and the company owners relatively seldom go back to unemployment (Okeke 1999, Carling and Gustafson 1999). Again, Bergwall and Larsson (2000) point out that firms established with support may crowd out other non-recipient firms competing on the same market.

Since the middle of the 1980's a variety of measures have existed in different schemes, especially designed for the young. When combined, results from evaluations suggest small or sometimes even somewhat negative effects from these measures; see e.g. Ackum (1991), Korpi (1994), Larsson (2000) and Regnér (1997). Comparison between different programmes indicates that for the young, subsidised jobs are of more help than participation in labour market training; see Larsson (2000).

Participation in a measure within the framework of a well-designed programme (i.e. in line both with the resources and needs of the young unemployed and also with the demand for labour) seems to increase young people's chances of establishing themselves in the regular labour market; see Sehlstedt and Schröder (1988).

Search activity

The high unemployment in recent years has initiated a discussion on the search activity of job seekers. Several factors make search activity an interesting topic. First, it is fair to believe that those who do not look for a job – all other things being equal – have comparatively few chances of getting a job. Second, in foreign discussions (see e.g. Layard et al. 1991 and Wyplosz 1994) permanent unemployment has been partly explained by the gradual diminishing of job searching activity. Third, active job search can create a job: when unemployed people get in contact with employers on their own initiative, they can persuade the employers to speed up a planned hiring or even to offer a new, unplanned vacancy. Fourth, search activity can be of importance to wage setting in the economy: the stronger the effective labour supply, (i.e. the more job seekers there are per vacancy) the lower the risk of inflationary wage increases.

Swedish studies on search behaviour over the 1990's have observed that search activity in the Swedish labour market is, as a rule, low, and on entering an ALMP measure it practically ceases; see e.g. Ackum Agell (1996), Harkman and Jansson (1995) and Regnér and Wadensjö (1999). Regarding the low search activity of participants, even during the recession of early 1980's, see Edin and Holmlund (1991). Swedish studies, on the other hand, do not imply weakening in search activity because of long-term unemployment; see e.g. Ackum Agell (1996), Harkman and Jansson (1995) or Åberg (1997). In AMS (1999) another interesting result emerges, namely spontaneous recruiting encouraged by personal contact by the job seeker (i.e., an employer acts earlier or decides on a new (extra) vacancy), which is quite common.

Stigmatisation of the unemployed

Both Swedish and international studies suggest that employers hesitate about hiring anyone out of work for a longer period. Agell and Lundborg (1999) find that a relatively high number of personnel managers regard job seekers with a history of unemployment and/or participation in ALMP measures as potentially less productive than other workers. Similar results are found in a Norwegian study (Colbjørnsen et al. 1992), which suggest minor attitude changes among employers in hiring a person with a history

of unemployment of up to 6 months, but clear reluctance with regard to employing someone having been out of work for longer than that. In certain respects, this problem seems to have become more critical through the 1990's. In 1991, a little over 20 per cent of personnel managers considered long term unemployment as being an indication of negative productivity; in 1998, 27 per cent were of this opinion. Furthermore, Agell and Lundborg (1999) show that this stigmatisation effect becomes milder in the case of those having participated in some sort of labour training. Open unemployment is, however, more stigmatising than engaging in training. Agell and Lundborg (1999) find no statistically significant differentials between open unemployment and participation in other ALMP measures.

3 Macroeconomic effects

In section 2 we presented the effects of ALMP on those who participate in programmes. In this section we shall discuss their effects on the entire economy, and not just on those who participated. We have chosen to present the results in three different parts, i.e., their effect on labour supply, employment and mobility.

Labour supply

Growth in employment has, in recent years, been very favourable, yet it has not caused inflation pressures for the economy. A possible, but not scientifically proven explanation is that the ALMP measures managed to keep the unemployed within the labour force over the 1990's depression. See Dahlberg and Forslund (1999) for indirect evidence that ALMP increase labour market participation. In that way, labour supply has been maintained, which has made it easier to match new vacancies to the job seekers during an economic upturn.

Employment effects

Crowding out with constant wages

When it comes to evaluating the effects of labour market policies on employment and unemployment, the question of net effects is of central importance. There is an obvious risk that a measure can be used to employ a person who, partly or totally, takes over assignments that without measures would have been given to someone else. What do we know about the crowding out effects? That some of the ALMP lead to direct crowding out effects is hardly a controversial claim. The scale of crowding out has, however, been the subject of much discussion.

The problem with the crowding out effects caused by the ALMP measures has long since been noted. Gramlich and Ysander (1981) studied crowding out effects in connection with relief work. Not totally unexpectedly, they found that crowding out is extensive in the construction sector, where substitutability between different types of labour is potentially high. In contrast to that, relief work within health care does yield new job opportunities. Similar results are confirmed in Forslund and Kruger (1993).

Crowding out has been studied in recent years by i.a. Calmfors and Skedinger (1995), Forslund (1996) and Dahlberg and Forslund (1999). Calmfors and Skedinger (1995) find that their results are model sensitive (this is also corroborated by Dahlberg and Forslund 1999) and that subsidised jobs crowd out regular employment, whereas no crowding out effects were found in connection with labour market training measures. Dahlberg and Forslund (1999) find, moreover, that subsidised jobs lead to significant crowding out, although to a somewhat lesser extent than that which was observed in earlier studies (see e.g. Forslund 1996), while labour market training does not create crowding out.

Crowding out with wage changes

ALMP measures can also crowd out regular employment through wage pressure. The reasoning behind this idea is that wage negotiators set their claims, aware of the fact that rising wages cause losses in demand for labour. In such models, wage claims are dampened down by the risk of open unemployment, since this produces income losses for the employed. If wage earners think that a lot of those getting the sack are merely reoriented to the ALMP (where the compensation for e.g. relief work is higher than unemployment benefit) this can cause a certain dampening of the risk of unemployment in wage negotiations. Wages can therefore increase and (the regular) employment thus decrease if the unemployed are steered on to ALMP.

A regular finding in Swedish studies is that open unemployment seems to dampen down wage claims more than employment, with the help of an ALMP measure; see i.a. Calmfors and Forslund (1990), Holmlund (1990) and Forslund (1995, 1997). Involving the unemployed in measures can thus produce a trend for wage pressures and, therefore, a risk of crowding out regular employment. The expected wage-raising effect among higher levels of compensation has also been corroborated in foreign studies, even though the effect seems to be rather modest. These studies are based on pre-1990's-depression data. The radically changed economic environment of the last decade may well show different results. The most recent studies

on this issue (Forslund and Kolm 2000) do not find any wage pressure effects of labour market policies. The main reason for this is that they claim to have had access to better quality data than the earlier studies.

Mobility of labour

A flexible labour market is a necessary prerequisite if the current total unemployment is to be restored to a more acceptable level. Labour mobility is an important indicator for flexibility of the labour market. If labour mobility is at a low level, temporary shocks can lead to mismatch on the labour market – new jobs are not certain to emerge in regions (or professions) worst hit by unemployment. Labour market policy can influence the mobility of the labour force, both geographically and occupationally. It is, in this context, necessary to differentiate between mobility-increasing measures (employment services, migration benefit and labour market training) and subsidised jobs.

Mobility-increasing measures aim directly at preventing and counteracting matching problems in the labour market. According to Harkman (1988), employment services and mobility grants have indeed contributed to the increased mobility. Westerlund (1992), on the other hand, does not find any connection between mobility grants and geographic mobility. In their evaluation of start up-grants, Storrie and Nättorp (1997) find that a marginal change in the support has, on average, a minor effect on the willingness to move.

What is the effect of subsidised jobs on the geographic mobility of labour? There is some evidence in economic literature that subsidised jobs can lead to geographic and occupational locking-in effects; see e.g. Calmfors (1994). Geographic locking in can take place if an increase in the subsidised jobs has a similar influence on the increase in demand for labour on the regional labour market – individuals who, in other circumstances, would have moved, choose to stay if they get a chance to participate in a measure. Occupational locking in arises if individuals with outdated professional skills turn down re-education or further training when given the possibility to participate in a measure. Studies in this field give some support to the observation that labour market training and relief work produce regional locking-in effects on the labour market (at least in the short term); see Edin et al. (1998), Fredriksson (1997), Harkman (1988), McCormick and Skedinger (1992) and Nilsson (1982). So far, no-one in Sweden has studied whether subsidised jobs cause occupational locking-in effects. This is probably due to lack of data, as Sweden has no official register on occupations.

Perhaps it is necessary here to point out a few problems in studies on the locking-in effects of subsidised jobs. First, earlier studies on potential

locking-in effects have chosen to aggregate labour market measures. For example, no difference has been made between labour market training and subsidised jobs. This is unfortunate, as training, unlike subsidised jobs, mostly aims at increasing an individual's choice on the labour market. Second, both short-term and long-term effects should be considered. Even if participation in labour market training produces locking-in effects in the short run, it may not constitute a problem, given that an individual's post-training mobility in the labour market increases, too. Research does not make this distinction but sheds light on short-term effects only. Third, certain studies imply that the results are model sensitive.

4 Lessons on decentralised labour market policy

For decades, the National Labour Market Board has had regional and local bodies. In the 1990's much effort was placed on increasing local and regional influence in Swedish labour market policy. As a novelty, actors other than officials of the National Labour Market Board have also been involved in implementation of the labour market policy, i.e., employment experiments with more relaxed usage of ALMP measures on the level of provinces, with a majority of the members of local employment service committees being appointed from municipalities and municipal responsibility for the young as examples of this trend.

Decentralised decision-making has both benefits and disadvantages. On the one hand, local actors (in comparison to central administration) can have communication advantages at local level, resulting in better decisions. On the other hand, local decision makers easily fail to notice the consequences of their decisions outside their own region. Deciding whether or not the advantages outweigh the disadvantages is an empirical question. What do we know about the effects produced by intensification of decentralised labour market policy during the 1990's? To begin with, relatively few studies about decentralisation exist. Although we have tried, in what follows, to sum up results from a number of studies on the subject, it is too early to say which – advantages or disadvantages – are more important.

Behrenz et al. (1999) found no positive effects from a municipality experiment. On the other hand, their results indicate that the chances of unemployed workers finding a permanent job are greater in the municipalities which substantially increased the local co-operation – whether they participated in the experiment or not.

Lundin and Skedinger (2000) study experiences from a 1996 experiment,

where the influence of municipalities in the so-called employment service committees was increased (25 municipalities took part in the experiment). The task of these boards was to adjust labour market policy to local premises. Certain differences have been detected between the objectives of national labour market policy and the more locally-oriented goals of the board members. The studies also show that local initiatives did increase (in the form of e.g. more measures in municipal control) and that measures were targeted at disadvantaged groups to a greater extent than in municipalities that did not take part in the experiment. No tendency towards geographic locking-in effects of the job seekers was found. These results should, however, be interpreted with caution, since they may not be generally applicable.

Research also suggests that local actors often have difficulties in recognising their role in labour market policy and that guidance and training has, in this respect, been inadequate (Lundin 1999). Increased decentralisation means that the state's monitoring and control of the labour market policy becomes more difficult. That this has sometimes been the case is implied by Martinson (1999), Persson and Regnér (1999) and Persson and Johansson (2000). For example, the experiments were documented in a way that makes reliable evaluation impossible to carry out; see Persson and Johansson (2000). This lack of monitoring is a problem if the goals of local actors differ from the original aims of the central government politicians.

5 Finally

In summary, it should be stated that a lot more research is needed to draw reliable conclusions about the effects of active labour market policies. Several studies suggest that the results are model sensitive. Furthermore we need to ascertain how labour market policy can be adjusted to different phases of economic cycles. A good strategy during economic upswing may prove totally useless when the cycle turns. We think that massive programmes with low costs per participant can be effective in keeping labour force participation high during recession, but it seems that, in boom times, small scale measures involving relatively high costs per participant are most effective.

More decentralised labour market policy has its pros and cons. There are strong grounds for the delegation of decisions because this makes it possible to capitalise on the information to which local decision makers are a party. On the other hand, studies carried out in that field also indicate problems when local actors are involved in deciding on the use of common measures.

Moreover, a significant control problem was revealed by research.

As regards this last issue, we would like to emphasise that inadequate documentation of labour market policy measures represents a problem that is likely to arise in connection with monitoring and evaluation; see Bennmarker et al. (2000) for in-depth presentation and discussion of this problem.

References

- Ackum, S. (1991): Youth unemployment, labor market programs and subsequent earnings, *The Scandinavian Journal of Economics*, 94(3), 531–541.
- Ackum Agell, S. (1994): Vad bör göras med arbetsmarknadspolitiken?, stencil, Arbetarrörelsens ekonomiska råd, LO, Stockholm.
- Ackum Agell, S. (1995): Svenska arbetsmarknadspolitik under konjunkturuppgången, in *Arbetsmarknadspolitik – vad kan vi lära för framtiden*, SAF:s för-lagsservice, Sandviken.
- Ackum Agell, S. (1996): Arbetslösas sökaktivitet, in SOU 1996:34 Aktiv arbetsmarknadspolitik, expertbilaga till Arbetsmarknadspolitiska kommitténs betänkande, Fritzes, Stockholm.
- Ackum Agell, S. (1998): Medling och arbetsmarknadspolitik – åtgärder för en förbättrad lönebildning?, in SOU 1998:141 Medling och Lönebildning. Bilagor till slutbetänkande från utredningen om ett förstärkt förlkningsmannainstitut, Fritzes, Stockholm.
- Ackum Agell, S. – Forslund, A. – Harkman, A. – Johansson, E. – Lundin, M. – Martinson, S. – Persson, K. (2000): Erfarenheter av nittioårets arbetsmarknadspolitik, Stencilserie 2000:2, IFAU, Uppsala.
- Agell, J. – Lundborg, P. (1999): Survey evidence on wage rigidity and unemployment: Sweden in the 1990s, Working Paper 1999:2, Institutet för arbetsmarknadspolitisk utvärdering, Uppsala.
- AMS (1998): Åtgärdsundersökningen 1998 – en uppföljning av deltagare som avslutat konjunkturberoende åtgärd fjärde kvartalet 1996, Apra 1998:3, Arbetsmarknadsstyrelsen, Solna.
- AMS (1999): Åtgärdsundersökningen 1998 – åtgärdernas effekter på deltagarnas sysselsättning och löner, Ura 1999:1, Arbetsmarknadsstyrelsen, Solna.
- Andersson, F. (1999): Job flows in Swedish manufacturing 1972–1996, Working Paper 1999:4, IFAU, Uppsala.
- Axelsson, R. (1989): Svensk arbetsmarknadsutbildning – En kvantitativ analys av dess effekter, Umeå Economic Studies No. 197, Umeå universitet.
- Behrenz, L. et al. (1999): Utvärdering av lokal samverkan mot arbetslöshet. Slutrapport, Centrum för arbetsmarknadspolitisk forskning, Växjö.
- Bennmarker, H. – Davidsson, L. – Forslund, A. – Hemström, M. – Johansson, E. – Larsson, L. – Martinson, S. – Persson, K. (2000): "Dataproblem vid utvärderingen av arbetsmarknadspolitik", Forskningsrapport 2000:5, IFAU, Uppsala.
- Bergwall, D. – Larsson, S. (2000): Medför starta eget-bidraget en undanträning av egenföretagare? Forskningsrapport S51, Handelns utredningsinstitut.

- Calmfors, L.* (1994): Active Labour Market Policy and Unemployment – A Framework for the Analysis of Crucial Design Features, stencil, OECD.
- Calmfors, L.* – *Forslund, A.* (1990): Wage Formation in Sweden, in *Calmfors, L.* (ed.): Wage Formation and Macroeconomic Policy in the Nordic Countries, SNS and Oxford University Press.
- Calmfors, L.* – *Forslund, A.* – *Hemström, M.* (2001): Does active labour market policy work? Lessons from the Swedish experiences, mimeo, IFAU, Uppsala.
- Calmfors, L.* – *Skedinger, P.* (1995): Does Active Labour Market Policy Increase Employment? – Theoretical Considerations and some Empirical Evidence for Sweden, *Oxford Review of Economic Policy*, 11(1), 91–108.
- Carling, K.* – *Gustafson, L.* (1999): Self employment grants vs subsidized employment: Is there a difference in the re-unemployment risk?, Working Paper 1999:6, IFAU, Uppsala.
- Carling, K.* – *Larsson, L.* (2000): Att utvärdera arbetsmarknadsprogram i Sverige: Rätt svar är viktigt, men vilken var nu frågan?, Forskningsrapport 2000:6, IFAU, Uppsala.
- Colbjørnsen, T.* – *Dahl, S.-Å.* – *Hansen, H.-T.* (1992): Langtidsarbeidslositet. Årsaker, konsekvenser og mestring, SNF-rapport no. 83/1992, Stiftelsen for Samfunns og næringslivsforskning, Bergen.
- Dahlberg, M.* – *Forslund, A.* (1999): Direct displacements effects of active labour market programmes: The case of Sweden, Working Paper 1999:7, IFAU, Uppsala.
- Edin, P.-A.* – *Holmlund, B.* (1991): Unemployment, Vacancies and Labour Market Programmes: Swedish Evidence, in *Padoa-Schioppa, F.* (ed.): Mismatch and Labour Mobility, Cambridge University Press.
- Edin, P.-A.* – *Holmlund, B.* (1994): Arbetslösheten och arbetsmarknadens funktionssätt, Bilaga 8 till LU94, Fritzes, Stockholm.
- Edin, P.-A.* – *Jansson, M.* – *Nilsson, C.* (1998): Interregional Migration in Sweden in *Jansson, M.*: Essays on Demographic Factors and Housing Markets, *Economic Studies* 40, Nationalekonomiska institutionen, Uppsala universitet.
- Forslund, A.* (1992): Arbetslöshet och arbetsmarknadspolitik, Bilaga 7 till LU92, Allmänna förlaget, Stockholm.
- Forslund, A.* (1995): Unemployment – Is Sweden still different?, *Swedish Economic Policy Review* 2, 17–58.
- Forslund, A.* (1996): Direkta undanträningseffekter av arbetsmarknadspolitiska åtgärder, rapport till Riksdagens revisorer.
- Forslund, A.* (1997): Lönebildningen och arbetsmarknadens funktionssätt. Bilaga 1 till SOU 1997:164, Stockholm.
- Forslund, A.* – *Kolm, A.-S.* (2000): Active labour market policies and real-wage determination – Swedish evidence, Working Paper 2000:7, IFAU, Uppsala.
- Forslund, A.* – *Krueger, A.* (1993): An Evaluation of the Swedish Active Labor Market Policy: New and Received Wisdom, in *Freeman, R. B.* et al. (eds.): The Welfare State in Transition. Reforming the Swedish Model, University of Chicago Press, Chicago.
- Fredriksson, P.* (1997): The dynamics of regional labor markets and active labor market policy: Swedish evidence, in *Fredriksson, P.*: Education, migration and active labor market policy, *Economic Studies* 28, National-ekonomiska institutionen, Uppsala universitet.
- Gramlich, E.* – *Ysander, B.-C.* (1981): Relief Work and Grant Displacement in

- Sweden, in Eliasson, G. et al. (eds.): *Studies in Labor Market Behavior: Sweden and the United States*, IUI, Conference Reports (1981:2).
- Harkman, A.* (1988): Arbetsmarknadspolitikens effekter på geografisk rörlighet, rapport från utredningsenheten 1988:19, AMS.
- Harkman, A. – Jansson, F.* (1995): Sökaktivitet, återanställning och chansen att få jobb, Ura 1995:4, AMS, Stockholm.
- Holmlund, B.* (1990): Svensk lönebildning – teori, empiri, politik, Bilaga 24 till LU90, Allmänna förlaget, Stockholm.
- Holmlund, B.* (1993): Arbetslöshtskrisen – konjunkturfenomen eller systemfel, in Bilaga 12 till Ekonomikommissionens förslag, Nya villkor för ekonomi och politik, SOU 1993:16.
- Holmlund, B. – Löfgren, K.-G. – Wadensjö, E.* (1993): Arbetsmarknadspolitik på nya vägar. Tre forskare om arbetsmarknadspolitikens handlingsutrymme, Fritzes, Stockholm.
- Jackman, R.* (1994): What can active labour market policy do?, *Swedish Economic Policy Review*, Vol 1, No 2.
- Johansson, P. – Martinson, S.* (2000): The effect of increased employer contacts within a labour market training program, *Working Paper 2000:10*, IFAU, Uppsala.
- Korpi, T.* (1994): Escaping unemployment. Studies in the individual consequences of unemployment and labor market policy. Swedish institute for social research 24, Stockholms universitet.
- Larsson, L.* (2000): Evaluation of Swedish youth labour market programmes, *Working Paper 2000:1*, IFAU, Uppsala.
- Layard, R. – Nickell, S. – Jackman, R.* (1991): Unemployment: Macroeconomic performance and the labour market, Oxford University Press, Oxford.
- Lundin, M.* (1999): Arbetsförmedlingsnämnderna. En implementeringsstudie, Stencilserie 1999:6, IFAU, Uppsala.
- Lundin, M. – Skedinger, P.* (2000): Decentralisation of active labour market policy: The case of Swedish local employment service committees, *Working Paper 2000:6*, IFAU, Uppsala.
- Martin, J.* (1998): What works among active labour market policies: evidence from OECD countries experiences, OECD, Labour Market and Social Policy – Occasional Papers no 35.
- Martinson, S.* (1999): Aktivare användning av arbetslöshtersättningen. En uppföljning, *Forskningsrapport 1999:7*, IFAU, Uppsala.
- McCormick, B. – Skedinger, P.* (1992): Why do Regional Unemployment Differentials Persist? in Skedinger, P.: Essays on Wage Formation, Employment, and Unemployment, Acta Universitatis Upsaliensis, Studia Oeconomica Upsaliensia 22.
- Nilsson, C.* (1982): Sysselsättningspolitiken och arbetsmarknadens regionala anpassningsproblem, in *Arbetsmarknadspolitik under debatt*, Liber.
- OECD* (1993): Employment Outlook.
- Okeke, S.* (1999): Starta eget-bidragets effekter, Ura 1999:12, Arbetsmarknadsstyrelsen, Stockholm.
- Persson, H.* (1999): Essays on labour demand and career mobility, Swedish institute for social research 40, Stockholms universitet.
- Persson, K. – Johansson, E.* (2000): Friare användning av arbetsmarknads-politiska medel. Slutrapport, *Forskningsrapport 2000:1*, IFAU, Uppsala.
- Persson, K. – Regnér, H.* (1999): Friare användning av arbetsmarknads-politiska medel. Delrapport 1, Stencilserie 1999:1, IFAU, Uppsala.

- Regnér, H.* (1997): Training at the job and training for a new job: two Swedish studies, Swedish institute for social research 29, Stockholms universitet.
- Regnér, H. – Wadensjö, E.* (1999): Arbetsmarknadens funktionssätt i Sverige. En beskrivning baserad på nya intervjudata, Sofi, Stockholms universitet.
- Riksdagens revisorer* (1994): Arbetsmarknadspolitiken. En granskning av åtgärder mot arbetslöshet, 1993/94:RR9, bilaga 1.
- Sehlstedt, K. – Schröder, L.* (1988): Språngbräda till arbete?, EFA, Allmänna förlaget, Stockholm.
- SOU* (1993): Politik mot arbetslöshet 1993:43, betänkande av EFA, Allmänna förlaget, Stockholm.
- SOU* (1996): Aktiv arbetsmarknadspolitik 1996:34, betänkande av Arbetsmarknadspolitiska kommittén, Fritzes, Stockholm.
- Storrie, D. – Nättorp, B.* (1997): Starthjälp. Geografisk rörlighet 1978–1995 och en utvärdering av starthjälpen, EFA, Arbetsmarknadsdepartementet.
- Westerlund, O.* (1992): Internal Gross Migration in Sweden. The Effect of Variation in Mobility Stimuli and Regional Labour Market Conditions, Umeå Economic Studies No 292, Nationalekonomiska institutionen, Umeå universitet.
- Wyplosz, C.* (1994): Demand and structural views of Europe's high unemployment trap, Swedish Economic Policy Review, Vol 1, No 1–2.
- Åberg, R.* (1997): År stigande jämviktsarbetslöshet huvudproblemet på arbetsmarknaden?, Ekonomisk Debatt, Årgång 25, Nr 1.

THE EFFECTIVENESS OF LABOUR MARKET TRAINING IN DIFFERENT ERAS OF UNEMPLOYMENT

Kari Hämäläinen*

1	Introduction	113
2	The empirical model	115
3	Data	117
4	The determinants of open employment 1989–94	120
5	Distribution of programme effects	124
6	Concluding remarks	128

1 Introduction

It is a common claim that labour market training (LMT) has little to offer participants when the subsequent employment prospects are poor, i.e., labour market training as a manpower policy is the least effective when it is needed the most. An implicit assumption incorporated in this statement is that the effectiveness of training programmes is negatively related to overall unemployment. Surprisingly, this issue has remained relatively unexplored despite its considerable interest for all parties involved in dealing with the unemployment problem. This study aims at extending our knowledge about the effectiveness of labour market training in different eras of unemployment by examining the Finnish experience during the turbulent years of 1989–1994.¹

Finland is an ideal case for a ‘natural experiment’ in exploring the dependence between overall unemployment and the effectiveness of labour market training programmes. In just four years, from 1990 to 1994, the unemployment rate increased by 15 percentage points, from 3.4 to 18.4 per cent. At the same time, the employment rate slumped from 74 to 60 per cent. The government responded to these sudden changes in the labour market by expanding the supply of active labour market programmes. As a

* The financial support of the Academy of Finland (project number 43546) and the Yrjö Jahnsson Foundation (project number 4066) is gratefully acknowledged. I would like to thank the editors for helpful comments and suggestions.

¹ Some results of the impact of labour market training are reported in Hämäläinen (1999) on which this study heavily draws. The current study offers a more detailed evaluation of labour market training, since Hämäläinen (1999) explored active labour market policy as a whole. Other evaluations of active programmes include Aho et al. (1999) and Tuomala (2000).

result of this, the number of labour market trainees increased by over 60 per cent during the years 1990–1993.

Changes of this magnitude are likely to influence the effectiveness of labour market training programmes for several reasons, such as discouragement and decreasing returns to scale (Calmfors 1994). In addition, there were two changes in the implementation of labour market training in the early 1990s that may have affected the process of selection for labour market training and its outcome. First, the monopoly held by state-owned vocational centres was removed and it became possible for the labour administration to buy training courses from other providers of education, too. As a result of this, the proportion of training days provided by vocational centres fell below 60 per cent (Mikkonen 1997).

Another change in the early 1990s was the introduction of a 'management by results' scheme. It was first introduced in three labour market districts in 1990 and further extended to the whole labour administration in 1991, i.e., the 1992 budget of the labour administration was the first under the new scheme (Saarinen et al. 1993). The management by results scheme induced specific targets both for the number of starting places and for the proportion of trainees who entered employment after participation. These changes would influence the evaluation results if they altered the selection process, for instance, by creating incentives to cream off only those participants whose initial employment prospects were good even without a training course.

The analyses are carried out by employing three separate cross sections. During the first period, 1988–1989, the economy was gradually beginning to overheat and employment prospects were generally good. The second cross-section coincides with the period of sharply increasing unemployment, 1991–1992, during which the speed of increase in the unemployment rate was some 5 percentage points per year. The third period, 1993–1994, is taken to study the effectiveness of labour market training during the era of high unemployment when the unemployment rate had stabilised at around 20 per cent.

The main issue of interest is the impact of labour market training on open employment, i.e., the outcome variable does not include subsidised employment periods. By this means, we are able to separate the pure employment effects from the circulation of the unemployed between active programmes and unemployment. In the first stage of analysis, the effectiveness of labour market training programmes is analysed by including the single indicator variable for a training programme in the employment equation. A caveat with respect to this commonly used method, however, is that the estimated programme effect is constrained to be the same for all

participants regardless of their labour market history, individual characteristics etc. In the second stage, this restriction is loosened and the programme effect is allowed to vary across the explanatory variables included in the employment equation. This makes it possible to examine not only the average effects, but also the distribution of programme effects across participants.

The rest of the paper is organised as follows: the second section introduces the empirical methods employed in the analyses and discusses the identification and statistical tests used in the evaluations. An introduction to the data and a short description of labour market training is given in the subsequent section. Section 4 reports the determinants of open employment in the different eras of unemployment. A closer look at the effectiveness of labour market training as a policy instrument in different eras of unemployment is taken in section 5. Finally, section 6 concludes the study.

2 The empirical model

The re-employment of the unemployed is typically analysed within the framework of the job search theory; see, among others, Pissarides (1985) and Devine and Kiefer (1991). Job seekers look for a vacancy, which is assumed to open up at some regular rate, in which the compensation at least equals their reservation wages. Employers, on the other hand, interview potential new workers up to the point where an increase in recruitment costs equals the productivity of a new worker. Accordingly, in the search theoretical framework, the supply and demand sides of the labour market are determined through the factors that influence the reservation wages of job seekers and the recruitment decisions of firms.

In its simplified form, the search strategy of an unemployed person is based on a comparison between the expected profits of a successful search (plus the expected profits of continuing the job search) and the costs involved in searching. Within this framework, an increase in the reservation wage reduces the probability of a successful job search. The main determinants of the reservation wage consist of the various sources of income enjoyed while unemployed. This calls for the inclusion in the empirical analysis of variables that measure resources during unemployment, such as unemployment benefits, as well as non-labour resources such as net-wealth and the income of the spouse.

The reservation wage is not determined merely by these different sources of income. Reservation wages also vary across the unemployed owing to individuals' attitudes towards work. This kind of variation arises

from differences in accumulated human capital, individual characteristics, labour market possibilities and family ties. The observed differences in these factors are measured here using the variables shown in the first column of Table 2 below.

The probability of employment is not solely determined by the characteristics of job seekers; the demand for labour also plays a crucial role. Several of the variables included in the analyses influence not only the reservation wage but also the recruitment decisions of firms. For instance, the parameter estimates of the occupational indicators reflect both the accumulated human capital of an unemployed person and the variation in occupational responsiveness to the changes in labour demand in the early 1990s. Finally, regional disparities in economic activity are controlled for by including regional unemployment rates and factors characterising the region of residence of the unemployed person, such as the capital region of Uusimaa, not to mention whether the region is semiurban or rural.

In non-experimental evaluations, one has to construct a comparison group which is thought to represent the counterfactual state of the participants had they not participated in a training programme. Typically, the members of a comparison group differ from the trainees by observable characteristics, discussed above, and possibly also by unobservable characteristics, see e.g. Heckman and Hotz (1989) and Heckman et al. (1999). Unless this selection mechanism is incorporated in evaluation models, the estimated effects of labour market training will be biased. An attractive way of doing this is to analyse the joint distribution of the error terms in the following two-equation latent variable model, where the latent variables y_i^* and p_i^* represent the propensity to become employed and the propensity to participate in a labour market training programme:²

$$\begin{aligned} y_i^* &= X_i\beta + \alpha p_i + \varepsilon_i \\ p_i^* &= Z_i\gamma + \eta_i. \end{aligned} \tag{1}$$

Information on the dependent variables is limited to whether or not a particular event occurred through the indicator functions $y_i = 1_{y_i^* > 0}$ and $p_i = 1_{p_i^* > 0}$. The observable factors that affect the likelihood of these events are included via the linear index functions $X_i\beta$ and $Z_i\gamma$. The exact specification of the likelihood function, together with the implemented statistical tests, is discussed in Appendix 1.

In addition to the mean impact, it is of interest to policy makers to know the proportion of labour market trainees who actually benefit from

² The two equation latent variable model specifies the bivariate probit model employed in Zweimüller and Winter-Ebmer (1996) and in Raaum et al. (1995).

training courses. The drawback of the model set up in equation 1 is that it constrains the programme effect, α , to be either positive or negative for all participants, depending on the sign of the parameter estimate. One way of exploring the distribution of LMT effects is to interact the training dummy with other determinants of individuals' employment status. By this means, the programme effect is allowed to vary across the observed individual characteristics and hence across different participants. The results of these estimations are reported alongside the conventional evaluation estimates below.

Finally, a word on identification. As pointed out in Maddala (1983) p. 122–123, the model set up in equation (1) belongs to the class of mixed structure models. To identify the parameters of the employment equation, it must contain some exclusion restrictions. In this study, the instrument for participation is produced by the local supply of active programmes, which is measured as the proportion of participants to the working population in a labour market district.

Since the chosen instrument is not without caveats, we have measured the variables included in the participation and in the employment equations in different years. It is hoped that this creates enough variation between the equations to ensure identification in those cases where the local supply of active programmes fails to do so.

3 Data

The data for this study are drawn from the 1990 population census. The original data consists of some 180 000 individuals (around 5 per cent of the working age population) who were 13–67 years of age in 1990. Statistics Finland has expanded the census data by collecting information on these individuals from a number of different registers, including the population central register, tax registers, pension registers, student registers and the registers maintained by the labour administration. All this information covers the years 1987–1994.

Data for estimating the impact of labour market training on employment were created in two steps. Step one consisted of drawing three, roughly equally-sized and separate random samples of individuals who were 16–65 years of age during the three sample years of 1988, 1991 and 1993. The second step was to select the treatment group and the control group. The treatment group consisted of labour market trainees who started and terminated their labour market training spell during a sample year. Since evaluation results may vary across comparison groups, see Torp (1994) and

Hardoy (1998), two different comparison groups were drawn to examine the sensitivity of the results.

The first control group, henceforth termed the stock sample, included all those individuals who were unemployed and who did not participate in an active programme during a sample year (1988, 1991 or 1993). The second control group, henceforth termed the flow sample, was drawn from the inflow to unemployment. In addition, all individuals who did not participate in the labour force during an outcome year (1989, 1992 or 1994), i.e. pensioners, students, individuals claiming unemployment pension and conscripts in the armed services, were excluded from the second sample. It is worth noticing that the flow sample is a part of the stock sample, the two differences being the exclusion of long-term unemployed (or, more precisely, persons who started their spell of unemployment before the sample year) and the exclusion of individuals who experienced a transition out of the labour force during the outcome year.

An intuitively appealing alternative would be to form a comparison group from those individuals who did not finish a training programme. After all, these individuals did apply for a training course and hence are likely to resemble the treatment group in terms of unobservable characteristics. However, Table 1 reveals that the construction of an alternative control group is not possible in the current context for two reasons. First, the number of trainees who did not finish their training programme is modest. More importantly, they do not seem to be similar to the other trainees in terms of their subsequent employment prospects. The poor employment record of participants who did not finish a training course implies that an evaluation based on this comparison group would result in upwardly biased programme effects.

The upper part of Table 1 reports the sizes of the control groups together with the number of labour market trainees. The figures highlight the severity of the recession, as the number of unemployed persons in the stock samples more than doubles in five years. The sizes of the flow samples reveal that unemployment spells lengthened and transitions out of the labour force increased in the early 1990s. The number of observations in the last two flow samples remain the same despite large differences in the sizes of the corresponding stock samples. Finally, the expansion of labour market training programmes is also evident in Table 1. Even though the increase in the number of labour market trainees is less than proportional to the rise in sample size, the number of trainees almost doubled over the five years 1988–1993.

According to Table 1, the first reaction of the labour administration to a sharp increase in unemployment was to expand the number of training

Table 1. Sizes and proportions employed of treatment and control groups

Group sizes

	The sample year					
	1988		1991		1993	
	Stock	Flow	Stock	Flow	Stock	Flow
Controls	3157	1755	4950	3245	7577	3156
Trainees <i>of which:</i>	300	277	446	395	559	478
Laid-off trainees	n/a	n/a	143	136	13	13
Did not finish	n/a	n/a	43	34	54	41

	Proportions employed, per cent					
	The outcome year					
	1989		1992		1994	
	Stock	Flow	Stock	Flow	Stock	Flow
Controls	56.13	65.42	27.37	35.59	30.59	46.07
Trainees	68.33	72.56	36.36	41.23	37.10	42.69
Laid-off trainees	n/a	n/a	75.52	77.94	92.31	92.31
Did not finish	n/a	n/a	16.28	17.65	30.00	31.71

Notes: The stock and flow samples refer to different constructions of the treatment and control groups. For further definitions of these samples see the text. The proportions of individuals who became employed refer to the last week of the outcome year. n/a = not available.

places offered to temporarily laid-off persons. Their share of all trainees increased from under 10 per cent in the late 1980s to over 30 per cent in 1991 (Mikkonen 1997). In part, this substantial increase may also be a result of the introduction of the management by results scheme in three labour districts in 1991. To recap, the new management scheme laid down specific employment targets for the labour administration. This might have created incentives to increase the number of training places offered to laid-off persons, whose re-employment prospects are generally better than others, as evidenced by the bottom half of Table 1.

When the management by results scheme was expanded to cover all labour districts in 1992, it included a new target, measured as the proportion of unemployed persons of all labour market trainees. This may explain the sharp fall in the number of laid-off trainees that occurred between the years 1991 and 1993. Despite the decline in the proportion of laid-off trainees, their superior employment record calls for the inclusion of the control variable for training while laid-off when evaluating ordinary labour market training; all the more so, since the good employment record

of laid-off trainees can be explained by their high probability of returning to their former employers, a factor that raises questions regarding the extent to which laid-off training can be counted as a manpower policy aimed at helping the unemployed.

When it comes to the employment record of labour market trainees during the last week of the outcome year, their share of employment typically exceeds that of controls by some 6–12 percentage points, depending on the year and the particular sample. It has to be noted, however, that the employment shares reported in Table 1 are subject to both observed and unobserved selection. In addition to the training effect, these figures are influenced by the non-random distribution of other determinants of employment across the different groups. A closer look at the determinants of open employment and at the impact of labour market training on subsequent employment possibilities is undertaken in the following sections.

4 The determinants of open employment 1989–94

Table 2 reports the heteroskedasticity corrected parameter estimates of the employment equations of the estimated bivariate probit models for the years 1989, 1992 and 1994.³ The specification of these models is put under scrutiny in the lower part of the table, which reports the results of the tests for heteroskedasticity and bivariate normality. To recap, the normality test tests for the significance of expansion terms that allow local departures from bivariate normality. If this expansion is up to the fourth order, as in this study, nine expansion terms with cumulants, κ , are added to the bivariate normal distribution.

According to the LR test for the significance of heteroskedasticity correction terms, the homoskedastic alternatives of the reported bivariate probit models are strongly rejected. The implemented normality tests show, however, that the adopted distributional assumption of these specifications is not without caveats. In four cases out of six, at least one of the cumulants, κ , is significant at conventional levels of significance. Interestingly, deviations from normality seem to be positively related to the magnitude of the correlation coefficients in the 1989 and 1992 samples. This finding casts doubts on some of the large programme effects that are reported for

³ To remind the reader, the identification is primarily obtained by measuring the variables included in the employment and participation equations in the different years. This is necessary, since the local supply of active programmes was found to be insignificant in the 1991–92 and 1993–94 estimations; see Appendix 3.

these years in the following section. In the 1994 sample, the deviations from bivariate normality are likely to be connected with the insignificant correlation coefficients, since the probit models pass the implemented normality tests.⁴ This implies that the 1994 effects of labour market training are preferably analysed within single-equation models.

When it comes to the estimation results, the models paint a fairly similar picture of the determinants of open employment. Furthermore, this picture remains relatively stable despite large variations in overall unemployment. Variables such as age, education, union membership, previous work experience, occupation, debts and the employment status of a spouse, have a statistically significant, positive impact on the probability of open employment in all the time periods. Similarly, regardless of the era of unemployment, the employment prospects of an unemployed person become fainter if he/she has a disability, a long unemployment history, high unemployment benefits or has participated in an active programme during the outcome year.⁵

The observed variation in the determinants of open employment are mainly caused by changes in the demand for labour. At the regional level there are two changes worth noticing. First, the upward impact of the capital area of Uusimaa on the probability of employment turns out to be insignificant in 1994. Second, the variables describing the home region of an unemployed person (semiurban or rural) enter the employment equations with significant and positive parameter estimates in 1994. These findings show that the recession hit all regions including urban regions with traditionally low unemployment. Having said that, the negative and statistically significant parameter estimates of the regional unemployment rate indicate that regional differences in unemployment continued to exist, at least partially, throughout the recession years.

The parameter estimates of the occupational indicators reflect the adjustment of different sectors of the economy to the recession. The construction industry was especially severely hit at the beginning of the recession. This is present in the results in the statistically significant negative parameter estimates for construction and technical occupations in the 1992 sample. The negative effect of occupation in construction vanished in the

⁴ The test employed to test the normality of the error terms in the probit models is the heteroskedasticity corrected version of the test reported in Pagan and Vella (1989) p. 43. The joint test for the expansion terms resulted in the test statistics of 1.06 and 2.11 in the stock and flow samples, respectively. These are asymptotically χ^2 distributed with two degrees of freedom. Also, the separate tests for the individual expansion terms suggest that the null hypothesis of normality cannot be rejected.

⁵ Since the study focuses on open employment, this last variable is included in the model to control for the fact that individuals who are participants in active programmes cannot be openly employed at the same time. The variable also takes into account the shorter job-seeking time of individuals who have participated in a programme during the outcome years.

Table 2. Parameter estimates of employment equations

	Year 1989		Year 1992		Year 1994	
	Stock	Flow	Stock	Flow	Stock	Flow
Constant	-0.57***	0.09	-1.21***	-1.19**	-1.19***	-0.64***
Individual characteristics						
Woman	-0.33***	-0.21*	0.09*	0.12*	-0.18***	-0.12**
Age 16–19	0.19#	0.52**	0.19	0.29	0.55***	0.68***
Age 20–29	0.84***	0.43**	0.38***	0.47***	0.59***	0.54***
Age 30–39	0.79***	0.25	0.28***	0.27**	0.49***	0.36***
Age 40–49	0.70***	0.24	0.26***	0.29***	0.43***	0.28***
Married	0.15*	-0.04	0.03	0.03	-0.00	0.00
Number of children under 7 years of age	-0.19	-0.31*	-0.05	0.04	-0.07	-0.07
Age of youngest child 0–1	0.16	0.06	0.03	-0.25	-0.22**	-0.30**
Age of youngest child 2–3	–	–	0.14	-0.07	0.08	-0.09
Age of youngest child 4–6	–	–	0.11	-0.03	0.07	-0.04
Age of youngest child 2–6	0.24	0.32	–	–	–	–
Upper secondary education	0.21**#	0.09	0.16***	0.23***	0.15***	0.23***
Lower higher education	0.18	0.04	0.64***	0.78***	0.30***	0.32***
Upper higher education	0.47*	0.52	0.48***	0.58***	0.42***	0.44***
House owner	0.15**	0.32***	-0.04	0.01	0.01	0.05
Disability	-1.03***	-0.99***	-0.39***	-0.60***	-0.56***	-0.42***
Broader job seeking	-0.20	0.03	0.13#	0.13#	0.05	0.22***
Labour market characteristics						
Travel-to-work						
unemployment rate	-0.03**	0.01#	-0.01**	-0.01**	-0.02***	-0.02***
Union member	1.05***	0.71***	0.65***	0.53***	0.76***#	0.46***#
Unemployment days in t-2 * 10 ⁻²	-0.27***#	-0.39***	-0.21***	-0.24***	-0.14***#	-0.10***
Potential job search time	-0.05*	0.02	0.04**	0.10***#	0.02*#	0.05***#
Programme participant during the outcome year	-1.17***#	-0.76***	-0.75***	-0.73***	-0.69***#	-0.38***#
Home region Uusimaa	0.39***	0.19	0.14**	0.07	0.06#	0.00
Home region semiurban	0.01	0.08	0.00	-0.07	0.08*	0.05
Home region rural	0.18**	-0.04	0.15***	0.09	0.16***	0.15***
Some work experience	–	–	0.01	0.01	0.19***	0.14**
Full work experience	–	–	0.11*	0.10	0.31***	0.22***
Occupation						
Technical	0.20	0.13	-0.47**#	-0.58**#	0.06	-0.01
Health-care	0.63***	0.01#	0.24	0.20	-0.08	-0.15*
Social care	0.28	-0.08	0.18	0.21	0.06	0.19*
Office	0.14	0.02	0.05	-0.01	-0.03	-0.16*
Merchant	0.66***#	0.20	0.32***	0.34***	0.09	0.05
Farming/forest	0.21	0.23	0.25**	0.20	0.18**	0.34***
Transportation	0.51**#	0.35	0.17	0.17	0.28***	0.28***
Construction	0.44***#	0.64#	-0.35**#	-0.44**#	-0.07#	-0.00
Textile	0.25	0.45	0.00	-0.04	0.03	0.02
Manufacturing	0.47**#	-0.06	0.17**	0.18**	0.20***	0.15**
Service	0.27#	0.02	0.18**	0.15	0.09	0.03
No occupation/unknown	-0.12	-0.44***	0.09	0.21**	-0.05	0.08#
Income information						
Unemployment benefits exceed the average	-0.20**	-0.33***	-0.33***	-0.36***	-0.31***#	-0.28***
Non-labour income *10 ⁻⁵	-1.96***	-0.88**	-0.89***	-0.42**	0.54***	0.21*
Wealth *10 ⁻⁶	–	–	0.56**	0.68#	-0.03	0.11
Debt *10 ⁻⁵	–	–	0.23***#	0.33***#	0.18***#	0.18***#

Spouse's information						
Spouse employed	–	–	0.15***	0.14**	0.30***	0.26***#
Spouse's education	–	–	0.01	0.02	0.02	0.02
Spouse's income *10 ⁻⁶	–	–	-0.74	-0.88	-0.35	0.15
Spouse's wealth *10 ⁻⁶	–	–	0.33	0.01	0.23	-0.10
Spouse's debts *10 ⁻⁶	–	–	–	–	0.14	-0.37*
LMT variables						
Did not finish	-0.30	-0.18	-0.55*	-0.82**	-0.09	-0.25
Laid-off training	–	–	0.27	0.38*	1.18**	1.10
Participant	1.16***	1.58***	1.05***	0.84***	0.48**	0.30**
<i>Correlation coefficient</i>	-0.29**	-0.57***	-0.39***	-0.29***	-0.15	-0.13
Statistical tests						
LR test for the significance of correction terms	122.37***	73.10***	395.01***	335.57***	112.54***	116.97***
LM test for normality (joint test; df=9)	11.49	10.07	17.03**	6.67	15.95*	15.46*
LM test for normality (individual tests; df=1)						
K ₁₀	0.14	0.35	1.02	2.64	0.01	0.09
K ₂₁	0.63	0.15	0.88	0.34	0.07	0.73
K ₁₂	2.38	0.09	1.13	0.16	0.02	0.00
K ₀₃	0.05	0.09	0.46	1.11	0.26	5.50***
K ₄₀	1.31	0.16	0.32	0.03	1.19	0.13
K ₃₁	0.63	0.13	0.03	0.26	3.80**	3.48*
K ₂₂	0.11	0.19	0.35	0.40	0.90	2.11
K ₁₃	1.53	0.95	0.72	0.09	0.49	3.33*
K ₀₄	1.10	3.82**	1.97	0.80	2.26	0.63
Log-likelihood	2789.97	1701.48	3761.72	2836.69	5820.03	3086.90
Correctly classified	87.69%	75.40%	85.98%	86.84%	86.92%	93.45%
Number of observations	3454	2029	5396	3640	8136	3634

Notes: *** (**, *) = significant at the 1 (5,10) per cent significance level. # = the variable has also been employed in modelling the heteroskedasticity of the error terms. Test statistics that are significant at the five per cent level of significance are given in bold.

1994 sample when the private sector, and especially the export sector, started to recover from the recession. The export-led recovery of the economy also explains the positive impact of occupations in transport that is found in the 1994 sample. Interestingly, the results imply that the recruitment of new workers started with the most experienced job seekers as implied by the upward impact of the work experience variables on the probability of employment at the end of the estimation period.

Contrary to the export sector, the difficulties experienced by the public sector continued throughout the 1990s. A rapid increase in public debt resulted in budget cuts in the public sector. The impact of these savings is evident in the changes in the employment probabilities of those unemployed persons who had typically been public sector employees. When the economy was booming in the late 1980s, the estimates show that having, for instance, a health-care occupation significantly increased the probability of becoming openly employed. The situation was, however,

reversed at the end of the estimation period, when the employment prospects of health-care personnel were among the poorest of all occupations, with other things equal.

Next we turn to the main issue of interest in this study, namely the impact of labour market training on the employment prospects of the unemployed. The results reported in Table 2 imply that participation in a training programme improved the probability of employment regardless of the exact sample or the estimation period. This is shown by the positive and highly significant coefficients obtained for the participation dummies. Moreover, the negative correlation between the error terms reveal that the initial employment possibilities of the trainees were inferior to those of controls. There seem to be some unobservable characteristics, such as lack of motivation or depression, that make participation more likely and, at the same time, have a downward effect on the probability of employment.

5 Distribution of programme effects

The previous section reported that the coefficients of labour market training in the employment equations were positive and statistically significant. The upper part of Table 3 shows the corresponding changes in the probability of open employment. The reported training effects are calculated as the following difference between two conditional probabilities:

$$\frac{\Phi_2 \left[\frac{X_i\beta + \alpha p_i}{\text{Exp}(W_{iy}\delta)}, \frac{Z_i\gamma}{\text{Exp}(W_{ip}\theta)}, \rho \right]}{\Phi \left[\frac{Z_i\gamma}{\text{Exp}(W_{ip}\theta)} \right]} - \frac{\Phi_2 \left[\frac{X_i\beta}{\text{Exp}(W_{iy}\theta)}, \frac{Z_i\gamma}{\text{Exp}(W_{ip}\theta)}, \rho \right]}{\Phi \left[\frac{Z_i\gamma}{\text{Exp}(W_{ip}\theta)} \right]}, \quad (2)$$

where Φ_2 (Φ) stands for the bivariate normal (standard normal) cumulative distribution function. Accordingly, equation (2) measures whether participants in training programmes have experienced improvements in their labour market position, by comparing the actual outcome to the hypothetical outcome had they not participated in labour market training.

The lower part of Table 3 reports the results of (unreported) models in which the programme dummy is interacted with the other determinants of employment.⁶ This allows the programme effect to vary across participants,

⁶ The results are available from the author on request. The figures reported in the lower part of Table 3 relate to the models that included all the interaction terms, regardless of their significance level. Even though several interaction terms were insignificant, all non-interacted parameter estimates that were significant in Table 2 also remained significant in the interaction models.

Table 3. The impact of labour market training on the probability of open employment

Specification 1: Average person; invariant LMT effect

LM Training	Stock sample			Flow sample				
	Effect	+ (%)	- (%)	ρ	Effect	+ (%)	- (%)	ρ
1989	27.99	..	..	-0.29	52.71	..	..	-0.57
1992	18.62	..	..	-0.39	15.41	..	..	-0.29
1994	15.23	..	..	-0.15	14.16	..	..	-0.13
	(6.46)			(. .)	(6.96)			(. .)

Specification 2: Distribution of training effects; varying LMT effect

LM Training	Stock sample			Flow sample				
	Mean	+ (%)	- (%)	ρ	Mean	+ (%)	- (%)	ρ
1989	24.05	87	13	-0.30	21.63	82	18	-0.28
1992	21.37	91	9	-0.36	21.37	83	17	-0.22
1994	6.92	66	34	-0.03	5.67	66	34	-0.01
	(4.88)	(58)	(42)	(. .)	(5.02)	(63)	(37)	(. .)

Notes: The results reported in the upper panel are based on the estimations in which the impact of labour market training is modelled through a single dummy variable. The results of the lower panel are based on the specifications with interactions between the LMT dummy and other factors influencing the probability of employment. + (%) [- (%)] corresponds to the proportion of trainees who benefited [did not benefit] from their participation in a training course. ρ reports the estimated correlation coefficients of the bivariate probit models. . . = The figure is not available.

which, in turn, permits the analysis of the distribution of programme effects across participants. The reported summary statistics of the estimated impact distributions include the mean training effect, in the first column, and the proportion of trainees who have benefited (not benefited) from training, in column two (three). The corresponding figures for the distributions of training effects are reported in Appendix 2. The last column, ρ, corresponds to the estimated correlation coefficients.

The first thing to notice from Table 3 is that the differences in training effects between the samples and the estimation methods vanish after the programme effect is allowed to vary across participants. There are two reasons for this. First, the implausibly large correlation coefficient of the 1989 flow sample reported in the upper part of Table 3 is more in line with the other estimates of the late 80s and the early 90s. Second, the insignificant but fairly large correlation coefficients of the invariant specifications of training effects turn out to be negligible in the 1994 sample. This, in turn, nullifies the differences between the probit and the bivariate probit models.

Despite a certain level of variation in the estimated programme effects, the different specifications of the programme effects point in the same direction; namely, that there is a negative relation between overall unemployment and the effectiveness of labour market training. The employment effect of labour market training declined 15–20 percentage points in the 1990s. The lower part of Table 3 reveals that a decline in the mean effectiveness of labour market training is also connected to the proportion of labour market trainees who benefited from participation in them. Their share decreased by some 20 percentage points between the years 1992–94.

It is interesting to examine whether these changes have influenced different groups of participants in the same way. Table 4 explores the impact of labour market training on the employment probability of three specific types of participants, viz. disadvantaged, average and advantaged. The results show that the effects of training were notably different between these individuals. Labour market training offered to a disadvantaged participant became some 20 percentage points more effective during the 1990s. At the same time, an advantaged participant experienced a decline of some 10 percentage points in the effects of training. Even though these figures have to be considered as tentative, they imply that labour market training is most effective in an era of high unemployment when targeted at individuals whose initial labour market possibilities are

Table 4. The impact of labour market training on the probability of open employment of three specific participants

	Stock sample			Flow sample		
	Disadvantaged	Average	Advantaged	Disadvantaged	Average	Advantaged
1989	– 4.40	3.06	5.00	1.46	4.51	6.37
1992	8.87	0.008	4.51	7.99	1.48	– 3.73
1994	24.89	0.004	– 4.68	21.22	0.008	– 5.69

Notes: The figures correspond to the bivariate probit models in which the training dummy is interacted with other explanatory variables. The average participant is evaluated at the means of explanatory variables. The disadvantaged participant is male, 30–39 years of age, unmarried, has only compulsory education and no occupation, has some work experience, his unemployment experience exceeds the average by one standard deviation and he lives in a rural community where the unemployment rate exceeds the national average by one standard deviation. The advantaged participant is male, 30–39 years of age, has lower higher education, a technical occupation, owns a house, belongs to a union, has full work experience; his unemployment experience is one standard deviation below the average; his unemployment benefits exceed the average; and he lives in the capital area of Uusimaa where the unemployment rate is one standard deviation below the national average. All other continuous variables are set to their mean values.

weak. In an era of low unemployment the situation seems to be reversed.

In the last estimation period, the most preferred models show that labour market training increased the probability of open employment by 5–7 percentage points, on average. The distribution of training effects reveals that two thirds of all trainees benefited from participation. Even though these results are encouraging, the dominant feature of this study is the sudden fall, both in the mean effectiveness of labour market training and in the number of its beneficiaries, that seems to have taken place in the 1990s. In addition, there are indications that this fall happened a few years after unemployment started to increase and that it influenced mainly those participants with good initial employment prospects. Since the estimated training parameters play only a minor role in explaining the fall in mean training effects, one needs to concentrate on the estimated correlation coefficients, i.e., on factors that are not directly observable in the data.

One possible explanation is that the administrators of the scheme altered the process of selection for training courses between the years 1991–93 in favour of individuals with better employment prospects. Obvious candidates are then the management by results scheme and the removal of the monopoly held by special vocational centres in offering training courses that were both introduced during that period. In particular, the employment targets incorporated in the new management scheme may have created incentives to cream off the potentially more successful participants. This creaming-off would influence the estimated correlation coefficients, provided that it was, to some extent, based on unobservable factors.

A rival explanation for the observed changes in the correlation coefficients is that employers altered their recruiting behaviour. In the era of low unemployment, employers may have used labour market training as a signal of the ability and the willingness to learn new skills which the average unemployed person lacked. However, the arrival of mass unemployment increased the pool of skilled job-seekers, which, in turn, may have reduced the importance of labour market training as a signalling device, especially for the most qualified group of job seekers.

Conventional explanations for the finding that the effectiveness of labour market training is negatively related to overall unemployment are based on discouragement and decreasing returns to scale (Calmfors 1994). According to the discouragement explanation, the negative relation results from a fall in job opportunities combined with increased competition over existing jobs, which weakens the effort put into training courses by the participants. The decreasing returns to scale argument, on the other hand, hypothesises a negative relation between the outcome of training courses and the number of participants. It is likely that the labour market

administrators were able to tailor labour market training both to individual trainees and to the needs of labour markets during the economic boom of the late 1980s. A sharp increase in the number of labour market trainees made this tailoring impossible, which, in turn, reduced the impact that labour market training had on the probability of becoming employed. If a rise in the number of starting places was not evenly distributed across skill levels, this may also explain the observed changes in the effectiveness of labour market training across trainees with different initial employment prospects.

6 Concluding remarks

This study has focused on one aspect of labour market training that has remained relatively unexplored, namely the effectiveness of labour market training as a manpower policy in different eras of unemployment. The key results can be summarised as follows. First, the effectiveness of labour market training appeared to be negatively related to overall unemployment. Second, the impact of labour market training began to decline only after unemployment had been rising for several years, and mainly in the case of those participants with good initial employment prospects. Third, the fall in mean effectiveness can largely be attributed to unobservable factors; changes in the parameter estimates of the training variables play a minor role.

The last two observations also call for explanations other than the conventional ones that focus on discouragement, signalling and decreasing returns to scale. There were two policy changes in the implementation of labour market training which were introduced at the same time as the observed decline in the effectiveness of labour market training – the introduction of a management by results scheme in the labour administration and the removal of the monopoly of vocational centres in providing training courses. In particular, the employment targets set for the employment service agencies by the new management scheme might have created incentives to cream off participants with good initial employment prospects. A change of this kind in the selection process may explain the observed changes in the estimated correlation coefficients and, together with decreasing returns to scale, the changes in the employment effects of labour market training observed between different types of trainees.

Most probably, there is no single explanation for the decline found in the effectiveness of labour market training, but all of the reasons given above have contributed in it. To gain a clearer picture of the functioning of

manpower policies in different eras of unemployment, evaluation research needs to focus on the relative importance of discouragement effects, decreasing returns to scale and the changes that occurred in the implementation of labour market training. The separation of the impacts of these hypothesised explanations calls for detailed information about the selection process, the provision of labour market training and the linked employer-employee data. All of these data sources are expected to become available in the near future.

References

- Aho, S. – Halme, J. – Nätti, J. (1999): The Targeting and the Effectiveness of Subsidised Employment and Labour Market Training in 1990–1996, Studies in Labour Policy No. 207, Ministry of Labour, Helsinki (in Finnish).
- Calmfors, L. (1994): Active Labour Market Policy and Unemployment – A Framework for the Analysis of Crucial Design Features, OECD Economic Studies 22, 7–47.
- Davidson, R. – McKinnon, J. G. (1984): Convenient Specification Tests for Logit and Probit Models, Journal of Econometrics 25, 241–262.
- Davidson, R. – McKinnon, J. G. (1989): Testing for Consistency Using Artificial Regressions, Econometric Theory 5, 363–384.
- Devine, T. J. – Kiefer, N. M. (1991): Empirical Labor Economics: The Search Approach, Oxford University Press, Oxford.
- Hardoy, I. (1998): Effects of Labour Market Programmes: Unobserved Heterogeneity and Sample Design, Paper presented in the Tenth Annual EALE Conference, Blankenberge.
- Heckman, J. J. – Hotz, V. J. (1989): Choosing Among Alternative Non-experimental Methods for Estimating the Impact of Social Programs: The Case of Manpower Training, Journal of American Statistical Association 84, 862–874.
- Heckman, J. J. – LaLonde, R. J. – Smith, J. A. (1999): The Economics and Econometrics of Active Labor Market Programs, Handbook of Labor Economics, Volume 3, 1865–2097.
- Hämäläinen, K. (1999): Active Labour Market Policy and Employment in Non-Subsidised Labour Markets, The Research Institute of The Finnish Economy, B151, Helsinki (in Finnish).
- Maddala, G. S. (1983): Limited-dependent and Qualitative Variables in Econometrics, Cambridge University Press, Cambridge.
- Mikkonen, I. (1997): Labour Market Training as a Part of Labour Market Path, Labour Market Policy Research No. 174, Ministry of Labour (in Finnish).
- Murphy, A. (1994): Testing Normality in Bivariate Probit Models: A Simple Artificial Regression Based LM Test, WP 94/27, Centre for Economic Research, Department of Economics, University College Dublin.
- Pagan, A. – Vella, F. (1989): Diagnostic Tests for Models Based on Individual Data: A Survey, Journal of Applied Econometrics 4, S29–S59.
- Pissarides, C. A. (1985): Job Search and the Functioning of the Labour Market, In Carline, D. et al. (eds.): Labour Economics, Longman.
- Raaum, O. – Torp, H. – Goldstein, H. (1995): Employment Effects of Labour

- Market Training in Norway, Memorandum from Department of Economics No. 8, University of Oslo.
- Saarinen, M. – Huuhtanen, P. – Lindström, K.* (1993): Management by Results and Well Being in Labour Administration, Labour Market Policy Research No. 49, Ministry of Labour (in Finnish).
- Torp, H.* (1994): The Impact of Training on Employment: Assessing a Norwegian Labour Market Programme, Scandinavian Journal of Economics 94, 531–550.
- Tuomala, J.* (2000): Labour Market Transitions of the Unemployed in 1998, Government Institute for Economic research, VATT Discussion Papers 225, Helsinki (in Finnish).
- Zweimüller, J. – Winter-Ebmer, R.* (1996): Manpower Training Programmes and Employment Stability, *Economica* 63, 113–130.

Appendix 1. The specification of empirical model and the implemented statistical tests.

During the past two decades, the conventional specifications of latent variable models have been questioned. The studies by Davidson and MacKinnon (1984, 1989) and Pagan and Vella (1989), amongst others, have shown that various mis-specifications, such as heteroskedasticity and incorrect assumptions about the distribution of error terms, that are routinely checked in linear econometric models, are of even greater concern in non-linear models. Such mis-specifications typically introduce bias into both the estimated standard errors and the estimated parameters in latent variable models.

The heteroskedasticity of the error terms can be modelled in the current context by specifying them as $\varepsilon_i \sim NID[0, \text{Exp}(2W_{iy}\delta)]$ and $\eta_i \sim NID[0, \text{Exp}(2W_{ip}\theta)]$, where the W matrices include the variables affecting error variances, δ and θ being the additional parameter vectors. Under the assumption of bivariate normality, the normalised error terms follow the standard bivariate normal distribution, in which case the log-likelihood function becomes:

$$\ln L = \sum_i \ln \Phi_2 \left[\frac{(2y_i - 1)(X_i\beta + \alpha p_i)}{\text{Exp}(W_{iy}\delta)}, \frac{(2p_i - 1)Z_i\gamma}{\text{Exp}(W_{ip}\theta)}, (2y_i - 1)(2p_i - 1)\rho \right],$$

where Φ_2 stands for the bivariate normal cumulative distribution function. In this setting, the heteroskedastic model can be tested against its homoskedastic alternative by any classical testing procedure. Another issue of interest, namely selection on unobservables, can be tested through the correlation coefficient, ρ . Low values for the test statistic imply that the assignment on labour market training is random, at least as regards the unobservables, and the model can be consistently estimated using single equation probit models.

Tests for the presence of heteroskedasticity and for the endogenous selection of participants are, however, subject to the adopted assumption of bivariate normality. To scrutinise this assumption, one has to construct an alternative to bivariate normality. In this study, local departures from normality are constructed by expanding the joint density by a series of derivatives of the standard normal density, as originally reported in Murphy (1994). The test for bivariate normality is based on the resulting score contributions which are modified to take into account the heteroskedasticity of the error terms.

Appendix 2. Distributions of training effects in different eras of unemployment

Figure 1. Year 1989

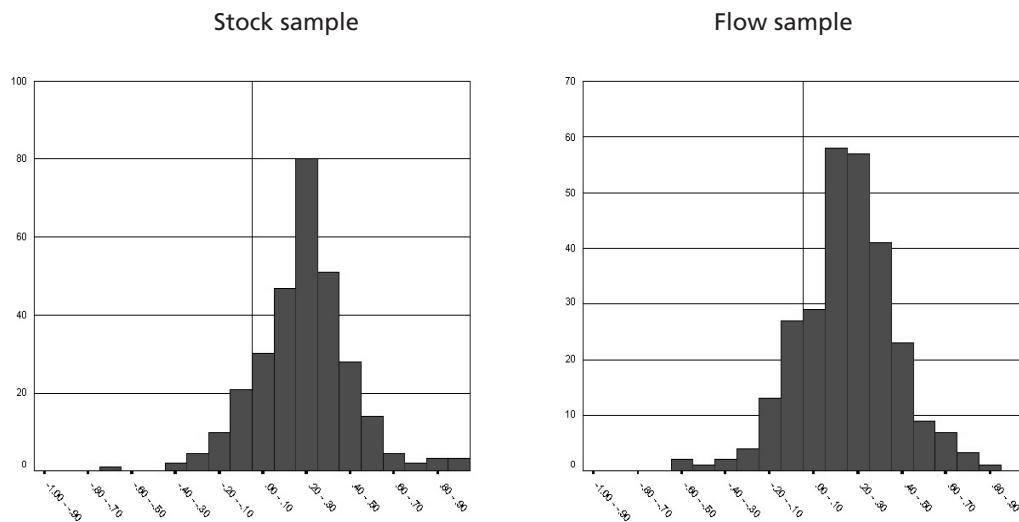


Figure 2. Year 1992

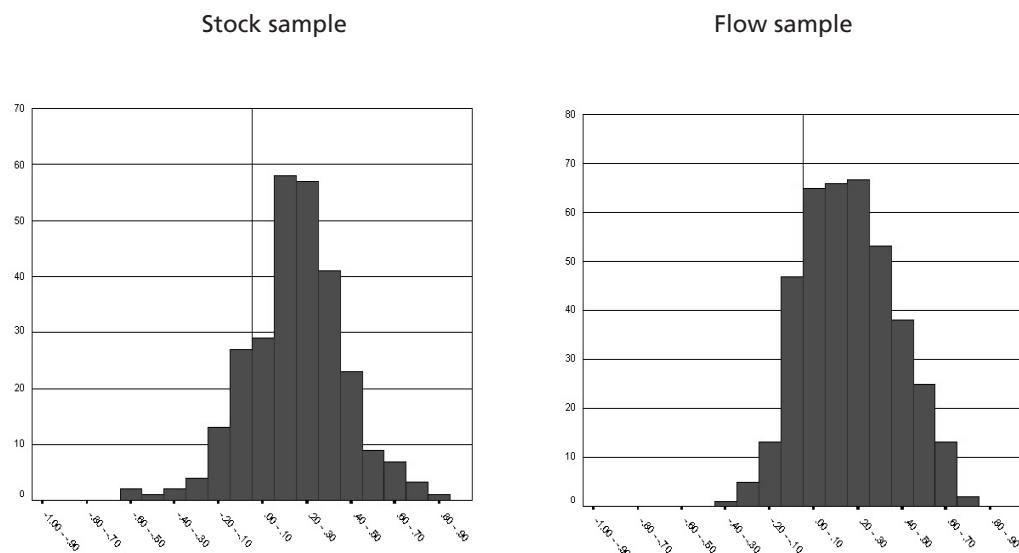
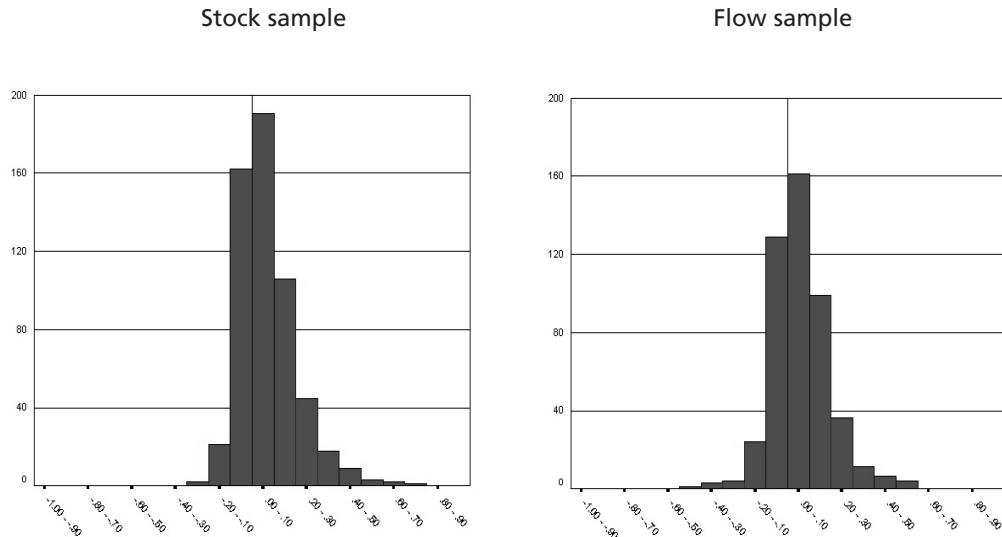
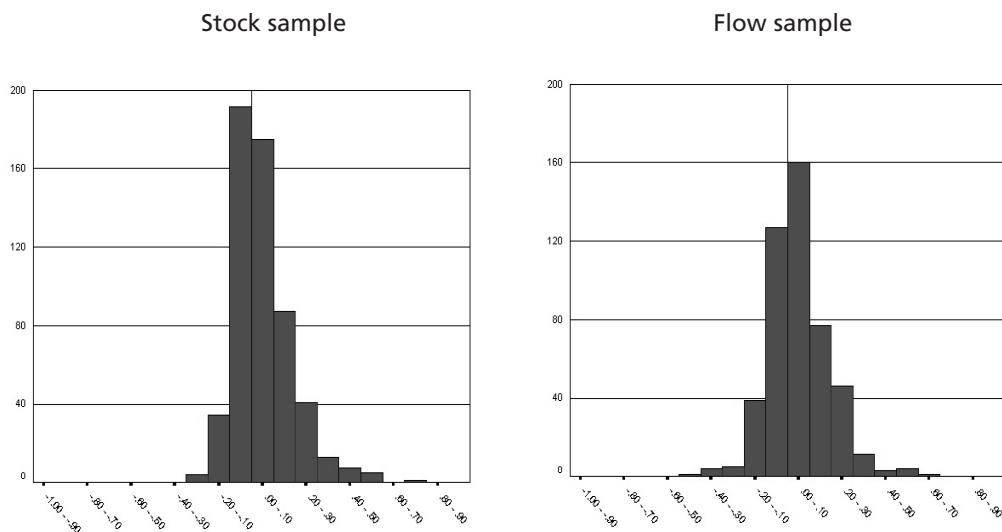


Figure 3. Year 1994; Bivariate probit specification*Figure 4. Year 1994; Probit specification*

Appendix 3. Parameter estimates of participation equations

	Year 1988		Year 1991		Year 1993	
	Stock	Flow	Stock	Flow	Stock	Flow
Constant	-3.10***	-2.81***	-2.55***	-2.29***	-3.89***	-3.47***
Individual characteristics						
Woman	-0.06	-0.04	-0.03	-0.17	-0.12	-0.03
Aged 16–19	-0.12	-0.65*	-0.91***	-1.62*	1.18***#	0.73#
Aged 20–29	-0.35#	0.07	-0.41#	-0.48#	0.48**	0.54**
Aged 30–39	-0.16#	0.14	0.20#	-0.01#	0.76***	0.52**
Aged 40–49	-0.01#	0.14	0.26#	0.14#	0.89***	0.62***
Married	0.17	0.30**	0.22*	0.24	0.15	0.26**
Number of children under 7 years of age	0.03	0.07	-0.07	-0.07	0.27*	0.28**
Age of youngest child 0–1	-0.05	-0.07	0.40#	0.64#	-0.48	-0.71**
Age of youngest child 2–3	–	–	-0.20	-0.13	-0.31	-0.53**
Age of youngest child 4–6	–	–	0.26	0.29	-0.01	-0.19
Age of youngest child 2–6	0.02	-0.14	–	–	–	–
Upper secondary education	0.77***	0.52***#	0.05	0.04	0.17*	0.10
Lower higher education	0.72**	0.56	-0.13	-0.22	0.49**	0.32
Upper higher education	0.45	0.05	0.79#	0.67#	0.04	0.14*
House owner	0.50***#	0.46***#	-0.06#	-0.05#	-0.21**	0.09#
Disability	-0.27	-0.43	-0.40	-0.52	-0.38	-0.03
Broader job seeking	-0.47*	-0.45	-0.08	-0.01	0.36**	0.24**
Labour market characteristics						
Travel-to-work						
unemployment rate	-0.06**	-0.04*	-0.00	-0.00	-0.01#	0.03
Union member	0.75***#	0.82***#	1.18***	1.44***#	0.58***#	-0.89***#
Unemployment days in t-1*10 ⁻²	0.01	-0.30#	-0.48***	-0.55#	0.04	0.50***#
Home region Uusimaa	0.08	-0.14#	-0.50***	-0.66**	-0.03	-0.07
Home region semiurban	0.00	-0.11	0.19	0.16	0.13	-0.08
Home region rural	0.07	-0.06	0.15	0.11	0.15	0.14
Some work experience	–	–	-1.21***	-0.78***	-0.07	-0.10
Full work experience	–	–	-0.47***	-0.55***	-0.53***	-0.27**
Occupation						
Technical	0.32	0.29	0.33#	-0.12#	0.69***	0.40**
Health-care	-0.40	-0.54	0.13	0.07	-0.48**	-0.42**
Social care	0.91***	0.79***	0.34	0.38	-0.48	-0.34
Office	0.50*	0.25	-0.27	-0.63	0.75***	0.27
Merchant	0.34	0.15	-0.55*	-0.55	0.39*	0.36**
Farming/forest	0.37	0.45*	0.32	-1.10#	-1.01*	-0.92***
Transportation	-0.05	-0.10	-0.00	-0.35	-0.06	-0.11
Construction	-0.11	-0.24	-0.16	-0.13	0.08	0.16
Textile	0.33	0.19	-0.46	-1.78	0.31	0.33
Manufacturing	0.27	0.12	0.46***	0.37*	0.52**	0.35**
Service	0.47**	0.31	0.09	-0.01	0.07	0.03
No occupation/unknown	1.66***#	1.34***	1.91***#	1.86***#	2.24***#	0.26#
Income information						
Unemployment benefits exceed the average	-1.22***	-5.04#	-2.48***	-20.44#	-0.07#	1.34***#
Non-labour income *10 ⁻⁵	-0.05	-0.12	-0.18	-0.16	-2.65	-2.27
Wealth *10 ⁻⁶	–	–	0.26	0.38#	-0.06	0.08
Debt *10 ⁻⁵	–	–	0.13**#	0.11	0.06	-0.01

Spouse's information						
Spouse's income *10 ⁻⁶	–	–	–	–	2.37**	1.38
Spouse's wealth *10 ⁻⁶	–	–	–	–	0.57	-0.40
Spouse's debts *10 ⁻⁶	–	–	–	–	0.00	-0.06
Local supply of ALMPs	0.09***	0.11***	0.00	0.00	0.00	0.00
<i>Correlation coefficient</i>	-0.29**	-0.57***	-0.39***	-0.29***	-0.15	-0.13
Log-likelihood	2789.97	1701.48	3761.72	2836.69	5820.03	3086.90
Number of observations	3454	2029	5396	3640	8136	3634

Notes: *** (**, *) = significant at the 1 (5,10) per cent significance level. # = the variable has also been employed in modelling the heteroskedasticity of the error terms.

COMMENTS

Tor Eriksson

The fact that there is large expenditure on active labour market policy programmes and that many policy-makers apparently have a strong belief in such programmes, and, moreover, think that more of the same is the solution to current employment problems, suggests that evaluating these programmes should obviously be a high priority. Programme evaluations should predominantly be carried out by the research community. There are two reasons for this. Firstly, it is usually a good thing to have the policies evaluated by different people than those who have planned and implemented them. Given the scale of these programmes, one cannot exclude the possibility that there is substantial scope for rent sharing within the "programmes industry".

Secondly, as experience has taught us, evaluations are quite difficult to implement due to intriguing methodological problems and to the great demands on the necessary data. Curiously enough, a considerable amount of the evaluation research comes from the United States where programmes are relatively rare and small scale. Although, as is well documented by Ackum Agell's and Lundin's survey, gaps still remain in the accumulated knowledge on the effects of active labour market policies, there has also been considerable progress.

The strong belief in the benefits of these policies is also a bit puzzling in view of the fact that, originally, the idea behind (or "model" for) the use of the active policy measures was to help economic adjustment by facilitating structural change, upgrading the skills of redundant labour and encouraging geographical and sectoral mobility in times when the economy was hit by short-run business cycle disturbances. Additionally, temporary public works were used to smooth out income variation. The purpose of the policies was not to create new jobs; rather, they presupposed jobs becoming available as aggregate demand increased again. Thus, these policies were designed to combat business cycle variations in unemployment, rather than as a means to reduce high unemployment, which has persisted for long periods of time. It is hard to see how the success of implementing these policies in completely different settings can be taken for granted.

Indeed, some of the main conclusions of Ackum Agell's and Lundin's meta-analysis are that labour market training in Sweden has been less successful in the nineties as compared to the eighties. Furthermore, the volume of the Swedish Labour Market Board's programmes has increased to the level where the marginal gains from the expanding programme participation are very small or even negative. An additional important

insight is that the public works programmes are associated with considerable crowding out effects, raising the question of whether these policies contribute to higher regular employment at all. As Sweden has acted more or less as a role model for active labour market policies in other countries, I would be surprised if many of the conclusions drawn from Swedish experience did not apply to Finland, too. At least they should provide some food for thought both to Finnish labour market analysts and to policymakers.

Kari Hämäläinen's study of the effects of labour market training in Finland looks at the period, 1988–1994, when there were huge variations in labour demand conditions and fairly large changes in the supply of active labour market policies, too. Characteristic of the first two years was an overheated economy, followed by an extremely sharp reduction in employment in 1991–1992 with an accompanying huge inflow into unemployment. 1993–1994 were the two last years before the export-led recovery started to take effect.

One major difficulty for Hämäläinen's analysis is that the composition of the pool of the unemployed is likely to differ quite substantially between these three periods. During the first low-unemployment period, training programme participants are likely to have constituted a rather negative selection, whereas during the two later periods, participants were more "representative" of the labour force in general. As a consequence, it is hard to isolate the effects of labour market training, especially variations in its scale, from those of changes in labour demand. Unfortunately, there is no obvious solution to this problem.

In addition to the major changes in the macroeconomic environment, the organisation of labour market training was also altered by the abolition of the state monopoly and the introduction of performance management. As pointed out by the author, these two changes might very well have changed the selection of participants into the programmes. In particular, rewarding training institutions for performance may have led to a "creaming-off" of the easy-to-train or easy-to-place participants, and hence, to an ostensible increase in programme effectiveness. Clearly, two of the questions addressed in the paper (i.e., is the scale of operations the appropriate one, and, given the size of the programmes, are the right people being selected into them?) both – and in particular the latter – merit further analysis.

In his analysis, Hämäläinen also attempts to go beyond the average effect of the policies, by interacting programme participation with individual characteristics. However, it should be noted that this is not the same as examining how the programme effects vary across individuals. Consequently, one should be careful not to draw excessively strong conclusions from the analysis of how the effects are distributed among participants.

Heikki Räisänen

The paper by Susanne Ackum Agell and Martin Lundin presents some evidence of the Swedish labour market policy outcome, which seems to be basically in line with experiences from other countries, too. They describe that no other country has invested so much in active LMP measures to get open unemployment down and, because of this, there are no lessons to learn from other countries. This is a rather surprising argument. Is the high relative volume of ALMP really such a unique factor in Sweden that there are no lessons to learn from other countries? Probably there are some unique elements such as institutional factors and the way in which relevant actors in the society cope with them, but the basic economic and labour market policy instruments could also work very much in the same way as in other countries. It is likely that an excessive volume of ALMP diminishes effectiveness and leads some people to participate, time after time, in a world of measures without open labour market jobs.

The job-brokering function of the Public Employment Services has proved to be effective in Sweden, as it usually is in any institutional context. This is also in line with the Finnish experience. Basically, the outcome of Swedish labour market policy measures seems much the same as the Finnish outcome: job brokering and carefully targeted labour market training measures create strong effectiveness, but subsidised employment programmes hardly do so. Ackum Agell and Lundin state that labour market training measures have also been applied with the purpose of preventing people from losing out on insurance benefits. This kind of phenomenon was also present in Finland in the depth of the recession of the 1990s, though it was not labour market training but subsidised employment programmes that sought this unofficial target.

Ackum Agell and Lundin define dead-weight effects in the case of recruitment subsidies from the companies' point of view: if the company gets a subsidy for hiring a person it would have hired anyway, this causes a dead-weight effect. This is one possible way of discussing side effects of ALMP measures. The other, more typical way is to consider the selection of the target group, i.e., whether or not a person in the target group would have found a job, even without the subsidy, could be defined as a dead-weight effect. Susanne Ackum Agell and Martin Lundin discuss that this type of side effect could also be handled as a displacement effect, as the subsidy could displace others in recruitment.

Employment measures were better for the youth than labour market training measures. Could this result be explained by the relatively high educational attainment of the youth and, because of this, the relatively

small additional effect of labour market training in comparison with elderly job seekers? This kind of effect is also present in the Finnish labour market.

The supply effect of active labour market policy programmes seems to be quite important. However, it is not only the supply effect in terms of participation in the labour force, but effective labour supply and the results of ALMP that seem somewhat too modest in this respect. The search activity during measures drops heavily. We are also familiar with this result in Finland. The policy response in Finland has been to develop active job-search behaviour both during a measure and just after the completion of the measure.

From a Nordic perspective (with rather low population density in mind) the difference between measures improving mobility (job broking, mobility grants and labour market training) and measures improving employment can be found to be an important distinction. Measures improving mobility also happen to have an effect on labour market mismatch. This can be connected to another finding by Ackum Agell and Lundin, i.e., increased decentralisation makes it more difficult for the state to direct ALMP.

Kari Hämäläinen discusses the effectiveness of labour market training in different eras of unemployment. One of the main arguments is that there exists a negative relation between the effectiveness of labour market training and overall unemployment. According my own studies and other Finnish evaluation literature, this seems to be true; however, I would like to place this in a slightly different format: the level of general labour demand is decisive on the effectiveness of labour market training, and has a positive relation to effectiveness.

Hämäläinen has studied the period 1989–1994, which, for Finland, covers probably the most severe recession experienced in the OECD countries. The years 1991–1993 were a period of severe economic, social and labour market crisis in Finland, i.e., there was also the question of survival.

Hämäläinen has found that participation in a training programme improved the probability of employment regardless of the exact sample or the estimation period. I think this result merits further discussion. In a period of high unemployment there are numerous highly skilled active job seekers in the labour market, many of whom do find jobs fairly rapidly, even in recession. That being the case, labour market programmes in general have large-scale displacement effects when these programmes put job seekers before other job seekers in the queue. On the other hand, dead-weight effects behave in a procyclical way; that is, they only have rather limited importance in a period of recession. As far as I understand the method used by Hämäläinen, dead-weight effects are already taken into account by this method. I think when considering the result obtained by

Hämäläinen, we should pay attention to these and to other side effects in order to better understand the net effects of labour market training. Also, the stability of the employment effects is an important point.

There are also other important effects of labour market training besides the relatively immediate effects on employment probability. Matters such as skill building, availability of skilled labour and vocational qualifications are highly important. Other target groups, such as immigrants without relevant skills in the Finnish language, need language training before employment in the Finnish labour market is possible. The same applies for persons with no basic IT skills. It is also clear that these kinds of training courses are a necessary precondition to create any employment prospects, but are not enough to simply cross the job threshold.

Hämäläinen also discusses the creaming-off effect in selecting participants. In my experience, there was not much creaming-off in the recession period, as the local employment offices did not have the capacity for careful selection of participants. And, in selection, it is necessary to consider who can benefit from training and who can pass the training courses and obtain qualifications. Many job seekers cannot do that because of lack of basic skills.

Both papers present valuable analyses and experience of key areas of labour market policy. Lessons from the Swedish and Finnish labour market policy do have many similar characteristics, even if we usually consider the differences first. In any case, these two societies resemble each other in many respects and the similarity between the labour market policies of the two countries is probably a good example of this.

CHAPTER 5

PROSPECTS FOR EUROPEAN EMPLOYMENT

HOW FAR FROM LISBON?

Tito Boeri

1	Introduction	143
2	Some common predictions	145
3	Race to the bottom?	146
4	What about the paralysis of reforms?	148
5	Towards a common social policy model?	152
6	And collective bargaining?	154
7	Final remarks	157

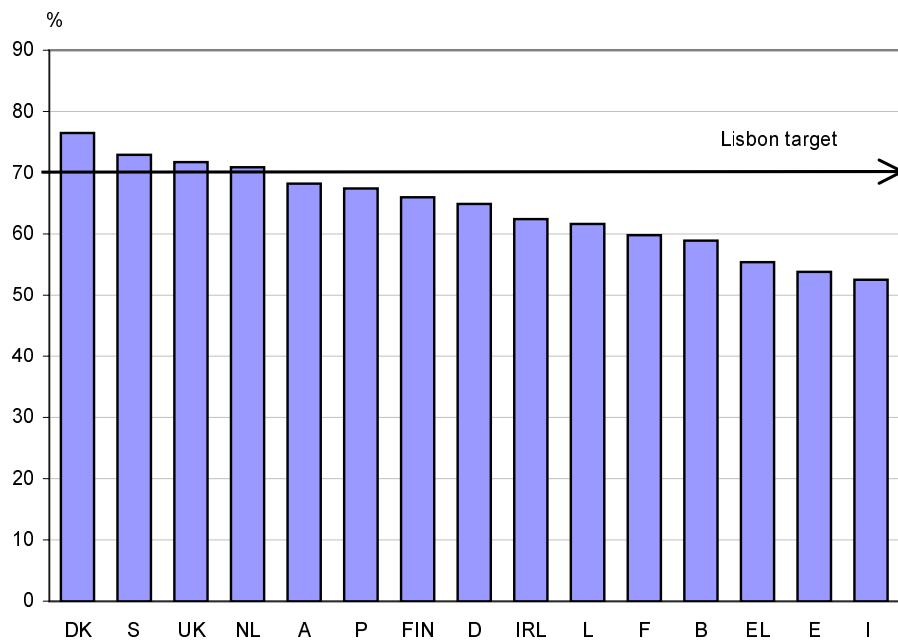
1 Introduction

In March 2000, the European Summit in Lisbon subscribed to the very ambitious goal of raising the employment rate by almost 10 percentage points in less than 10 years. More precisely, the task set out in Lisbon was to increase the employment to working-age population ratio from 62.4 per cent in 1999 to 70 per cent by the year 2010, attaining at least 60 per cent in the case of women.

There is currently a wide variation in employment rates across the European Union (Figure 1). They range from a high 76.5 per cent in Denmark and levels exceeding the 70 per cent threshold in Sweden, the UK and the Netherlands, to a low 52 to 56 per cent in Italy, Spain and Greece. Mediterranean countries of the EU face the greatest challenge for making progress towards the Lisbon target.

The low employment rates in these countries are mainly the by-product of the exclusion from the world of work of youngsters and women, as the employment rates for the core group of middle-aged men is more or less the same across the EU (and not much different from that of the US). Even if this was not explicitly stated in Lisbon, the attainment of the target will necessarily involve a further expansion of part-time and temporary jobs, as well as more low-wage/low-productivity jobs. These are jobs that have been, for the most part, created in recent years and which are, in any event, likely to include a higher proportion of women and young people. Thus, attaining the Lisbon target requires reforms promoting adaptable and flexible labour markets and changes in bargaining institutions or unions' strategies, allowing for more flexible working-time arrangements and more wage dispersion, as well as reforms of social welfare systems

Figure 1. Employment rates (15–64 years) in 1999 and the Lisbon target (70 % in 2010)



Source: OECD; Employment Outlook (2001).

increasing the rewards from labour market participation (particularly, but not only, at the lower ends of the wage distribution) and promoting human resources development.

In the past few years, alongside the well-paid new jobs created by technological developments, the fastest employment growth has occurred in “atypical” work, part-time, fixed-term or non-standard forms of employment, sometimes offering little in the way of security and continuity. In 1999, the employment rate in the EU increased to 62.4 % from 61.5 % in 1998, but if we look at the type of jobs created we notice that there has been, over the last five years, a constant rise in the proportion of workers taking part-time or temporary jobs, which now accounts for almost 30 per cent of total employment in the EU. This proportion has reached 45.7 % in the case of female workers.

Moreover, the growing gap between those who benefit from the new career opportunities created by technological developments, and those who do not, manifests itself in another way. Europe is experiencing persistent high levels of joblessness among low-skilled workers, and this fact is often presented as evidence of the rigidity of European labour markets, in contrast with the case of the US. Greater wage flexibility may

help to improve the employment prospects of people with little experience and/or low skills and low productivity potentials. But in this respect, we should learn something more from the US, where the earnings of lower-paid workers have experienced a sustained decline, falling by perhaps one-quarter in real terms over the two decades following 1973.

In a nutshell, employment growth of the sort we need to meet the Lisbon targets requires wide-ranging reforms of labour market and social policies. On the one hand, greater wage and contract flexibility has to be pursued, in order to expand the employment rate among low-skilled or "atypical" workers. On the other hand, social policies must be transformed in such a way as to enable them to reduce the disadvantages of vulnerable groups and to increase the rewards from participation at the same time.

Is all this feasible? Will it require more or less co-ordination of social policies at the EU level?

In order to shed some light on these issues, we need to address some broader problems, such as the impact of European Integration on European social welfare systems, the impact of EMU on collective bargaining institutions against the background of ongoing trends in union presence and influence and the extent of convergence of labour market and social policy institutions towards a common "European model".

Speculative thinking, more than past experience, can offer guidance in this respect as European integration, and even more so the introduction of a common currency, are the type of radical transformations to which Lucas critique applies. This means that predictions cannot rest on projections based on historical experience, as underlying behavioural relationships have changed.

2 Some common predictions

Two recurrent views of the future of employment and social welfare systems in a united Europe are worth stressing, as one is the polar extreme of the other.

On the one hand, there are those who forecast a *paralysis of reforms*. According to this view, the action of governments will be biased in favour of the status quo for a number of reasons. First, incentives to free riding will increase as closer economic integration makes it easier for governments to shift onto other countries the burden of their own structural inefficiencies. The monetary union, in particular, will reduce incentives to reform labour market regulations in order to cope with the inflationary bias associated with structural unemployment. Second, Europe will be caught up in a slow-

growth high-structural rigidities equilibrium: slow growth makes reform more difficult, if not altogether impossible (Minford 1994, Saint-Paul 2000), because there is a stronger demand for social protection and job security; institutional features that structural reforms are supposed to reduce or, at least, make less automatic.

On the other hand, there are those who claim that there will be a uniform across-the-board tendency towards reducing social welfare. This so-called *race to the bottom* in welfare state provisions (Edwards and Keen 1996, Sinn 1998) will be due to different micro-interactions, such as capital mobility (Burda 1999), pressures on locally provided social benefits and the erosion of the sources of financing. All these factors will force Governments to dismantle European "social protection". In particular, the removal of the remaining barriers to the mobility of goods and services and the greater price transparency involved because of the adoption of a common currency in the core EU countries will increase competitive pressures on national fiscal systems, setting in motion a reduction in social welfare in an attempt to attract foreign direct investments. The impossibility of adjusting parities vis-à-vis the main trading partners, will also increase competitive pressures on employment protection and collective bargaining institutions.

3 Race to the bottom?

The two views imply that either reforms of the kind required to attain the Lisbon targets cannot be made or that, rather than reforms of the welfare states, one should expect uniform across-the-board cuts to social spending, also including expenditure items which increase rewards from labour force participation (e.g., child care facilities or active labour market policies).

Hence the question: Is there any indication that we may be approximating either of these two extreme scenarios?

Product market integration and monetary unions are not completely unknown events to Europe. There are countries like Austria, Belgium, and the Netherlands which have maintained fixed parities with the D-Mark, virtually sharing the same currency, over the last 20 years. The French Franc has also been a "hard currency", kept well within the narrow EMS bands since 1987. If these are not true monetary unions, they are very close approximations of them. Thus, the experience of the D-Mark area and core EMS countries can be informative for our purposes. In particular, race to the bottom pressures on wages and bargaining institutions should have arisen within these "currency areas", characterised from the very start by marked differences in unit labour costs and unemployment levels (hence also

potential differences in the dynamics of wages). The countries belonging to such unions were also very closely interconnected (e.g., one third of Dutch exports go to Germany).

If we analyse the evolution of labour market and social welfare institutions in the three areas listed above (Bertola, Boeri and Nicoletti 2000) – D-Mark zone, core EMS group and the EU as a whole – over the last two decades, we notice that:

- There are no visible reductions in *social security contributions*. Statutory contribution rates have indeed increased in most countries over time and it is quite revealing that such a tendency has been particularly pronounced within the D-Mark zone, with Germany and Austria leading the “race to the top”. The picture does not change when the focus is on actual, rather than statutory, contribution rates. There are just a few countries decreasing contributions, in spite of the fact that some nations have recently shifted social security financing away from payroll taxes to income or indirect taxation.
- As regards social expenditure, there is some tendency to a reduction in generosity only in the area of non-employment benefits (encompassing not only unemployment benefits, but also the various cash transfers provided to individuals of working age who are not working). In particular, trends in a summary measure of generosity of *unemployment benefits*, based on a revised OECD index, suggest that there has been some tendency towards reducing the generosity of benefits, but this trend has not been uniform across the board.
- Concerning trends in *social assistance provision*, i.e., those cash transfer schemes aimed at satisfying the primary goal of social welfare to reduce poverty, the impression is again one of a race-to-the top rather than a race-to-the bottom.
- There is some reduction of *employment protection*. We observe in almost all European countries a decline in the strictness of employment protection computed by the OECD, which corresponds to a decline in the extent of employment protection, whilst no changes are visible outside the EU. But this higher “flexibility” in employment adjustment is very often the by-product of new contractual types, rather than of reforms of regulations for permanent workers.

Overall, there does not seem to be a uniform across-the-board tendency towards reducing social welfare provisions across Europe, and no race to the bottom taking place. Some schemes, e.g., unemployment benefits, are becoming less generous and there is a marked tendency towards the reduction of the system of job-guarantees offered in the past to employees. In other fields – the most noticeable being social assistance – the trend is

exactly the other way around, i.e., the generosity of provisions is increasing over time. More importantly still, the fact of having been in a quasi-currency union does not appear to matter much. Evolutions in social spending and social security taxation are, in most cases, broadly the same between, on the one hand, D-Mark area or core EMS countries, and, on the other hand, the remaining EU members.

What can we conclude from this? That, *past experience* does not, as yet, support the view that a dismantling of welfare states is taking place. Governments seem to have some leverage in deciding which institutional features should be kept in place and which ones should be downscaled.

4 What about the paralysis of reforms?

Let us consider the other extreme view, the paralysis of reforms scenario. Some indications in this respect come from a database, assembled at the Fondazione Rodolfo Debenedetti, on reforms carried out in Europe in the field of employment protection, non-employment benefits and pensions. We can distinguish reforms on the basis of their broad orientation, that is, whether they make employment protection more or less stringent, increase or reduce rewards from labour market participation, and tend to change the generosity of public pensions.

Figures 2–4 compare the average yearly number of reforms before and after 1997 – the year in which EMU membership was defined and, hence, presumably the currency union started exerting its effects in various fields. We find that *reforms of employment protection legislation*, going towards making protection less stringent, have increased in the Euro area more than elsewhere since 1997. Under closer scrutiny, it turns out that most of these reforms are marginal in the sense that they do not affect entitlements of the core group of workers with permanent contracts. This nature of reforms has significantly increased the institutional complexity of employment protection legislation: we have witnessed a multiplication of contractual types, with a number of fixed-term and unstable jobs going hand in hand with permanent and still heavily protected positions. All this magnified the dualism of European labour markets, making them more segmented not only between insiders and outsiders but also among various types of outsiders. The trend is, however, towards more flexibility, and this trend would seem to be more marked in the Euro area than outside it.

As regards non-employment benefits, we can see that, after 1997, reform activity in euro countries has increased more than in non-euro countries. Relative to the period before 1997, reforms strengthening rewards from

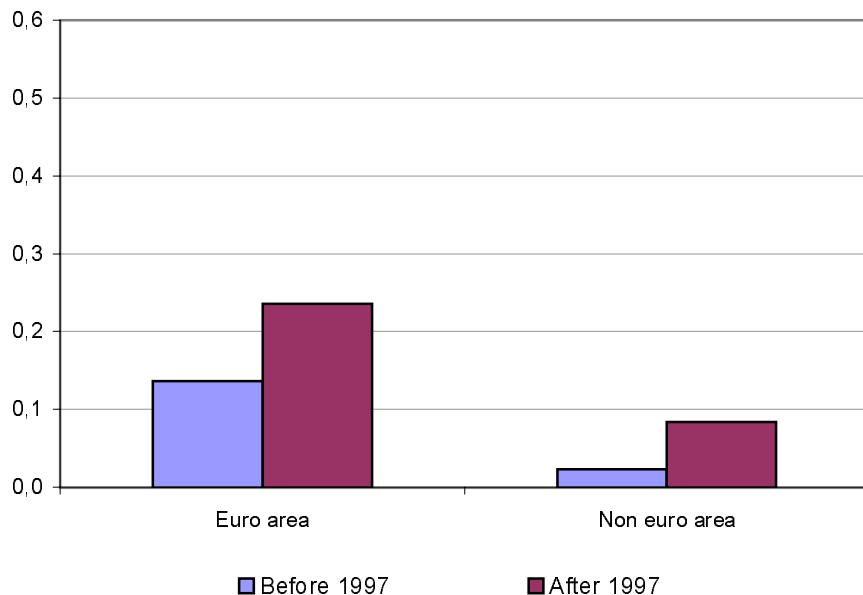
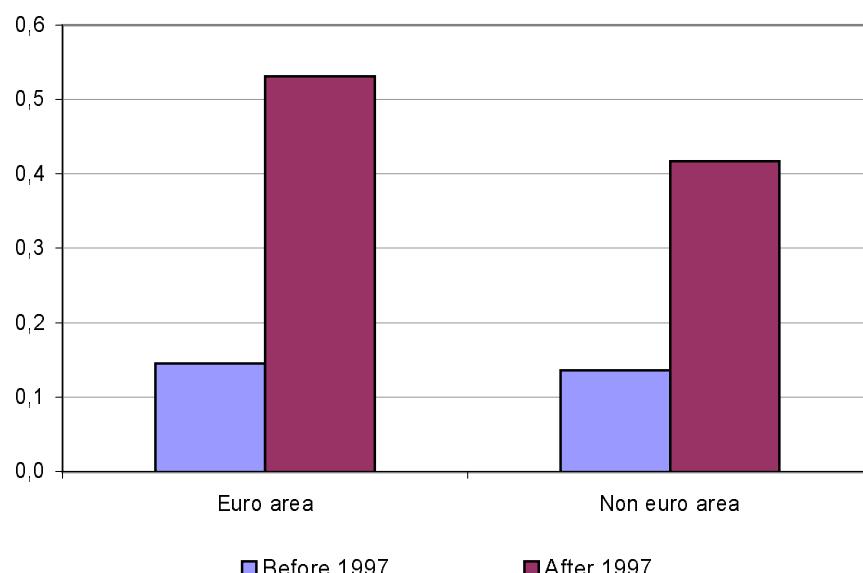
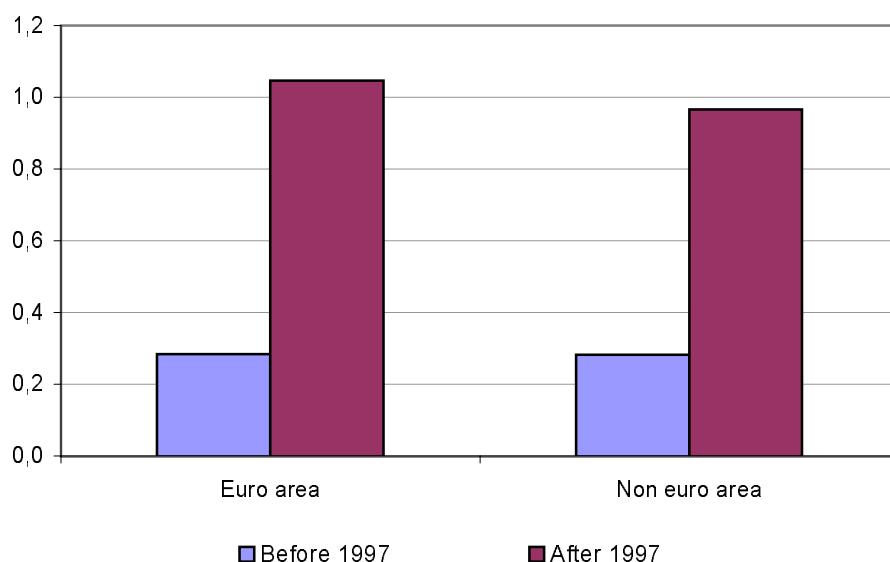
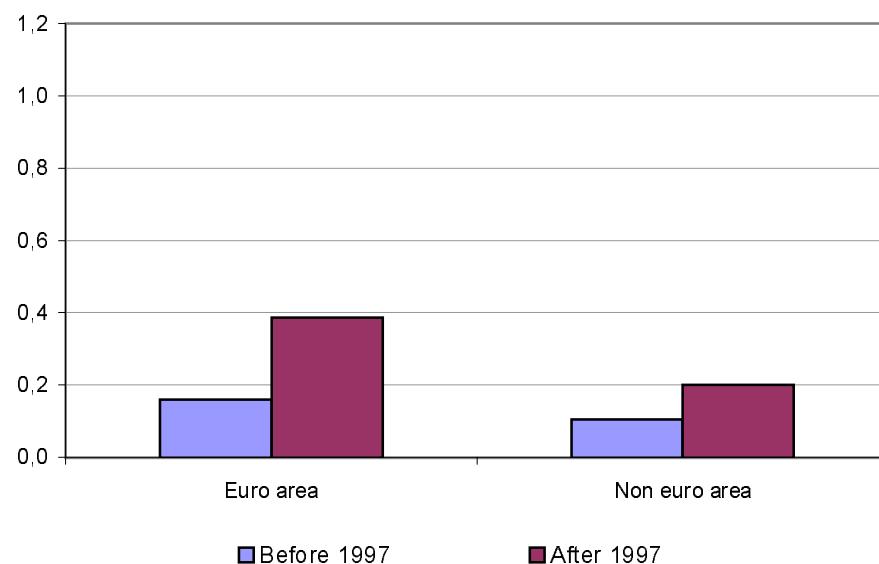
*Figure 2. Average number of reforms per year and country*Employment protection legislation: decreasing flexibilityEmployment protection legislation: increasing flexibilitySource: Fondazione Rodolfo Debenedetti (www.frolb.org).

Figure 3. Average number of reforms per year and country

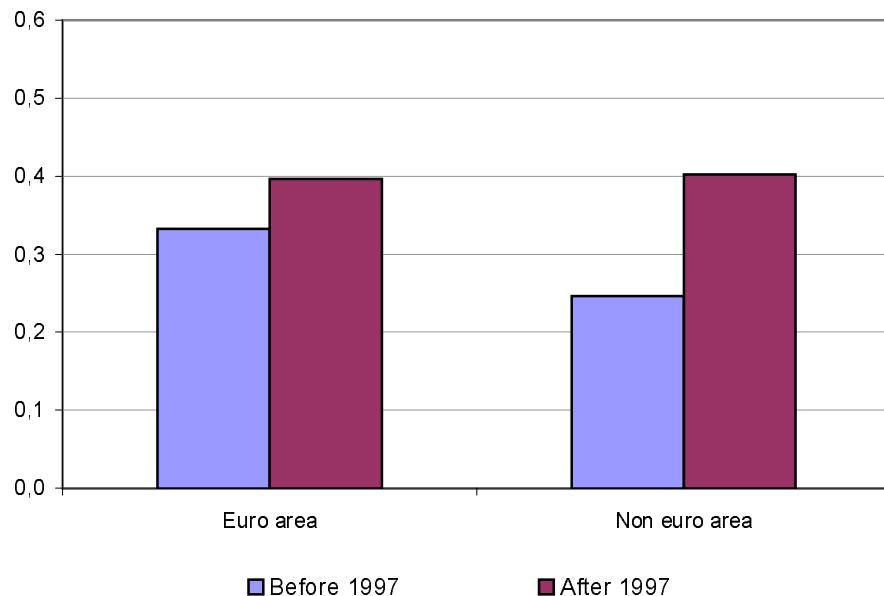
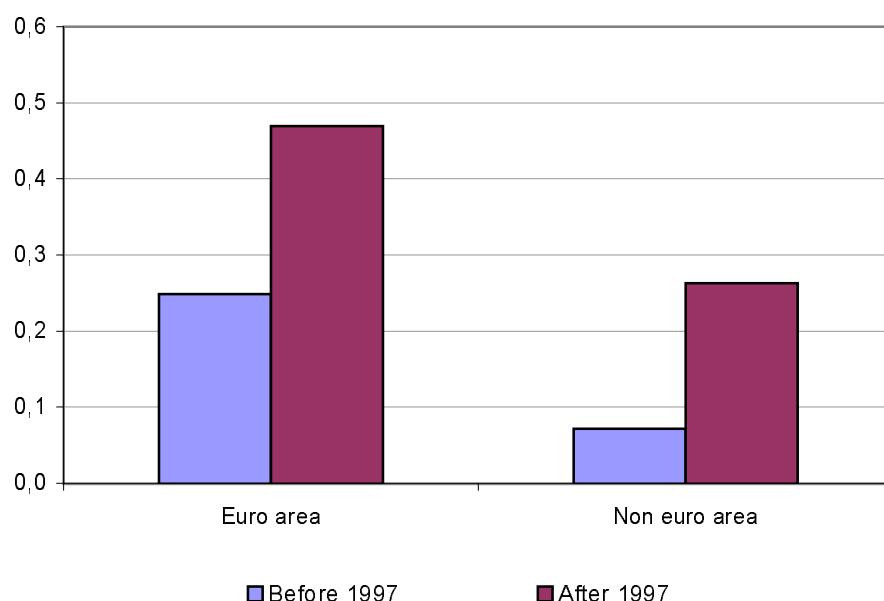
Non-employment benefits: increasing rewards from labour market participation



Non-employment benefits: decreasing rewards from labour market participation



Source: Fondazione Rodolfo Debenedetti (www.frolb.org).

*Figure 4. Average number of reforms per year and country*Pension systems: decreasing generosityPension systems: increasing generositySource: Fondazione Rodolfo Debenedetti (www.frolb.org).

participation have increased (Figure 3). More reforms going the other way around have also been implemented, but the rise in reform activity is not as pronounced as in the case of reforms aimed at making work pay. Interestingly, there seem to be no differences in these trends between Euro area and the remaining EU countries.

Finally, also in the field of pensions, an acceleration in the number of reforms has occurred, involving all European countries, independently of whether or not they belong to the monetary union. Unlike the case of non-employment benefits and employment protection, such reforms are, for the most part, moving in the direction of increasing the generosity of benefits in the Euro area. Some of these reforms, however, are not inconsistent with the aim of increasing participation: in particular, some measures allow older workers to combine partial (e.g., part-time) pensions and work.

In a nutshell, there is no support for the idea that EMU involves a paralysis of reforms. If anything, an acceleration in the pace of reforms has occurred since 1997. Thus neither of the two extreme views mentioned at the outset is supported by our findings.

5 Towards a common social policy model?

The overall impression given by our inventory is much different from that of standard textbooks: institutions are not static at all. Rather, institutional changes are taking place very frequently in all European countries.

An interesting question is whether such changes are the sign of convergence towards a sort of pan-European social security model. To shed some light on this issue, we can test the existence of convergence in social spending by regressing the growth in social expenditure as a percentage of GDP for the period 1980–1996 on its initial level for a cross-section of countries. Convergence in the unconditional sense is implied, according to this methodology, if the coefficient for spending in the base year is negative and statistically significant. We cannot reject this *beta unconditional convergence* for the OECD countries as a whole: the coefficient between change and initial levels is –0.14 which is significant at 99 per cent confidence levels. However, the interaction variables for the D-Mark and EU areas are not significant, which suggests that monetary unions have not had an additional effect on convergence (Table 1).

We also tried to test another type of convergence, that is, sigma-convergence, i.e., whether the standard deviation of the logarithm of social spending had decreased or increased over time. According to this criterion,

there is convergence not only for OECD countries as a whole, but also for the EU15 and, in particular, D-Mark countries groups. Significantly, convergence would seem to occur mainly within the various social Europes, namely the four groups of countries typically used by taxonomies of the European welfare states, rather than between them: the cross-country variation between social expenditure as a percentage of GDP decreased over the 1980–1996 period in all these groups of countries. (Table 2).

In conclusion, there are some indications that the cross-country variability in the size of the welfare states is decreasing. However, this is occurring mainly within the various "Social Europes" rather than across them.

Table 1. Unconditional beta convergence

Dependent variable: average growth rate of social expenditure as a percentage of GDP in the period 1980–1996

	Coeff	Sign	St.err.	Coeff	Sign	St.err.	Coeff	Sign	St. err.
Social expenditure as a percentage of GDP in 1980	-0.1125	***	0.0233	-0.1058	***	0.0263	-0.1368	***	0.0333
Social exp. as a % of GDP in 1980 – D-Mark area (interactive term)				-0.0173			0.0186	-0.0251	0.0189
Social exp. as a % of GDP in 1980 – Euro15 area (interactive term)							0.0290		0.0200
Constant	3.7425	***	0.4699	3.6686	***	0.4936	3.9016	***	0.5065
Observations	25	25	25						
R ²	0.50	0.54	0.58						

*** denotes significance at 99 per cent level.

Source: SOCX, OECD (1998).

Table 2. Sigma convergence

Standard deviation of log (social expenditure as percentage of GDP)

	1980	1995	Sigma convergence
OECD EU-15	0.4532	0.3612	Yes
	Overall	0.2627	Yes
	Between*	0.2474	
	Within*	0.1467	
D-Mark area	0.0807	0.0604	Yes

*The groups of countries are: the Nordic countries (Sweden, Finland and Denmark), the D-Mark area (Austria, Belgium, the Netherlands, Germany and France), the Anglo-Saxon countries (Ireland and United Kingdom) and the Southern countries (Italy, Portugal and Spain).

Source: SOCX, OECD (1998).

6 And collective bargaining?

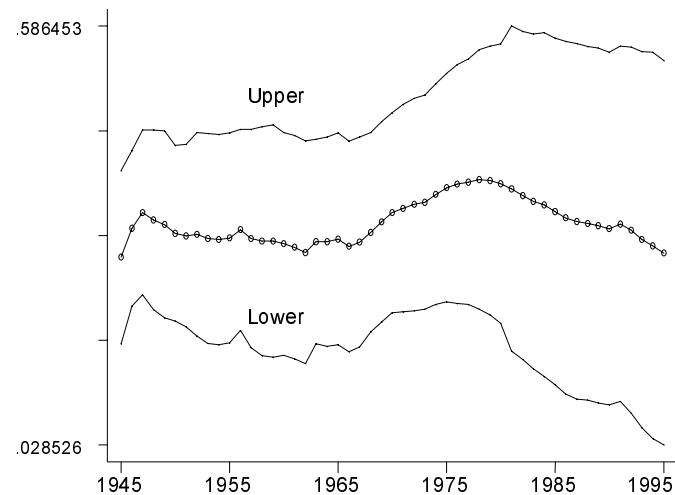
The possibility of attaining the ambitious goals set at the Lisbon Summit will also very much depend on the evolution of collective bargaining institutions and union density. Larger employment rates would seem to involve the creation of low-paid jobs and a rise of wage differentials; all outcomes which are typically opposed by the unions and which are in contrast with the egalitarian outcomes of broadly based collective bargaining institutions.

Hence the question: What is happening to the union movement throughout Europe and what is likely to happen in the years to come?

In most European countries, trade unions have experienced large declines in their membership over the last two decades. Often, the decline in the organised *presence* of the unions has not been associated with a reduction of their *influence* over the determination of economic policies, notably in crucial areas for workers such as pensions, unemployment insurance and employment protection regulations. Actually, in some countries, and mainly those of Continental and Southern Europe, diverging dynamics of membership rates (the proportion of the workforce being unionised) and coverage (the share of workers covered by collective agreements) were observed. The proportion of non-active union members has also increased over time, reflecting (and being itself an important determinant of) the increasing attention devoted by unions to reforms of the welfare state and pension systems.

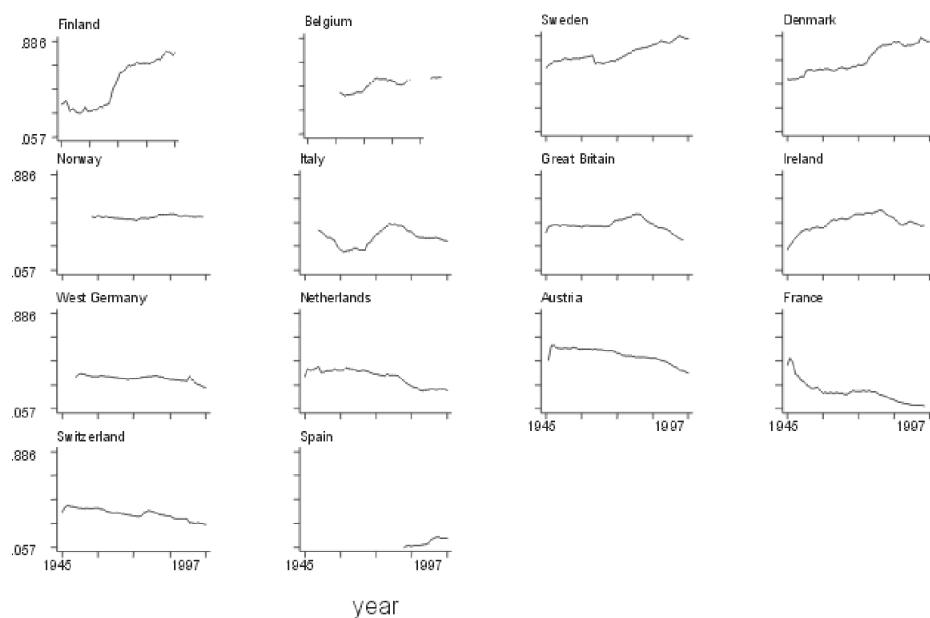
Figure 5 shows the dynamics of the weighted average of the union membership rates in the countries of the European Union over the last 40 years. Data are drawn from the work carried out by two researchers of unions, Bernhard Ebbinghaus and Jelle Visser (Ebbinghaus and Visser 2000). The bell pattern indicates that, after reaching a peak in 1978, membership fell back to its post-war levels. This declining trend in the European overall membership rate should not conceal major differences in the dynamics of membership in the various countries of the EU. The cross-country variation in membership rates can be appreciated by looking at the upper and lower lines (which offer a \pm standard deviation from the average union membership rate): the width of the area between the two curves is a visual representation of the increasing dispersion in the presence of the union movement across the EU. Under closer scrutiny (Figure 6), one observes that in the so-called Ghent countries – countries in which the unions play an important role in the running of unemployment benefit systems (mainly Denmark, Sweden and, in the recent past, Belgium, the Netherlands, Finland and Norway) – union membership rates have been either stationary over the last two

Figure 5. Union density in Europe; weighted average (by employees)



Source: Author's calculations on Ebbinghaus and Visser (2000).

Figure 6. Union density – employed

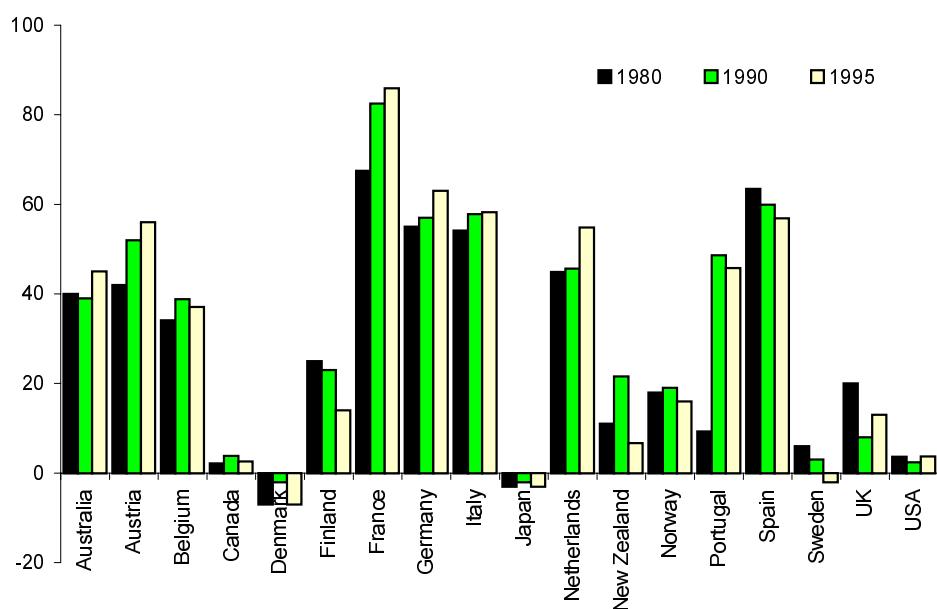


Source: Ebbinghaus and Visser (2000).

decades or have even increased. Thus, the involvement of unions in the running of unemployment benefits would seem to have prevented, in these countries, the membership decline observed everywhere in parallel with the rise of European unemployment.

As stressed above, the decline in membership has not been associated with a reduced influence of unions in wage determination and in economic policies. Figure 7 displays the so-called "excess coverage" (OECD terminology) rate; that is the difference between membership rates and the share of the workforce involved by collective agreements. In countries like France, excess coverage can be as high as 80 per cent. Significantly, all countries which had large excess coverage rates in 1980 – with the exception of Spain and Portugal, whose "democratisation" and EU membership have been associated with an increase in membership – have experienced an increase in the size of the non-unionised workforce which is nevertheless subject to collective agreements.

Figure 7. Excess coverage, 1980, 1990 and 1995*



* the difference between membership rates and the share of the workforce involved by collective agreements

Source: OECD (1997).

There is actually evidence that countries where the difference between coverage and membership is particularly large also displayed larger declines in membership. This hints at possible crowding-out effects associated with administrative extension of collective agreements to the non-unionised segment of the workforce. Administrative extension of collective bargaining coverage and other norms extending the influence of unions behind their presence (the fraction of workers who are members of these organisations), tend to increase the free-rider problem of unions. In other words, workers have less incentives to pay unions' dues and take an active part in these organisations as, in any event, they will get the pay rises the unions are negotiating for them. Such free-rider problems and other possible explanations for the trends observed in union membership are extensively discussed in Boeri, Brugiavini and Calmfors (2001). It is worth stressing at this juncture that shrinking membership is not cost free in terms of union strategies; it makes them less and less representative of different interests, hence less able to be encompassing.

7 Final remarks

Are the goals set out in Lisbon attainable? Very much will depend on the pace and comprehensiveness of ongoing reforms of European labour markets and social policy institutions. The evidence collected in this paper suggests that much is going on and that some gloomy predictions as to the effects of EMU are far from actually materialising. Yet reforms are very gradual and piecemeal and, for this reason, can be reversed. Longer periods of time to evaluate the impact of EMU and more work on the political economy of reforms are needed before informed guesses on the likelihood of a Lisbon scenario can be made.

What is sure is that the European institutional landscape will have to change further – and quite radically – to accommodate such higher employment rates. We need more pro-work social policies (e.g., conditioning income support to employment) and activation measures. We need also more decentralised collective bargaining, with unions rooted at the workplace, but no longer with an influence which spans way beyond their influence.

Finally, to attain the Lisbon targets, and notably those concerning participation of older workers, we need reforms of pension systems, discouraging early retirement and reversing the trend towards lower participation of older workers.

References

- Bertola, G. – Boeri, T. – Nicoletti, G.* (eds.) (2000): Welfare and Employment in a United Europe. A study for the Fondazione Rodolfo Debenedetti, Cambridge, MIT Press.
- Boeri, T. – Brugiavini, A. – Calmfors, L.* (eds.) (2001): The role of unions in the 21st Century: A study for the Fondazione Rodolfo Debenedetti, Oxford University Press.
- Burda, M.* (1999): European Labour Markets and the Euro: How Much Flexibility Do We Really Need? Forthcoming in Deutsche Bundesbank, (ed.): The monetary Transmission Process, London: Macmillan.
- Ebbinghaus, B. – Visser, J.* (2000): Trade Unions in Western Europe since 1945, London: McMillan.
- Edwards, J. S. S. – Keen, M. J.* (1996): Tax Competition and Leviathan, European Economic Review, 40, 113–134.
- Minford, P.* (1994): Deregulation and Unemployment: The UK Experience, Swedish Economic Policy Review 1:113–142.
- OECD* (1997): Employment Outlook, Paris.
- Saint-Paul, G.* (2000): The Political Economy of Labour Market Institutions, Oxford University Press.
- Sinn, H.-W.* (1998): European Integration and the Future of the Welfare State, CEPR Discussion Paper n° 1871, London.

COMMENTS

Jaakko Kiander

In March 2000, the Lisbon European Summit set a goal to raise the average rate of employment in the EU countries from 62 per cent in 1999 to 70 per cent by the year 2010. Such a target is clearly good and sensible, and even crucial for the future growth of the European economies – otherwise, the expected demographic change would have devastating effects on European standards of living and public finances.

The paper by Tito Boeri discusses the feasibility of the Lisbon target. According to him, the higher employment rates cannot be achieved in the European countries without “wide ranging reforms of labour market and social policies”. Such claims have often been heard and they are not without justification. They originate in the eurosclerosis diagnosis from the 1980s, and have gradually obtained growing research evidence in their support. The labour market institutions attracted increased research activity, and it became clear that there are indeed important differences between countries in this respect, too. Perhaps the most authoritative and exhaustive presentation of this evidence was provided by the 1994 OECD Jobs Study.

The “usual suspects” among the structural weaknesses of the European labour markets are well known. They include: (i) unemployment benefits and other forms of income support provided by the social security systems, (ii) trade unions and high union coverage, which tend to raise wages and reduce flexibility, (iii) high taxes on labour input, and (iv) other regulations such as minimum wages and hiring and firing restrictions. Many studies have attempted to capture the impact of all of these factors¹.

If unemployment is mainly structural, then a permanent increase in employment can only be achieved by structural changes; Boeri mentions, as possible remedies, institutional changes enabling expansion of part-time jobs and low-wage, low-productivity jobs. In order to find the correct cures for the unemployment and underemployment common in many European countries, it would be most important to know to what extent the current unemployment is structural and what is the level of potential employment. Unfortunately, that is not known for certain; it is far from clear what is the level of structural unemployment in EU countries.

¹ Perhaps the most promising way to explain the European unemployment problem is to rely on interaction between demand shocks and labour market institutions, as suggested by Blanchard and Wolfers (2000). The impact of income support systems is studied e.g. by Ljungqvist and Sargent (1998), who argue that the reservation wages and structural unemployment increase with the level and duration of unemployment benefits.

It is often argued that the rise of European unemployment was first caused by negative shocks – the oil shocks of the 1970s and the monetary shocks of the 1980s and 1990s. Although these shocks are usually viewed as transitory, they were followed by persistent – not transitory – mass unemployment. The persistence of unemployment has given rise to interpretations according to which there need to be serious structural problems in the European labour markets contributing to the observed hysteresis. However, for several reasons, such a view is not entirely convincing.

First, differences between national labour market institutions do not explain the observed differences in unemployment and employment rates between countries. There are countries with low unemployment and high employment which also have high taxes, high union coverage, high unemployment benefits and high employment protection². This implies that labour market institutions are not the only decisive factors explaining European unemployment. A comparison with the experiences from the 1930s might also suggest a similar conclusion; the period of the Great Depression was another period of persistent mass unemployment in many countries, although the current institutional settings (regulations, high taxes and high benefits) were, at that time, mostly non-existent³.

Second, there has not been any symmetry between negative and positive shocks in the European economies in the 1970s, 80s and 90s, although such a claim (at least implicitly) is often made by those who emphasise the structural nature of European unemployment. In fact, one could quite plausibly argue that the negative demand and supply shocks have not been transitory but permanent, so that the negative effects have been dominant almost ever since the mid-1970s. While the oil prices have fluctuated, the real interest rates rose in the 1980s and the labour productivity growth slowed in the 1970s, and these changes have been permanent. As a result of these changes, the Western economies have faced a permanent increase in the productivity-adjusted real interest rates, which has reduced investment and slowed growth permanently (cf. Fitoussi et al. 2000).

Third, in most countries, the current labour market institutions and regulations were established well before the 1980s and 1990s, when unemployment rose, and – as shown by Boeri among others – since the 1980s there have been deregulatory changes in many countries, which have slightly increased labour market flexibility. Job protection legislation in

² Even job protection doesn't need to be harmful to employment, as shown by the study of Blanchard and Portugal (2001) on Portuguese labour markets. The small European corporatist countries – Denmark, Norway, Sweden and Austria – have succeeded, even in the 1990s, in maintaining relatively high employment notwithstanding their many institutional weaknesses (a fact which is in line with the argument of Summers et al. (1993))

³ Such a comparison has been suggested e.g. by Blanchard and Summers (1986).

particular became less restrictive for employers during the 1990s. There has also been significant real wage moderation since the early 1980s in most countries.

As the fourth and perhaps most powerful argument against the structuralist explanation, one can present evidence from the countries which have been most successful over the 1990s in reducing unemployment (Table 1). Although, up to the mid-1990s, the general picture of European unemployment was very bleak and hence supported the eurosclerosis argument, the situation has, since then, been improving in many countries. Unemployment peaked in 1994 but has, subsequently, been falling. During the latter half of the 1990s the largest absolute drops in unemployment rates were experienced in Spain, Ireland and Finland – countries where unemployment was clearly highest in 1994.

Significant reductions have also been achieved in the Netherlands, the UK, Denmark, Sweden, France and Portugal. In absolute numbers, the reductions have been smaller in these countries due to lower starting points, but in relative terms the achievement has been spectacular.

It is common to all these European countries – as well as to the US – that the actual reductions in unemployment after the recession of the early 1990s have been much larger than one might have suggested on the basis of the 1994 OECD estimates of output gaps. This recent experience shows that numerous countries have been able to reduce their unemployment rates significantly, and more than anyone relying on the estimates of high structural unemployment would have predicted. It is also noteworthy that this improvement has taken place without any deep labour market reforms – or, at least, it is hard to find evidence of such institutional changes.

Table 1. Change of unemployment and output gap estimates

	Unemployment rate in 1994	Unemployment rate in 2000	Change from 1994 to 2000	OECD output gap estimate in 1994	'Unexplained' reduction
Spain	24.1	14.1	-10.0	-2.4	-7.6
Finland	16.7	9.7	-7.0	-6.1	-0.9
Ireland	14.3	4.2	-10.1	-4.1	-6.0
France	12.3	9.5	-2.8	-2.6	-0.2
UK	9.6	5.5	-4.1	-1.6	-2.5
Sweden	9.4	5.9	-3.5	-2.3	-1.2
Denmark	8.3	4.7	-3.6	-2.5	-1.1
Netherlands	7.1	2.9	-4.2	+0.2	-4.4
Portugal	6.9	4.1	-2.8	-1.4	-1.4
USA	6.1	4.0	-2.1	+1.2	-3.3

Sources: OECD Employment Outlook, OECD Economic Outlook.

What can be learned from these observations? One lesson is that there is a lot of variation in unemployment rates between countries and between different periods. In the absence of major institutional changes it is hard to believe that the most recent reduction of actual unemployment would have been caused by identical reduction in structural unemployment. It is likely that the recent American and European employment miracles have been caused by cyclical factors and macroeconomic policies, i.e., by a stronger than expected increase in aggregate demand (Ball 1999, Fitoussi et al. 2000).

Our experience from the 1990s suggests that attaining the Lisbon goal of raising the employment rates of EU countries should not be an impossible mission. If not prevented by contractionary macroeconomic policies, the European economies can show dynamism once linked only with the US economy. The economic growth and improved fiscal balances also create room for favourable supply-side reforms which can further improve the growth and employment potential.

References

- Ball, L.* (1999): Aggregate demand and unemployment. Brookings Papers on Economic Activity, 1999:2.
- Blanchard, O. J. – Portugal, P.* (2001): What hides behind an unemployment rate – comparing Portuguese and U.S. labor markets. American Economic Review, 91.
- Blanchard, O. J. – Summers, L.* (1986): Hysteresis and the European unemployment problem. NBER Macroeconomics Annual 1986.
- Blanchard, O. J. – Wolfers, J.* (2000): The role of shocks and institutions in the rise of European unemployment: the aggregate evidence. Economic Journal, 110 C.
- Fitoussi, J.-P. – Jestaz, P. – Phelps, E. M. – Zoega, G.* (2000): Roots of recent recoveries: labor reforms or private sector forces? Brookings Papers on Economic Activity, 2000:1.
- Ljungqvist, L. – Sargent, T.* (1998): The European unemployment dilemma. Journal of Political Economy, 106.
- Summers, L. – Gruber, J. – Vergara, R.* (1993): Taxation and the structure of labor markets. Quarterly Journal of Economics, 108.

Juhana Vartiainen*Introduction*

Economic and political discussions on European employment are often a matter of the same old story. European employment is too low and unemployment too high. This is due to various "rigidities" such as generous welfare state provisions and collective regulation of the labour market. The interesting question is, therefore, whether Europe "can" implement "structural reforms" to get rid of these rigidities.

As Tito Boeri points out, there are two influential – but extreme – views on the future of European institutions. Proponents of a large welfare state fear a "race to the bottom" as far as the social welfare net is concerned, whereas many liberal-minded politicians and economists (and perhaps some market-players too) are sceptical of Europe's political capability to undertake reforms. Regardless of political stance, many commentators see global economic integration, as well as the introduction of the single European currency as a powerful impetus for structural and institutional change.

Tito Boeri does a valuable job by compiling empirical indicators of the pace and direction of reforms in the euro area. The results indicate that neither of the extreme views espoused by many political commentators are true: European political institutions are certainly not incapable of employment-promoting reforms, but nor are these institutions engaged in a race towards the bottom in welfare state provisions and labour market regulation.

However, in light of the best economic research, even the "old story" outlined above rings hollow. My comments will be organised around the following three themes: (i) what do the best studies on unemployment tell us about the causes of joblessness? (ii) how did welfare state arrangements and collective agreements arise, and (iii) how does collective bargaining constrain the process of flexible wage formation?

What do the best studies on the causes of unemployment tell us?

The most plausible stories of European unemployment, such as that of Blanchard and Wolfers (2000) show that European unemployment can best be understood as the result of interplay between macroeconomic shocks – deliberate disinflation, oil price hikes and productivity shocks – and structural factors such as the generosity of unemployment benefits in particular.

One plausible interpretation of such analyses is that European economies are slower to respond to adverse economic shocks than the US economy; however, evidence of a permanently higher NAIRU for the euro area remains controversial. The most robust evidence of structural rigidities has

to do with the unemployment benefit systems, as the fine survey by Bertil Holmlund (this volume) indicates. Even the issue of taxes is much more controversial (see Erkki Koskela's contribution).

Furthermore, even in the case of UI, it is not clear that a drastic dismantling of existing UI systems would increase welfare. Theoretical contributions have shed light on both the costs and benefits of UI systems (for a critical view, see Ljungqvist and Sargent 1998; for a more sympathetic view, see Acemoglu and Shimer 1999).

Thus, on the basis of available evidence, we can hardly rule out the "null hypothesis" that European economies will, in due time, return to a normal state of low unemployment. That return will be slower than in the case of the US, and the starting point has been less favourable given that the disinflation of the late 1980s and the 1990s was – in the EU case – followed by a contractionary restructuring of the national public sectors (by itself necessary and unavoidable, of course), formally associated with the criteria of the Maastricht treaty. One must remember, however, that that return was fairly slow even in the US case. One plausible explanation for this is based on the option value theory of investment (see Dixit and Pindyck 1994, p. 15). After an economy has been hit by shocks, employers remain cautious for quite a long time before they are convinced of the robustness of economic recovery.

Finally, it is often forgotten that the European unemployment problem is, first and foremost, a German unemployment problem, and present German unemployment has much to do with a single policy mistake, namely, the levelling of Eastern and Western wage levels at the time of national unification. As Sinn (2000) has demonstrated, this has cost Germany millions of jobs, since the productive supply side of the former Eastern area cannot cope with the present level of costs. But even that effect will fade, albeit slowly.

What are the historical origins of the welfare state and collective wage agreements?

If European rigidities are so harmful, why did they arise in the first place? Furthermore, how plausible is the view that global economic integration and the single currency will undermine welfare state arrangements? After all, there is considerable theoretical and empirical evidence that shows that these arrangements arose precisely as a response to these same forces. The historical origin of welfare state arrangements has to do with the expansion of the European market in 19th century, as well as the increasing participation of smaller European countries in global markets. As Dani Rodrik (1998) has convincingly argued, the size of the public sector in various countries can

best be explained by the size and openness of their economies. Small and open economies are vulnerable to economic shocks that originate in the world markets, and a large welfare state can be seen as a rational insurance scheme that insulates the individual households from the full effect of global volatility. If that analysis if correct (as I believe it is), then it is hard to believe that the very same forces of globalisation and integration that gave rise to the welfare state in the first place would lead to its demise. By the same token, it is hard to see why a national currency would be such an ultimately necessary condition of an encompassing welfare state.

In a similar vein, Jonas Agell (1999) has argued that corporatist labour markets can be interpreted as insurance schemes that decrease uncertainty and that can even, in some cases, enhance efficiency.

How do collective agreements and employment protection function?

The economic literature on trade unions and labour market rigidities speaks of "centralised" wage setting, without paying much attention to the finer details of collective agreements and labour protection. Collective wage bargaining does not, in general, involve every individual's wage contract being somehow "centrally" determined; on the contrary, it is a co-ordination mechanism that is used to rapidly accommodate labour markets to macroeconomic and industrywide shocks without disrupting each and every individual wage contract at the shop floor level (see Teulings and Hartog 1998 in particular on this strand of thought, based on models of asymmetric information and holdup problems). As to wage differentials and downward wage flexibility, the empirical picture is varied; some unions are clearly more opposed to productivity-based wage differentials than others (see Vartiainen 1998 for a comparison of Sweden and Finland, for example). From the point of view of the theory of contracts, it is not clear that a rational trade union would find it advantageous to oppose a wage cut that would ensure the preservation of an individual job (see Malcomson 1997 in particular).

By the same token, many of the present employment protection regulations can be seen as ways of alleviating the excess mobility of labour that results from local problems of asymmetric information. According to this strand of thought, the employer-employee relationship is characterised by asymmetric information about the other party's outside options: the firm does not know about the worker's alternative job offers, and the worker is not informed of the firm's alternative recruitment opportunities. This asymmetry implies that labour mobility, as manifested in quits and layoffs, is unnecessarily high (see Hall and Lazear 1984 and Teulings and Hartog 1998 for the finer details of this argument). Furthermore, it can be shown that a

long-term nominal wage contract can, in this case, improve mutual welfare. The ideal role of well-designed collective agreements is then to accommodate these local long-term agreements to macroeconomic and industrywide shocks: local “long-termness” need not be disrupted if the entire array of wages is increased or decreased when the whole economy is hit by a shock.

Such theories suggest that there may be an important positive role for collective wage agreements, provided they do not interfere with local wage flexibility. The empirical picture is, of course, a mixed bag. Anyway, to sum up a large amount of economic literature, what unions do matters much more than how weak or strong they are.

Conclusions

As nobody knows for sure, it is not unreasonable to hazard a guess that European unemployment will, in the first decade of the new millennium, return to normal levels of 4 to 5 per cent whilst economists and politicians go on lamenting the lack of structural reforms.

References

- Acemoglu, Daron – Shimer, Robert* (1998): Efficient Unemployment Insurance. *Journal of Political Economy* 107, October 1999, 893–928.
- Agell, Jonas* (1999): On the benefits from rigid labour markets: Norms, market failures and social insurance. *Economic Journal* 109, February 1999, F143–164.
- Blanchard, Olivier – Wolfers, Justin* (1999): The role of shocks and institutions in the rise of European unemployment: the aggregate evidence. *Economic Journal* 110, March 2000, 1–33.
- Dixit, Avinash – Pindyck, Robert S.* (1994): *Investment under uncertainty*. Princeton University Press.
- Hall, R. E. – Lazear, Edward P.* (1984): The excess sensitivity of layoffs and quits to demand. *Journal of Labor Economics* 2, 233–257.
- Ljungqvist, Lars – Sargent, Thomas J.* (1998): The European Unemployment Dilemma. *Journal of Political Economy* 106, June 1998, 514–550.
- Malcomson, James M.* (1997): Contracts, Hold-up and Labor Markets. *Journal of Economic Literature* 35, Dec. 1997, 1916–1957.
- Rodrik, Dani* (1998): Why Do More Open Economies Have Bigger Governments? *Journal of Political Economy*, 106(5), October 1998, 997–1032.
- Sinn, Hans-Werner* (2000): EU enlargement, migration and lessons from German unification. *German Economic Review* 1:3.
- Teulings, Coen – Hartog, Joop* (1998): *Corporatism or Competition?* Cambridge University Press.
- Vartiainen, Juhana* (1998): Understanding Swedish Social Democracy: Victims of Success. *Oxford Review of Economic Policy* 14:1, 19–39.

CHAPTER 6

SUCCESSFUL LABOUR MARKET REFORMS

OVER THE HILL: THE DUTCH WAY OUT OF LABOUR MARKET MISERY

Joop Hartog*

1	Turning point, 1982	169
2	The reforms and their effects	171
3	An assessment	182
4	Some problems that remain	184
5	Conclusion: an incomplete restructuring	186

1 Turning point, 1982

The Dutch economy began the post-war period with a strong performance in terms of employment, growth and income distribution. In 1970, the unemployment rate was the lowest among the 15 OECD countries for which data are assembled in the Economic Outlook. In the early sixties, unemployment was not above 1 % for five consecutive years. After this prosperous period, in line with the extended post-war European boom, the oil price shock in 1973 definitely marked the end of a 'golden era'. Unemployment rapidly increased. The problems were initially tackled with Keynesian expansion policies, job creation programs and investment subsidies, all aided by the government's share in the gas revenue. The large export of gas, however, also made for a strong external position, a high exchange rate, and large losses of employment in the exposed sector. The government revenue from gas increased in a few years from 2.4 to 4.9 % of the national income (it is now down to 0.5 %).

After 1975, the policy goals changed towards budget deficit reduction and government retrenchment. However, the policy utterly failed. In a period of 5 years, the government share in national income went up by 9 percentage points. This was the period of 'Dutch disease': export curtailed by a strong guilder and government (transfer) programs fuelled by high gas revenues. Wages continued to increase (stimulated by the shifting of taxes and social security premiums) and profits were squeezed. The wage share in market sector income increased to 92 %. The government stressed, time and again, the necessity of wage restraint, and actually intervened in 1974,

* Support from the volume's editors in reducing a lengthy draft is gratefully acknowledged.

1976, 1979, 1980 and 1982 with mandates on wages, i.e., wage freezes, outlawing automatic cost-of-living adjustments, etc. The period 1973–1982 was a period of muddling through with the government's fiscal policies, rapidly increasing unemployment and intervention in wage formation that increasingly irritated and frustrated social partners.

In hindsight, the year 1982 is usually marked as the turning point. It was the year of the Central Agreement between the leading labour federation and the employers' federation, struck in Wassenaar, and hence dubbed the 'Wassenaar Agreement'. It covered wage restraint and reduction in working hours and intended to restore profit levels and create employment growth. At the same time as this, the government became more determined to control its expenditures and its deficit, and to reform social security. In particular, the inflow into the disability pension had been incredibly high. More generally, and following the mood in the rest of the world, the policy orientation definitely changed from a Keynesian one to being a neoclassical, market based one. After 1982, the great Dutch consensus machine became effective again, as it had been before.

Why could this new start be made in 1982? There are several reasons. First, unemployment had skyrocketed in the early 1980s, and there was a strong sense of urgency about this. At some point in time, unemployment had increased by 10 000 persons per month (Visser and Hemerijck 1997, Chapter 1), so the boat was sinking with dramatic speed. Second, unions and employers "were not amused" by the repeated government interventions in wage formation. The government had intervened with 6 binding wage regulations of various sorts in the period 1974–1982. They really had a strong desire to settle their affairs among themselves. And third, the whole institutional structure had always been there to allow a return to the consensual nature of industrial relations that is typical of the Dutch situation. Social agreements fitted in with history and with the institutional and socio-cultural environment; they were by no means a social innovation. Centralised, corporatist decision making could resume its course again.

The program developed after 1982 had several components and incorporated several actors. It was not dubbed as being a "Manifesto 1982", but the goals were certainly around at the time, as was the sense that the elements were interrelated. It consisted of the following components:

- the government was to get its expenditure under control, i.e., government retrenchment, reduction in the burden of taxes and social security premium
- the social partners were to implement the Wassenaar Agreement, i.e., wage restraint, working time reduction, more labour market flexibility
- social security was to be reformed.

We shall proceed as follows: in section 2 we shall describe these components of various reforms in a detailed way, while section 3 will provide a brief assessment of why the developments in the Dutch economy during the last 15 years have been particularly successful.¹ In section 4 we shall point out some of the problems that the Dutch economy still faces and, finally, section 5 will contain some concluding remarks.

2 The reforms and their effects

Government budget control

The central government budget deficit was reduced from 8.9 % of GDP in 1983 to 1.4 % in 1996, and the deficit of the total public sector (central government, local government, social insurance) from 8.6 % to 2.0 %. The share of taxes and social security premiums was reduced from 47.4 % to 44.4 %. The share of public expenditure in GDP fell from 58.0 % to 46.9 %. Employment volume in the public sector dropped from 698 000 person years to 650 000, which meant a drop from 15 % of employment volume to 11.7 %. The national debt, at 63 % of national income in 1983, initially increased to about 81 % in 1993 but since then fell to 78 % in 1996. The "wedge" (the difference between gross and net wages as a percentage of gross wages) fell from 34 % at the level of the minimum wage to 21 % in 1996, and at the wage level for the "modal employee" (a specific Dutch definition, i.e., an employee with a wage at the lowest higher boundary for compulsory social insurance) fell from 48 % to 41 %. At the lowest wage levels, there were substantial rebates on social insurance contributions.

Over a period of 13 years, the share of public expenditures was reduced by 13.5 % gross and by 11.1 % net. There were three main contributors: income transfers, civil servant wages and loans. Wage restraint in the public sector was substantial. The index for contractual wages, base 1980 = 100, stood at 155 for private sector workers in 1996, while for public sector workers it stood at 123.² Whereas in earlier days, public sector wages had been indexed to the private sector wage index, a substantial gap was created in the first half of the 1980s. By 1983, public sector wages had dropped 2 %, while private sector wages had increased by 15 %. By 1985, private sector wages further climbed, with a 21 % gain, while public sector wages stabilised. After 1985, contractual wages developed in an almost

¹ More details on the Dutch experience are specified in Hartog (1999).

² Statistisch Zakboek 1992, Table 3.21, p. 114 and Statistisch Zakboek 1998, Table 3.25, p. 119.

parallel way; the relative wage cut for civil servants has been accomplished within just a few years.³

As noted above, the share of public sector employment fell substantially. The decline in employment and relative wage took place without major disruptive labour conflicts, which required accommodating labour union behaviour. As is the case everywhere, union density is relatively high in the public sector: in 1985 it was 46 %, as opposed to 17 % in the private sector (Visser 1990, Table 11, 50). Only 1982 had a relatively high incidence of strikes, with 21/100 000 workdays lost; in other years, it was usually below 10 (Statistisch Zakboek). Public sector unions are affiliated with the large federations, and share the generally restrictive policies.

The reduction in expenditure on social security (transfers) had a pure price effect. Between 1980 and 1995, the number of benefit years increased from 2.2 million to 3.4 million, an increase of 52 %. The average benefit per benefit year increased from Dfl 14 040 to Dfl 15 116, i.e., an increase of less than 8 %, while over the same period national income per inhabitant increased by 79 %.⁴

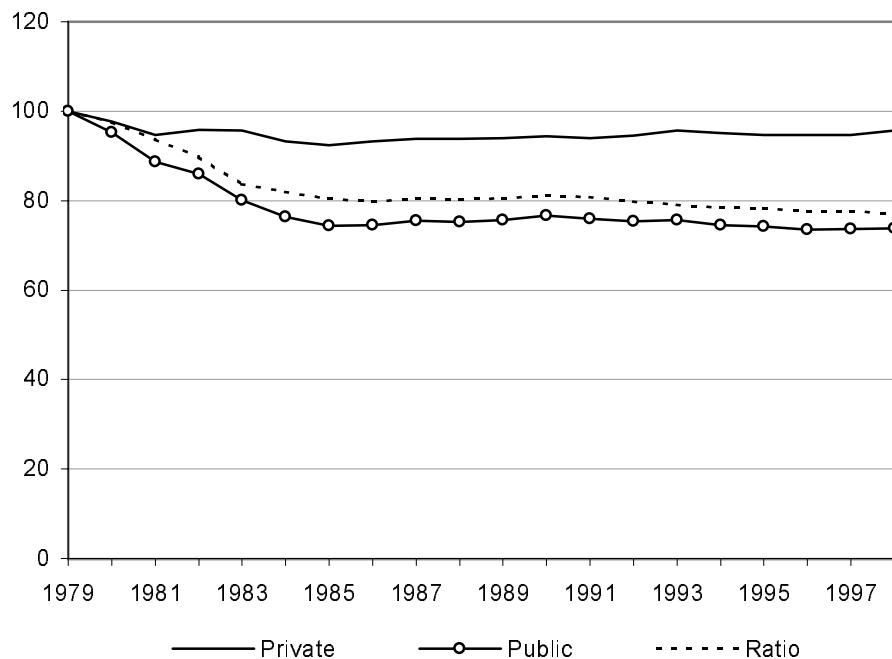
So, the conclusion on the relative reduction in government expenditure is clear. The bulk of the cuts came from the reduction in transfers and in the wage bill. Regarding transfers, it was overwhelmingly a price effect, as the number of recipients increased substantially. Regarding the public sector wage bill, it was both a price and a volume effect. Over the period 1983–1996, public sector employment fell by 7 %. Over the period 1980–1996, nominal public sector wages increased 30 % less than private sector wages. The relative wage reduction was mostly established in the early 1980s (see Figure 1).

Wage restraint

Nominal wage increases after 1983 have been modest, with a peak of 4 % in 1992; in most years, the increase was less than 2 %. Figure 1 gives the index of contract wages in the private and in the public sector. Note that real market wages were stable between 1975 and 1979, before decreasing, and then stabilising again after 1981. Hence the Wassenaar Agreement did not mark the beginning of wage restraint, as rapidly-increasing unemployment during the 1970s had already triggered moderation. Unit wage costs in 1996 were at the same level as they had been in 1981. Over the same period, they increased by 40 % in Germany and by 15 % on

³ Real wages were reduced by not adjusting for inflation. From 1980 to 1985, consumer prices increased by 21 % (Statistisch Zakboek 1987, Table U1, p. 329). Over the same period, nominal civil sector contract wages per hour fell by 1.8 %, per week /per month by 3.3 % (idem, VI, p. 337).

⁴ Statistisch Zakboek, 1990 Table 11.9, p. 337 and 1998, Table 11.12, p. 387.

Figure 1. Private and public sector real wages

Source: Courtesy of Dr. Wiemer Salverda, Amsterdam (extension of data in Salverda, 1997).

average in the EU. The wage share in market sector income dropped from 93 % in 1987 to 82 % in 1997.

At the low end of the wage distribution, restraint was even stronger. The legal minimum wage for adults, was, in real terms, reduced by 20 % in less than 20 years. The legal minimum wage is differentiated by age. In 1979, half of the minimum wage population was on the minimum youth wage, in 1994 it had dropped to a third (Salverda 1997). The minimum youth wage declined even more than the adult minimum. The share of employment yielding no more than the legal minimum wage dropped from 7.9 % in 1979 to 2.6 % in 1994 (in full-time equivalents). In 1979, the legal adult minimum wage was 70 % of the median wage. The share of employment at or below that relative wage level was 12.4 % in 1979 and had climbed to 14.0 in 1994 (Salverda 1997). In other words, the share of workers on the minimum wage declined substantially. But since the minimum wage itself has dropped below its former relative level, the share of workers in the low wage tail – defined by the initial relative level – has increased.

Wage restraint was convincingly realised. In 1996, private sector contractual real wages were 5 % below their level in 1979 and public sector

The Dutch system of labour relations

The Dutch labour market has strong corporatist features, in the sense that there is tripartite consultation at all stages of legislation and policy making (for concepts and measures, see Teulings and Hartog (1998), Chapter 1). The 1927 Law on the Collective Agreement makes an agreement binding for all workers in a firm, not just for members of the union who signed the agreement. Formally, the legal basis of labour relations allows free entry of new unions. Anyone can start a union and call for negotiations with an employer. The employer is free to honour or to ignore such a request. There are no formal representation rules, no compulsory elections, no rules on bargaining or bargaining structures. Because of the 1927 Law, when an employer signs a contract with a single union, this contract automatically applies to all its employees. Other unions are then left out. Employers play this game only when faced with an adverse product market, for example in April 1994, when CNV signed an agreement with Heineken and FNV called a strike (which was ruled illegal in court).

According to the 1937 Law on Mandatory Extension, if a collective agreement covers a substantial majority of the industry (55 % of the workers), the Minister of Social Affairs can extend the agreement to the entire industry. The Minister is obliged to ask the Wage Committee of the Foundations of Labour ('Stichting van de Arbeid', a private organisation of union federations and employer associations) for advice. In the Foundation of Labour, bargaining parties meet and consult each other, and give joint recommendations to their members regarding wage restraint, training and additional employment policies. In the past, a Central Agreement was, in some years, negotiated within the Foundation of Labour.

In 1999, only 27 % of workers were members of a union. Most unions belong to one of three federations that are members of the Foundation of Labour. On the employers' side, there is one national federation, with single firms and lower level employer organisations as members. The lower level organisations are involved in bargaining. There is a separate organisation for smaller firms and there is one for agriculture. Sometimes, an employer organisation bargains directly with the unions; sometimes the employer organisation mainly provides support to employers, who negotiate themselves. A collective agreement always excludes top level management and often excludes low-paid workers in temporary employment. Most collective agreements are industry agreements, and the share has been rising. The share of the company agreement was 12 % in 1997. The number of workers covered by a non-extended industry contract now stands at some 10 %.

The system strikes a remarkable balance, with both unions and union federations playing an important role, precisely because their formal position is rather weak. Union density is low and multiple unionism, combined with the non-discriminatory status of collective agreements, weakens the union side (an agreement signed with any union is binding for all workers in the firm and possibly in the industry). Mandatory extension seems to give organised interest a strong advantage on their playing field, but there are several escape routes for employers. There is no evidence that actual wages are substantially higher than market wages. Econometric analysis shows that wage differentials between bargaining regimes are quite small – no more than a few per cent (Hartog, Leuven and Teulings 2001).

For further analysis of corporate systems (and the Dutch version of corporate systems), see Teulings and Hartog (1998) and Freeman, Hartog and Teulings (1995).

wages were a quarter behind their 1979 level. Individual wage growth has to be realised by individual 'careers', i.e., the effects of tenure, age, and promotions. The average wage also increased because of a composition effect, in other words, the level of education of the labour force substantially increased over the last decades. However, mean real earnings for a full time worker in the mid-nineties were not higher than in 1979 (Salverda 1997).⁵ The government certainly retreated; between 1983 and 1996, the share of public expenditures in GDP dropped from 58 % to 47 %, the number of civil servants dropped by 7 % and the gap between gross and net wages fell from 48 % to 41 % at the mode and from 34 % to 21 % at the level of the legal minimum wage.

Simulations by the Central Plan Bureau (CPB 1991), based on their econometric macro-model, suggest substantial effects of wage and government restraint. Had the indexation of public sector wages, social security benefits and the legal minimum wage to private sector wages continued, private sector employment would have been lower by 125 000 person years and unemployment higher by 105 000 person years. Had the private sector wage share in value added not been reduced by 10 percentage points between 1979 and 1990, employment would have been lower by 220 000 and unemployment higher by 275 000 person years (unemployment in 1990 stood at 419 000). Nickell and Van Ours (2000) use cross-country regressions for national unemployment rates and, after inserting the changing values for the Dutch variables, find that more than half the predicted reduction in equilibrium unemployment is due to increased coordination in wage bargaining.

Social security reforms

Reforms focussed on reducing benefit levels, tightening eligibility, introducing employer incentives and changing the organisational structure, and taking away control from social partners. Between 1985–1987, the basic replacement ratio for unemployment, sickness and disability was lowered from 80 % to 70 %. But in many cases, benefits were maintained at 100 % through supplements negotiated in collective agreements. Eligibility for unemployment benefit was tightened in 1987 and again in 1995, by demanding stricter work histories. Eligibility for sickness benefit legally only began at day 3 of a sickness interval, but benefits were commonly supplemented in collective agreements to 100 % as of day 1; this only changed in 1994 (see below). Under disability insurance, providing coverage

⁵ The OECD statistics give the same result. Between 1980 and 1996, real average earnings (compensation per employee in the business sector) grew by 0.2 % annually in the Netherlands. The EU average was 1.1 % (OECD Economic Outlook).

after one year of sickness, the extent of disability was initially deliberately linked to the level of unemployment: if it was going to be hard for a disabled person to find a job utilising his restricted remaining capacity to work, that person would be placed in a higher disability interval. In 1987, the 'labour market criterion' was abolished. In 1993, eligibility conditions were further tightened and constant benefit levels until the age of 65 were abandoned.

It is quite likely that the strong increase in sickness incidence was due to the combination of full income coverage and a very lenient system of monitoring. In the reform of 1994, employers were mandated to pay at least 70 % of the wages for the first 6 weeks of sickness (2 weeks for small employers), with, of course, the option for employers to seek private insurance. In 1996, this was extended to full employer liability for 70 % of the wages for one year; essentially, the Sickness Insurance program for employees has been privatised.

The percentage of workers on disability increased to a high of 13.5 % of the labour force in 1984 and then slowly declined to 9.7 % in 1996. In 1994, for the first time since the introduction of the law, the outflow surpassed the inflow. However, in 1996, the tide turned again. The history of disability insurance is truly dramatic, with massive inflow right from the start in 1967, clearly responsive to economic incentives and accounting for a large amount of unemployment (Aarts and De Jong 1992). Between 1992 and 1994, the disability insurance had a bonus/malus system, in other words, a penalty for every employee of the firm that became disabled and a premium for hiring a disabled person. Since January 1998, firms' premiums for disability insurance have incorporated experience rating. The premium for benefits to insured persons who have been disabled for five years or more is at a national uniform rate. But the premium for the first five years of disability is set at the employer level, to match the disability expenditures originating from that employer. Employers may opt out from this first leg, but very few do. There is an obligation for firms to consult a Working Conditions service ("Arbo dienst") to improve working conditions and prevent the incidence of disease and disability.

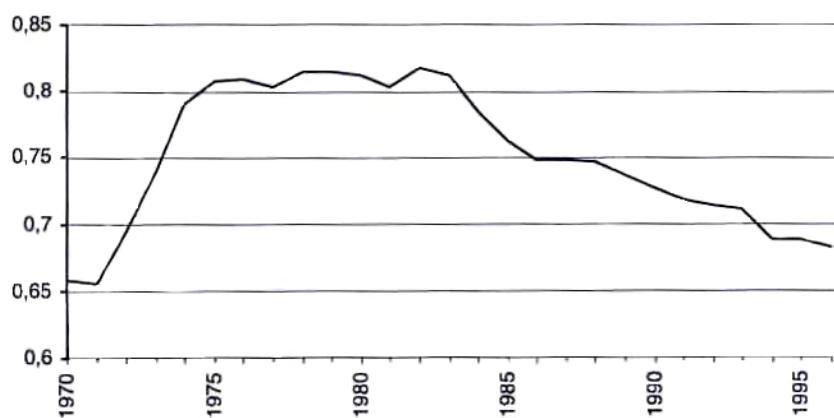
There is a widespread view that social partners were responsible for the dramatic increase of the proportion of the population on disability benefits – a view underscored by an extensive Parliamentary Investigation. Social partners have been punished for their mismanagement by the drastic administrative reform. In the old system, until 1995, social partners administered disability and part of the unemployment benefits through their role in the Industry Associations. In the supervisory body, they had a joint majority over the independent members. In 1997, Industry Associations

were abolished and social partners are no longer involved in administration or supervision. This represents an important move away from the former intentionally corporatist organisation set up in the early 1950s.⁶

The development of a generous welfare state, illustrated and almost symbolised in Figure 2, has created a large volume of benefit recipients. Teulings, Van der Veen and Trommel (1997, Chapter 6) estimate that the 15 % increase in benefit levels following 1970 has increased unemployment by 60 000 persons. Adding that higher benefits also stimulate inflow, they hold the high benefit level between 1974 and 1985 responsible for an upper level of 100 000 additional unemployed.

The high social minimum may have been a factor in eliminating low-skilled jobs, as the high reservation wage, at the low end, kept wages high and stimulated the substitution of higher educated workers for low educated workers. From the data in Hartog, Oosterbeek and Teulings (1993) we can deduce that, between 1979 and 1985, the relative wage of unskilled labour increased by 11 % and then stabilised until 1989.⁷ With an elasticity of substitution of 1, the employment ratio would drop by 5 %, implying a drop in demand for the unskilled by 2.5 % of total employment; some 110 000 person years.

Figure 2. Social minimum in relation to average wages



Source: Teulings, Van der Veen and Trommel (1997).

⁶ Debates on the management structure and organisation of the social insurances have a long history. See Teulings, Van der Veen and Trommel (1997, Chapter 9), for some discussion and further references.

⁷ In a standard Mincer earnings equation, the rate of return was 0.089 in 1979, 0.072 in 1985 and 0.073 in 1989. We assume an unskilled person has 4 years of education after primary school (to conform to the legal minimum) and a higher educated person has 7 years. The relative wage rate then changes by $-3 \times (0.072 - 0.089) = 0.051$.

Reducing the high volume of benefit recipients has proved extremely difficult. One factor may be that replacement ratios at the bottom have not really diminished. The ratio between minimum benefit and legal minimum wage stood at 98.5 in 1983 and at 98.1 in 1997, and has barely fluctuated in the intervening years (Centraal Economisch Plan 1997, Bijlage A6). While the relative social minimum has declined substantially over time, there is no evidence that the work incentives for the unemployed at the minimum level have improved.

It is hard to say whether the other reforms (tighter eligibility rules, increased sanctions, curtailment of duration) have had much of an impact. For the Netherlands, effects have been established for specific elements, such as approaching the end of benefit entitlement (Lindeboom 1992) and sanctions have been applied to insufficient job finding efforts (Abbring 1997). Between 1987 and 1994, the number of sanctions increased fourfold, to 17 % of the inflow of unemployed; sanctions may have substantially influenced the probability of outflow to work, depending on gender, age and wage (Teulings, Van der Veen and Trommel 1997, p. 166).

The high incidence of disability that developed under the control of social partners is something of a puzzle. In terms of wage determination, there can be no doubt that the corporatist structure is conducive to wage restraint (see Teulings and Hartog 1998). Why was such restraint absent in the admission to social security? Even though individual industry unions could pass on the bill of generous provisions (as the premiums were set nationally, not by industry), the federations might have intervened. Confronted with massive restructuring and mounting unemployment, the generous disability insurance set up by the government was used as an attractive means to exit the labour force. In fact, it was a deliberate policy. But even today, in a different political climate, it has proven very difficult to obtain substantial reductions in the number of disability recipients. It is quite clear that there is not enough pressure on the monitoring and screening function of the administrative system. As a CTSV report (CTSV 2000) dramatically demonstrates, the medical inspection in connection with the application for disability benefit is a very lenient paper procedure (no medical checks, all information provided verbally by the applicant, evaluation by a single physician without second opinions, and physicians explicitly refusing to revise their opinions in a government initiated re-evaluation of disability recipients). The big question is why no one really presses for active screening of applicants. Perhaps the population of disability recipients has become so large as to constitute an electorate that is too large to risk offending.

Increasing labour market flexibility

The growth in the volume of employment (in person years) between 1983 and 1996 is almost fully due to 'flex-workers' and part-timers. In fact, from 1970–1996 the volume of full-time jobs was stable, at about 3.7 million. From 1970 to 1996, the number of part-time jobs increased from 600 000 to 1.8 million and the number of flexible jobs increased from 200 000 to 700 000. The term 'flex-worker' covers all workers who work on an on-call basis or who otherwise have flexible arrangements, workers hired through a temp work agency, and workers with a contract for less than one year. The latter are often on probation, to find out what their real qualities are. Workers on call and workers with unspecified hours make up some 40 % of flex-workers. Most of them are women. Not all of the work they do is at the lowest job level. Temporary substitutes make up 8 %, and temporary workers almost one quarter.⁸

The growth of employment, through temporary work agencies, from virtually nothing in the late 1960s to over 200 000 person-years in 1997 has created a large market for temp agencies, and has enabled some to grow into large agents on the European market (e.g. Randstad). These agencies often serve as intermediaries for the selection and hiring of permanent workers (who get through the probation period).

Unions have come to accept the role of temp agencies. Whereas they initially attempted to prevent temporary work as much as possible, they have now chosen to bargain for a collective agreement for workers employed through these agencies. New legislation, *Flexibiliteit en Zekerheid* (Flexibility and Security, January 1999), gives temp and flex workers more protection.⁹ Workers on call should be paid for at least three hours when called in. After 26 weeks of employment, the legal rules for a sequence of temporary employment contracts apply, which implies that the contract gives entitlement to a tenured position after three consecutive temporary contracts with the same employer. Collective agreements may set other rules, however. The maximum duration of six months for a temp work contract has been eliminated (*Sociale Nota 1998*, p. 117).

The market structure for agencies dealing with job placement and labour market mediation has changed quite drastically. Up until 1990, the Public Employment Service had a monopoly for job placement services and there were only a few permits for temp work agencies. The Public Employment Service was a purely government service. In 1991, with the new Law on the

⁸ All the data mentioned here are from the Department of Labour Memorandum (SZW 1997).

⁹ The Act on Flexibility and Security and the Act on Allocation of Employees by Intermediary Organisations (WAAD) are both nearly completely based on unanimous advice from the Foundation of Labour in a government memorandum on these issues.

Employment Service (*Wet op de Arbeidsvoorziening*), the service became an 'Independent Administrative Agency', i.e., an agency with a specific administrative task; a public body, but not under the control of the Minister. The composition of the Central Board became tripartite, as did that of the 28 Regional Boards. The Central Board is authorised to distribute licences for Temp Work Agencies and for Job Placement Agencies, which has led to abundant growth in their numbers; in 1994 there were 887 of the former and 908 of the latter (OSA 1996, p. 135). Not all license holders are active, however. Moreover, under the old 'monopoly', private agencies were active anyway (De Koning et al. 1995, p. 121). As of July 1998, temporary work agencies have no longer needed a license. The market for job placement and mediation has changed dramatically, from a government monopoly to a multi-player market with many public-private partnerships and much cooperation (Bergman 1997).

The Dutch lay-off regulation is not particularly restrictive in comparison with other European countries (OSA 1996, p. 107). However, the decision as regards individual lay-off is exceptional by international standards. The route through the Regional Employment Agency involves the application of 'preventive evaluation', i.e., the director tests whether the dismissal can be considered reasonable. If permission is granted, there is no compensation for damages. The procedure has recently been shortened, as appeal is not possible. The other route is through the court. A fired worker can make a claim in court and, if granted, the judge sets compensation. The court route is faster. There has been somewhat of a shift towards this route, particularly when employers have feared that the case for dismissal may not be totally convincing to the director of the Employment Agency (OSA 1996, p. 106).

Remarkably, although social partners were expelled from the social security administration, the reform of the Employment Service in 1991 brought them in, as partners in the tripartite Central and Regional Boards (employers, unions, government). The reorganisation implied a move towards an explicitly corporatist structure that had long been used in the Netherlands. De Koning et al. (1995) report no evidence of effects of the reforms on the Beveridge (or UV) curve. The figure in Nickell and Van Ours (2000) shows an inward 'shift' after 1990 and an outward 'shift' after 1993, as legs of the counter-clockwise loops. Poor performance of the employment service may have been balanced by the deregulation of the market for mediation services. New reforms, focussing the Employment Service more on job seekers with low probability of employment, and on vacancies that are hard to fill, were implemented in 1997.

The composition of the labour force by industrial sector and by type of contract drastically changed between 1987 and 1995 (Table 1). For men, the

Table 1. Changes in number of jobs (thousands) by contract and industry, 1987–1995

Industry	Men				Women			
	Full	Part	Flex	Total	Full	Part	Flex	Total
Agriculture	3	2	7	12	1	3	9	12
Mining	0			-1	0			0
Manufacturing	-73	19	-2	-47	1	18	8	27
Energy and water	-5	0	-1	-5	0	2		1
Construction	-4	4	6	7	0	-1	3	2
Trade	64	24	20	107	22	54	27	103
Hotels, restaurants	8	17	12	38	2	32	19	52
Transport, communication	-3	9	6	12	8	15	7	30
Finance	3	2	-1	3	-2	10	1	8
Business Service	82	14	33	129	32	52	46	131
Public administration	-80	10	4	-65	1	22	2	25
Education	-7	9	-5	-4	-9	27	0	17
Health and welfare	-4	23	5	24	-57	148	40	132
Culture	13	9	-6	16	2	19	11	33
Household service	0	0	0	0		17		13
Total	-6	143	77	215	0	417	170	587

Source: CBS, *Arbeidsrekening* (Labour Accounts).

expansion was in business services and trade; while part-time and flexible work substantially increased, the majority of the increase was in full-time jobs. There was a large decline in full-time manufacturing jobs and also in public administration. For women, there was no sector in decline. There was only a decline in full-time jobs (modest in finance and education but substantial in health and welfare). For women, the biggest expansion took place in health and welfare, business services, trade and in the hotel-restaurant sector. Part-time employment growth dominated in health and welfare, in the hotel-restaurant sector and in trade. In business services, the growth in women's employment was more even.

The table illustrates a key feature of the Dutch development. Traditional manufacturing industries laid off enormous numbers of labourers, mostly at the detriment of older, low-educated men with a full-time job. Many of them ended up in long-term unemployment, early retirement or with disability. New jobs, in expanding sectors, heavily dominated by services, were taken up by highly educated entrants to the labour market, i.e., school-leavers and women. Many women want to work part-time and, thus, accepted flexible contracts. This greatly facilitated the transition to a service economy. The transition was accompanied by worksharing and flexibilisation, as redistribution of hours, worked across the labour force, led to a loss in the share of regular full-time jobs and an increase in the

share of part-time and flexible contracts (see Table 2). The volume of temp work greatly expanded. The organisation of labour market mediation and job placement underwent a major overhaul after the abolishment of the government monopoly, and new partnerships of public and private organisations emerged.

Table 2. Shifts in employment composition by type of contract

	Men				Women			
	Full-time	Part-time	Flexible	Total	Full-time	Part-time	Flexible	Total
Annual hours								
1987	1746	805	772	1613	1750	860	688	1185
1995	1740	861	819	1569	1741	900	684	1115
Annual overtime hours								
1987	32	9	9	29	4	9	3	6
1995	38	6	16	33	6	7	7	6
Employment volume in person years, fraction of total								
1987	0.662	0.029	0.019	0.710	0.166	0.104	0.020	0.290
1995	0.603	0.026	0.026	0.672	0.151	0.145	0.032	0.328

Source: CBS, Arbeidsrekeningen (Labour Accounts).

3 An assessment

In almost every year after 1984, employment grew by at least 70 thousand years (1993 and 1994 are the only big exceptions, with declines of 6 and 18 thousand years). From 1984 to 1996, employment grew by 834 years, that is 18 %. In terms of persons, employment grew by 1 291 thousand, i.e., by 23 %. Unemployment fell from 9.7 % to 7.6 %. Total private consumption increased by 37 % in real terms (in total, not per capita; population increased by 8 %).

Is this a success story? And if so, can we isolate the contribution of each element of the program as being the reason for this success or is the secret in the mix? As Freeman (1998) notes: "Maybe the Dutch have put the pieces together in the right way – by combining work-sharing with substantial wage moderation and various welfare state reforms."

Wage restraint has contributed its share, by reducing the cost of labour. Wage restraint has also eased liquidity constraints on investment. The share of capital in national income increased from 10.7 % to 16.9 %; the profit share from 5.7 % to 10.2 %. But investment growth has been highly irregular and only reached substantial levels in a few years: 1985–1986, 1989 and 1995–1996. Foreign demand helped; world trade increased

strongly throughout the entire period, with an acceleration after the early 90s. The acceleration came as a strong recovery after a European recession brought about by the combination of both tight fiscal policy and tight monetary policy, to meet the standards set by the Maastricht treaty, especially in Germany and France (see the evidence in De Grauwe 1998). Export growth was quite strong in most years. The shift in the production structure helped, i.e., away from manufacturing and from the exposed sector to the sheltered sector, i.e., to labour intensive services. Many pieces did indeed fit together in the right way. The impact of wage restraint at the household level was mitigated by the increased participation of women. The transition to a service economy, where flexible employment is more important than in manufacturing (as production for stocks is not feasible) was facilitated by women working part-time and students and others taking up flexible hours contracts.

If we look at the perspective provided by the entire post-war period, there are several indications that it is the interval 1973–1983 that is the exception, not the post-1983 period. In that sense, the ‘miracle’ of the recovery is not a miracle at all, rather it is a restoration of the earlier position. The ‘restoration’ took place in wage determination, in social security and in productivity. Moderate wage development is a Dutch post-war tradition that was disrupted in the late sixties and early seventies, after long periods of high excess demand in the labour market. The conclusion in Nickell and van Ours (2000), referred to above, is in the same vein: improved coordination in wage bargaining can explain more than half of the reduction in the equilibrium unemployment rate. The welfare state was strongly expanded during the seventies, and, in the early eighties, absorbed many into benefit recipiency. Restoration of benefit levels started in the early eighties, and by the mid-nineties they were back at the level of 1970. GDP growth resumed its old course: “The position of the Netherlands in terms of GDP per capita relative to North-western Europe is now more or less the same as it used to be in the 1960s and 1970s” (Van Ark, De Haan and De Jong 1994, p. 22).

Wage restraint can be related to the corporatist coordination at the top level of the socio-economic organisation, but its precise contribution is hard to determine. The CPB study discussed above (CPB 1991) allocates three quarters of the reduction in labour’s income share to the effect of the high unemployment rate, but the reaction coefficient of wages to excess supply already includes, of course, an institutional effect of the Dutch bargaining tradition. The impact of institutions on labour market outcomes is much debated (see Teulings and Hartog 1998), but a recent OECD study certainly supports the beneficial effects of labour market coordination

(Elmehkov et al. 1998). Introducing increased labour market flexibility may also be facilitated by corporatist coordination. There is reason to doubt whether work sharing has contributed to a better economic performance. But if there has been any virtue in it, it is also related to the flexible implementation, the combination of reduced worker hours with increased operating hours, and management's say in the timing of work and leisure.

Hours worked per head of the population declined steadily during the 1960s. The decline accelerated during the 1970s and became quite steep in the early 1980s. But since 1987 working hours have increased again, and the distance from the Northwest Europe average declined (Van Ark 1998). The drastic changes in the level and composition of working hours have had their impact on output. Calculations by Van Ark (1998) show that the reduction in hours worked per employed person between 1982 and 1996 reduced GDP per capita by almost 20 %. But the increase in the participation rate raised it by just under 15 %. In the end, wage restraint and reduced working hours per worker outweighed the effect of increased participation; consumption lagged behind the average for the US and Europe by approximately 10 % between 1979 and 1996 (Salverda 1998).

4 Some problems that remain

Low participation rate

One concern of policy makers is the low labour force participation rate. Traditionally, the participation rate of married women has been very low in the Netherlands. There has been a strong catching up, even though most of this participation concerns part-time work. Most part-timers express satisfaction with their working hours, however. This major increase of female labour supply is, in itself, a strong stimulus to growth and employment, as a structural shift from the household sector to the apparently more productive market sector.

The real problem is the persistently high rate of subsidised inactivity, i.e., receiving benefit of one sort or another without contributing to output. The problem has even led to the definition of a criterion variable, the i/a ratio (inactive/active), i.e., the number of benefit recipient years divided by the labour force, in full-time equivalents (employees and self-employed). In 1983, the i/a ratio (multiplied by 100) was 81.3. The next year it reached a maximum of 83.4 and then slowly declined to a value of 80.3 in 1996 (CPB MEV 1998, Bijlage A4). A large component of inactivity is retirement. The national old-age pension operates as a pay-as-you-go system and the

supplementary pension plans are capital-based systems. Hence, pensions are only re-distributive between individuals to the extent that the state pension is re-distributive (it is modestly pro-poor, with equal benefits for all and contributions related to earnings, but with an upper limit on annual contributions). If we restrict the i/a ratio to individuals below 65 (the state pension entitlement age), it is cut in half. It was 43.5 in 1985 and 39.7 in 1996. An i/a ratio greater than zero has strong disincentive effects, but this depends very much on the precise structure of the burden of premiums on earnings, and on the distribution of benefit entitlement. The below-65 ratio is substantially lower than in Belgium, slightly lower than in Denmark, about equal to Germany, higher than France and the UK and substantially higher than in the US and Japan (CPB 1997, p. 79).

Increasing required work effort and stress

In the public debate, there is a growing concern over mounting pressure at work. Reduced working hours without full compensation by additional workers, not to mention work force reductions have increased the required work effort of employees. Survey evidence presented by De Beer (1998) over a longer period of time confirms this. Although the effect is certainly plausible and can be backed up by anecdotal evidence, the obvious drawback of the evidence is its subjective character: for one reason or another, employees perceive the required speed of work as higher than it used to be. Additional evidence on the basis of more objective measuring criteria would be most welcome. For example, for education, it has been documented that required actual teaching hours and class size per teacher in secondary education in the Netherlands are the highest in Europe (OECD, quoted in Webbink 1998).

For the public sector, there are signs that the increased level of required work effort is felt as a real and serious problem. In education, health care and other public services, discontent on working conditions is mounting. There have been several strikes and related actions (such as working Sunday shifts on a weekday) in health care, day-care centres, education and welfare services, which all present the same claims, i.e.: higher wages (to make up for the large loss relative to the private sector) and reduction of the required work effort through an increase of the staffing levels.¹⁰ The decline in relative wages in the public sector has been dramatic and has, in the past, been accepted with reluctance. Indeed, union membership in the public sector fell by 12 %, from 704 100 in 1979 to 619 400 in 1987

¹⁰ See for example the overview in Trouw, June 20, 1998, p 6.

(although it later recovered to 629 800 in 1989). The public sector is increasingly confronted with negative consequences of low relative pay and cuts in staffing levels. Recruitment becomes problematic. It is also quite conceivable that this has a negative impact on the quality of civil servants, but this is notoriously difficult to measure.¹¹

5 Conclusion: an incomplete restructuring

This paper has focussed on developments between the early eighties and the mid-nineties. In the second half of the nineties, the basic picture had not changed. By the end of the century, unemployment stood at 4 % and the i/a ratio (benefit recipients over employed) had further declined to 67 %, even though the number of workers on disability continued to grow. The share of the public sector in GDP had stabilised at around 41 % and the public debt further declined to 64 % of GDP. The public sector had its budget balanced. Labour share in national income was stable at around 82 %. Unit wage cost in manufacturing continued to decline relative to foreign competitors.

The Dutch example surely shows that corporatist institutions are not synonymous with suffocating rigidity. Instead, they appear to allow for much flexibility. International comparative analyses confirm this (Teulings and Hartog 1998; Elmeskov et al. 1998). But some puzzles certainly remain. In terms of wage determination, the joint coordination by social partners is widely acclaimed as a success. In social insurance, social partners were blamed for allowing far too easy access to benefits, and a key goal of the reorganisation in 1997 was to kick them out. In reorganising the Employment Service in the early 90s, they were considered to be indispensable to improve labour market matching processes and labour market reintegration of benefit recipients, so they were invited to participate in governance.

The process of institutional restructuring has not ended, and probably never will. Current policies aim at integrating social insurance (disability, unemployment, welfare) and the employment service, in Centres for Income and Work. The debate is about the borderline between the public and the private sector (are requests for disability and unemployment benefits evaluated by a private or a public body?) and about the role of social partners (will they have a seat on the boards of the Centres?). Large shifts have already been made from the public to the private domain.

¹¹ In Hartog and Oosterbeek (1993) we found that public sector employees in 1983 were not underpaid, if unobserved heterogeneity is taken into account. However, the switching regression model we used is known to be very sensitive to specification.

Sickness compensation was changed from a public insurance to a private (employer) liability. Administration of social insurance may move from being a purely public activity to being a purely private activity.

Questions on optimal organisation essentially revolve around incentives. In that sense, the choice between private and public organisations is secondary. The experience with 'privatising' sickness compensation suggests that a proper incentive structure can have powerful effects. However, public organisations can also be influenced by a proper set of incentives. And privatising the administration of social insurances will have no lasting effects if competition among the organisations does not flourish.

References

- Aarts, L. J. M. – de Jong, Ph. R. (1992): Het bedrijf van de verzorgingsstaat: over taken en organisatiekarakteristieken van een doelmatig stelsel van sociale zekerheid. De toekomst van de welvaartsstaat, Pre-adviezen Koninklijke Vereniging voor de Staatshuishoudkunde, Leiden: Stenfert Kroese.
- Abbring, J. (1997): Essay in labour economics, Ph.D.thesis, Universiteit van Amsterdam, Tinbergen Institute Research Series, no 172.
- Bergman, F. (1997): Doelgroepen verworden tot markt, in: Hartog, J. – Theeuwes, J. (eds): Creëren van werk aan de onderkant, Den Haag: Welboom.
- CBS (1993): Sociaal-economische maandstatistiek, 10 June 1993.
- CBS (1994): Sociaal-economische maandstatistiek, 11 December 1994.
- CBS: Statistisch Zakboek, several years.
- CPB (1991): De werkgelegenheid in de jaren tachtig, CPB Werkdocument no 41, Central Plan Bureau, Den Haag: SDU.
- CPB (1997): Centraal Economisch Plan 1997, Centraal Plan Bureau, Den Haag: SDU.
- CPB (1997): Economische verkenning voor de volgende kabinetperiode, Centraal Plan Bureau, Den Haag: SDU.
- CPB (1998): Macro Economische Verkenning 1998, Centraal Plan Bureau, Den Haag: SDU.
- CPB (1998): Centraal Economisch Plan 1998, Centraal Plan Bureau, Den Haag: SDU.
- CTSV: Kroniek van de sociale verzekeringen, several years, Zoetermeer: College van Toezicht Sociale Verzekeringen.
- CTSV (2000): In de spreekkamer van de verzekeringsarts, Zoetermeer: College van Toezicht Sociale Verzekeringen.
- De Beer, P. (1998): De waarde van werk in de postindustriële samenleving, FDDT. dissertation, in preparation.
- De Grauwé, P. (1998): Euro and work, Contribution to the AIAS workshop, Universiteit van Amsterdam, July 1.
- De Koning, J. et al. (1995): Arbeidsvoorziening in perspectief, Evaluatie Arbeidsvoorzieningswet 1991–1994, Deelonderzoek B: resultaten en kosten, The Hague: VUGA.
- Elmeskov, J. – Martin, J. P. – Scarpetta, S. (1998): Key lessons for labour market reforms: evidence from OECD countries' experiences, paper presented at

- the workshop 'Unemployment in Europe', ZEW Mannheim, October 1998.
- Freeman, R.* (1998): War of the models: which labour market institutions for the 21st century?, *Labour Economics*, 5 (1), 1–24.
- Freeman, R. – Hartog, J. – Teulings, C.* (1995): Pulling the plug? An analysis of the system of mandatory extension in the Dutch system of labour relations, Report prepared for OSA, The Hague: SDU.
- Hartog, J.* (1999): So, what's so special about the Dutch model? *Country Employment Reviews*, The Netherlands, Geneva: ILO.
- Hartog, J. – Leuven, E. – Teulings, C.* (2001): Wages and the bargaining regime in a corporatist setting, *European Journal of Political Economy*, forthcoming.
- Hartog, J. – Oosterbeek, H.* (1993): Public and private sector wages in the Netherlands, *European Economic Review*, 37, 97–114.
- Hartog, J. – Oosterbeek, H. – Teulings, C.* (1993): Age, wage and education in the Netherlands, in: Johnson, P. – Zimmermann, K. (eds.) *Labour markets in an ageing Europe*, Cambridge: Cambridge University Press.
- Lindeboom, M.* (1992): Empirical duration models for the labour market, Ph.D. thesis Leiden, Tinbergen Institute Research Series no 30.
- Nickell, S. – van Ours, J.* (2000): The Netherlands and the United Kingdom: a European unemployment miracle?, *Economic Policy*, 30, 137–180.
- OECD* (1993): *Employment Outlook*, July, OECD: Paris.
- OSA* (1996): Soepel geregeld, OSA rapport no 24, Organisatie voor Strategisch Arbeidsmarktonderzoek, Den Haag: SDU.
- Salverda, W.* (1997): Loon en werk aan de onderkant: de rol van minimumloon en loonongelijkheid, paper presented at SISWO workshop Rotterdam, September.
- Salverda, W.* (1998): Is there more to the 'Dutch miracle' than a lot of part-time jobs?, paper presented to the Australian Fifth National Unemployment Conference.
- SZW* (1997): Flexibele arbeid in perspectief, Maandelijkse analyse, Ministerie van Sociale Zaken en Werkgelegenheid, Directie A&O, September 1997.
- SZW*: Sociale Nota, Ministerie van Sociale Zaken en Werkgelegenheid, several years.
- Teulings, C. – Hartog, J.* (1998): Corporatism or competition? Labour contracts, institutions and wage structure in international comparison, Cambridge: Cambridge University Press.
- Teulings, C. – van der Veen, R. – Trommel, W.* (1997): Dilemma's van sociale zekerheid, Den Haag: VUGA.
- Van Ark, B.* (1998): The productivity slowdown of the Dutch economy, 1960–2010, workshop presentation 'Recent trends in the Dutch economy', Utrecht, June 2.
- Van Ark, B. – de Haan J. – de Jong, H.* (1994): Characteristics of economic growth in the Netherlands during the post-war period, London: CEPR Discussion Paper 932; also published in Crafts, N. – Toniolo, G. eds. (1996): *Economic growth in Europe since 1945*, Cambridge: Cambridge University Press.
- Visser, J.* (1990): In search of inclusive unionism, *Bulletin of Comparative Labour Relations*, 18.
- Visser, J. – Hemerijck, A.* (1997): 'A Dutch miracle', Amsterdam: Amsterdam University Press .
- Webbink, D.* (1998): Studying in higher education: Decisions and outcomes, Ph.D. thesis, Universiteit van Amsterdam.

20 YEARS OF LABOUR MARKET POLICIES IN DENMARK

Niels Westergaard-
Nielsen*

1	Introduction	189
2	The overall development	190
3	Labour market policies 1980–1999	193
4	Measuring individual effects of activation	204
5	An alternative effect study	206
6	Conclusion	209

1 Introduction

Now and then, the economic political debate in Europe focuses on some countries, which have had more success with their labour market policy than others. For a few years, Denmark has been one of the countries in focus because it has been able to show dramatic reductions in the unemployment figures. Public opinion, assisted by the government, quickly links the positive development to single causes in the labour market policies. Often the causation is not as straightforward as policy makers want to think.

In this paper, I shall describe and evaluate the development of labour market policies in Denmark from 1980 to 1999, with the emphasis laid on the last years. The objective is to see the effect of each of these policies on the overall unemployment figures and the related employment figures.

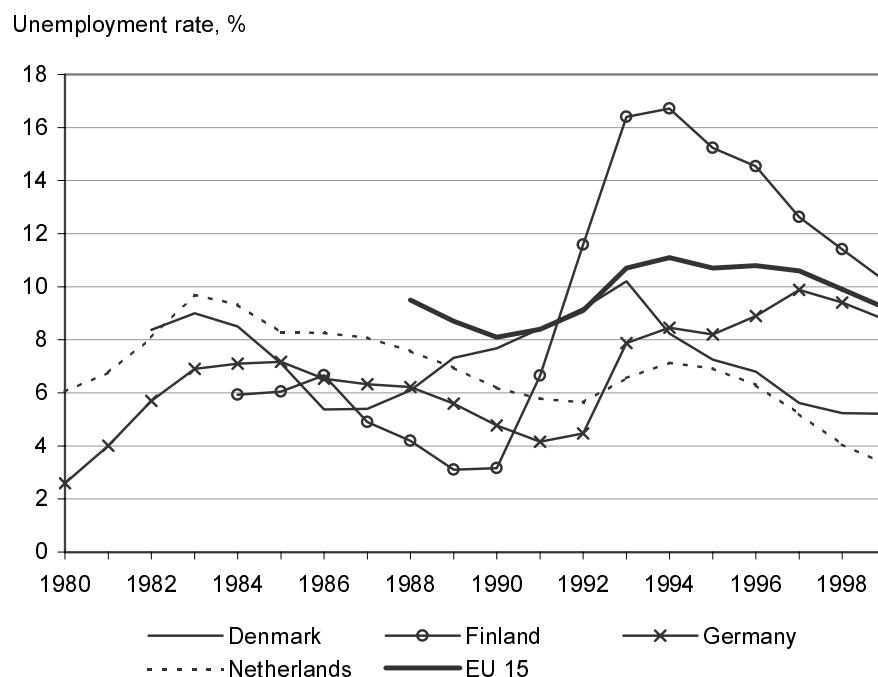
First, I shall present a brief overview of the development in unemployment, relative wages, employment and wage setting, to give the reader some background on the labour market policies in Denmark. Second, I shall survey the actual labour market policies used in recent years and the reform in 1994 in particular. Finally, I shall try to evaluate the labour market policies by looking at the effects.

* I would like to thank the participants at the seminar in Helsinki for great comments, in particular Seija Ilmakunnas and Erkki Koskela. Financial support comes from The Research Foundation of University of Aarhus.

2 The overall development

In recent years, Denmark has experienced a significant decline in unemployment. Unemployment culminated in 1993 and since then has fallen rapidly, as shown in Figure 1. It is worth remarking that the rise in the late 1980s was asynchronous with the development in Germany until reunification. After reunification, German unemployment has been highly influenced by the East German unemployment numbers, so it is hard to say if the Danish development is still asynchronous after 1993. The graph for the Netherlands probably gives a better idea and indicates that Danish unemployment has now become synchronous with Northern European development. However, the graphs show relatively clearly that Denmark has had its own cycle in the 1980s and that the positive development after 1993 is partly caused by this regime shift together with the better market conditions in Northern Europe. The main cause for the special Danish cycles in the late 80s was probably the tight fiscal policy that followed a premature upswing in the Danish Economy in 1985–87, see Andersen et al. (2001).

Figure 1. Standardised unemployment rates, selected OECD countries and EU15



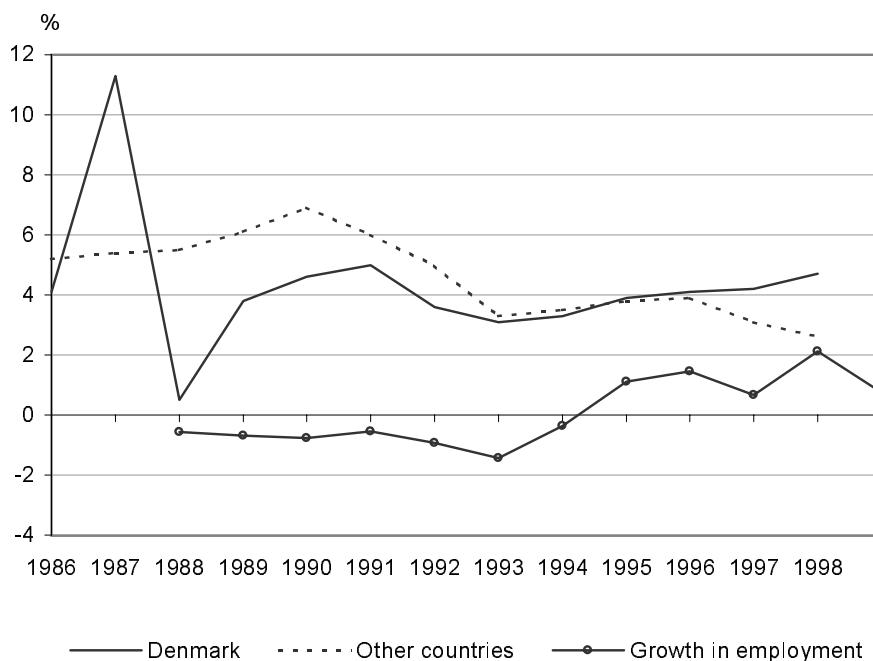
Source: OECD databank.

The special Danish upswing in the mid-1980s and the subsequent significant rise in unemployment had a significant impact on wage setting during the upswing and in the period afterwards. Figure 2 shows that the growth in employment comes after a period when the Danish wage growth has been below the wage growth of its competitors for a number of years. The most probable explanation is that competitiveness was restored around 1994 after the significant increase in Danish wage costs in 1987, where Danish wages were allowed to rise at an unprecedented speed.

Figure 2 also shows that the worsening of the relative cost situation in 1997 and 1998 may have had an effect on employment in 1999.

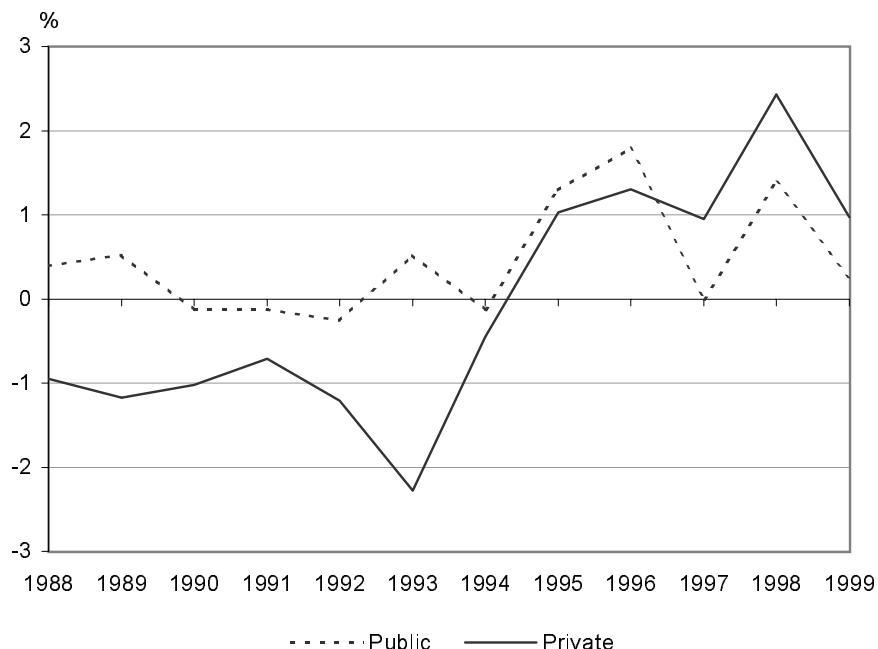
Another aspect of the net job creation is, of course, where exactly the jobs have been created. Figure 3 shows that the upswing in employment in 1995 was led by a simultaneous growth in the public and private sectors. The growth continued in 1996, slowed down in 1997 and sped up again in 1998. The remarkable point is that growth in the private sector was negative until 1994 and that the public sector demand could not match the supply of labour. The result was the modest growth in wage costs shown in Figure 2 and the significant increase in unemployment as seen in Figure 1.

Figure 2. Growth in wage costs in Denmark and in competing countries, together with job growth



Source: The Danish Employers' Confederation (1999).

Figure 3. Employment growth in the private and public sectors



Source: STO, various issues.

This development coincided with a gradual decentralisation of wage bargaining. The first round of decentralised negotiations took place in 1987, whereas earlier biannual negotiations used to be central. The resulting wage growth was unexpectedly high, and during the subsequent bargaining, employers coordinated their offers closely. The main coordination was in the fact that the Danish Employers' Confederation (DA) set a maximum wage growth allowed for their members. The unions, on the other hand, used this as a minimum target for their wage claims.

The wage coordination policy was finally given up in 1993 and since then, negotiations have become more and more decentralised. Only questions on pension and work hours are now negotiated at the central level. It is probably too early to judge the effects on wage level and dispersion. However, one should expect that the decentralised procedure means more dispersed wages across and within firms (Calmfors 2001). So far, however, there is little empirical evidence for such a development.

3 Labour market policies 1980–1999

Since unemployment became a problem in the Danish economic policy in the 1970s, various policies have been tried to weaken the adverse effects on individuals and society. For a long time, the main emphasis was to prevent direct loss of income, to maintain the ability to work and to prevent psychological problems for those hit by severe unemployment. Most labour market policies, therefore, had income maintenance as the main focus. Some of these policies have had the clear objective of diminishing the labour force. For a long time, too, the main policy instrument was to prolong the maximum period of unemployment benefit so that as few people as possible would exhaust their benefits. That policy was given up with the reforms that took place in and after 1993. These and similar measures are called "passive measures". Other policies are devoted to getting people back to work through training and jobs. These are usually called "active labour market policies".

Passive measures

The passive policies include UI benefits, post employment pay (efterløn), transition pay and leave schemes.

UI benefits

In Denmark, unemployment insurance is organised on a voluntary basis as in Finland, Sweden and Belgium with common offspring in the guild system and the German UI funds (Neumann et al. 1991). In Denmark, you can become member of a UI insurance fund when you are between 18 and 65 years of age and have residence in Denmark. In order to get UI benefits, you must have been a member for more than 1 year, unless you have graduated from an education/vocational training lasting more than 1.5 years, and you have worked for more than 52 weeks within the last 3 years. Only work without subsidy and work as a member count in this respect. Furthermore, you have to be registered at the Employment Service and have to be available for work.

The benefit is 90 % of the previous hourly wage up to a maximum of DKK 2 940 per week, which is DKK 79.50 per hour in 2001. This means that people earning less than DKK 88.33 per hour have a replacement ratio of 90 % and people earning more have a lower replacement ratio. The reference wage is calculated as the mean wage over the last 3 months. If the unemployment in one week is less than a full working week, i.e. below 37 hours, benefits are reduced to 82 % of the normal benefits. The same rule applies to eligible members who come directly from education.

Benefits are taxable, as is most other income support in Denmark, though the tax rate of benefits is slightly lower because a gross wage tax is not paid.

The structure of the Danish benefit system differs from the systems in neighbouring countries with respect to taxation, compensation structure and the length of the benefit period. If you compare the systems in the Nordic countries, Germany and the Netherlands after having adjusted for the differences in taxation, a number of differences appear. First, the Danish compensation structure has the highest maximum replacement ratio in the world with 90 % of compensation (UI benefits divided by the wage) for the lowest wage levels. The compensation starts at 80 % in Sweden and at 75 % in Netherlands, but is significantly lower in Norway and lowest in Germany¹. For higher levels of wages, the compensation is highest in the Netherlands and Germany. Another difference is the duration dimension in the benefit structure. The common pattern is that benefits are cut in size after a certain period of unemployment (usually 1 to 3 years). In Germany and the Netherlands, they are cut relatively early, depending on age and total time on the labour market, while they are not reduced in Denmark.

The idea behind the high replacement ratio is, of course, to prevent a possible loss in welfare, if the person is hit by unemployment. This creates, however, an incentive problem because the high replacement ratio makes the income from finding a job little different from the income when unemployed. If the unemployed person is eligible to other transfer payments, this problem is aggravated. It has been demonstrated that 23 % of all employed women in Denmark and 12 % of all employed men earn less than DKK 500 extra per month by working compared to receiving benefits.² These incentive problems are clearly more serious in Denmark than in other countries because benefits for low-wage earners are the highest and benefits are not reduced over time as in most other countries.

Similarly, on the employers' side there is only a small incentive to limit the use of unemployment as a means to adjust to unfortunate business conditions, even if these are only temporary. An employer-paid first day of each unemployment spell was introduced in 1988. This was later extended to two days.³

A membership fee finances only a small part of the Danish unemployment benefits and general tax money finances the rest. Thus, the latter covers all marginal expenses and is the main resource keeping the system afloat.

¹ See Ministerie van Sociale Zaken en Werkgelegenheid (1995) and Hansen (1998).

² See Smith (1998) and Pedersen and Smith (2001).

³ See Jensen and Westergaard-Nielsen (1990).

Other passive schemes

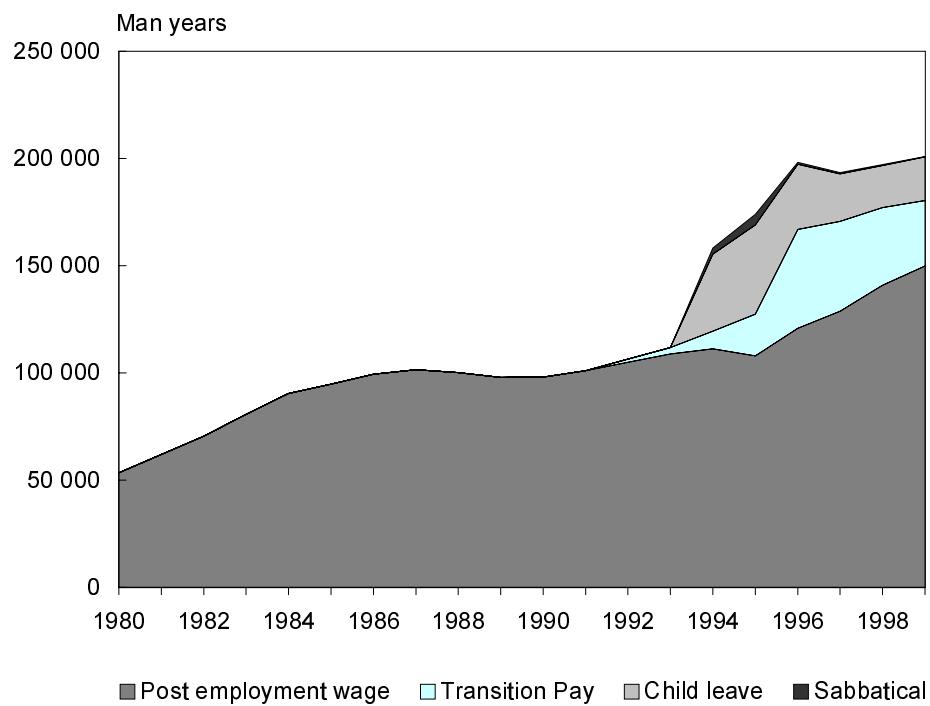
The passive measures consist of schemes for childcare leave, sabbatical leave, post employment wage (*efterløn*) and transition pay (*overgangsydelse*). Of these, the main one is the post employment wage introduced in 1979. Here, insured members of the UI funds, who are between 60 and 67 years of age, can obtain early retirement. The first year, 48 000 went into this programme. After the start, more and more of each age cohort above 60 have taken a post employment wage with the result that in 1999, 149 000 persons were on the scheme. From the age of 62, more than 50 % of the formerly working cohorts are now on a post employment wage. In 1999, the programme was supplemented by a substantial premium if the participation in the post employment pay program was postponed until after the age of 62. At the same time, the required membership duration was extended.

Transition pay was an offer to the unemployed between 50 and 60 years of age. The offer was that they could get 82 % of the highest UI benefit if they left the labour force for good. This programme was in effect from 1992 to 1995 and was chosen by about 44 000 persons. These two programmes have caused a substantial reduction in the retirement age.

The leave scheme programme, introduced in 1992 and reinforced in 1994, made it possible to take childcare leave. The leave period is 8 to 52 weeks. Eligible for childcare leave are all parents with children below the age of 9. Unemployed and welfare recipients are also eligible. The benefit is 60 % of the highest UI pay. To a major degree, childcare leave is used to extend maternity leave, and this has been used to levy the pressure on many municipal day care programmes. Finally, the sabbatical leave programme should also be mentioned. It was in effect from 1994 to 1999 and made it possible for people to take leave for purely sabbatical reasons. The rules were similar to the other programmes with two exceptions: the employer should give his consent and should employ a long-term unemployed person as a substitute.

The rationale behind the leave schemes was undoubtedly to create temporary jobs for the unemployed, making it possible for more unemployed persons to get a foothold in the labour market, but the programme was not limited to the employed. Indeed, a large fraction of the leave takers were unemployed. In other words, the unemployed were provided with an alternative to getting a job. Thus, the introduction of the new schemes can be interpreted as a rise in the reservation wage for the unemployed and for those considering taking leave from a job. Furthermore, the introduction of the programmes coincided with a growing demand for labour. As a result, a real shortage was created in

Figure 4. The passive labour market policies 1980–1999



Source: STO, various issues.

some professions (nurses), where the loss due to the lower replacement value was limited. Finally, the de facto extension of maternity leave was considered by some to be harmful to the careers of women. The total picture of these passive schemes is illustrated in Figure 4.

As is clearly visible, the reform in 1994 adds some 40 000–50 000 people to the number of people on passive schemes. Some of these had actually come from active measures (see Figure 5), and some from unemployment (see Figures 6 and 7). Furthermore, it is remarkable that the number on a post employment wage does not increase in 1993, 1994 and 1995 but increases after 1995.

Active labour market policies⁴

Until 1994, active labour market policies consisted of a job offer and a training programme, an educational subsidy system, AMU courses and a programme for subsidies to the newly self-employed.

⁴ Rules and amounts refer to 2001, if not otherwise stated. Source: www.danmark.dk.

The job offer scheme offered jobs lasting 7–9 months to long-term unemployed persons with a total unemployment duration of more than 2 years. These jobs counted against eligibility to another period on unemployment benefit. The maximum duration of benefits was 9 years. The other main element was a subsidy scheme for education. Participation in both schemes was paid with unemployment benefit. The scheme to promote self-employment paid $\frac{1}{2}$ of maximum UI benefits for a 3-year period. Finally, there were AMU courses, where unemployed and employed persons could get training in specific skills, i.e., operating specific equipment.

After the "Labour Market Reform of 1994" and changes in the subsequent years, unemployed members of an unemployment insurance fund have had the right and have been obliged to take part in some type of activation after 12 months of unemployment measured over a 24-month period.⁵ The first period of 12 months is free of other obligations except that of looking for a job. The activation period can last 3 years. In this period, the unemployed person has to be kept activated more than 75 % of the time. The unemployed person will receive unemployment benefit throughout the 4 years, though the wage under job training may be larger depending on the type of job.

As a result of the 1994 reform, none of the subsidised job-training periods under the labour market programmes counts against eligibility to further unemployment benefits, whereas the previous rules would grant eligibility against a new period of 9.4 years of benefits.

The main activation measures are job training and education. The purpose is to give the unemployed an opportunity to get back into work through a job-training period with a private or public employer. A private employer receives a subsidy of DKK 52.32 per hour for a 6-month period and has to pay a wage usual for that particular job, whereas the public sector pays a fixed wage of DKK 91.88 per hour. The proportion division between private and public job training has been around 2 to 8 as long as the programmes have existed. Furthermore, individual job training can be arranged for people who have difficulties getting a job because of long-term unemployment or a poor educational background. In addition, activation can occur in so-called pool jobs (puljejob) in the public sector. These jobs can only be created within areas of the public sector where the public service may be improved without crowding out ordinary jobs.

⁵ The unemployment period prior to activation is gradually reduced from two years to one year over the next couple of years as a result of a change in 1999.

Education is another type of activation. Education can be received at ordinary educational institutions or as courses designed for the unemployed. Ordinary education has to be on a list issued by the Ministry of Labour. Unemployed persons enrolled in education can obtain unemployment benefits for a period of up to 5 years. Ordinary types of education with benefits have become very popular in recent years, so 4 in 5 under the education programme choose ordinary education.

The other big programme providing benefits for education was the leave scheme for education. This was in effect from 1992 until the end of 2000. The leave scheme for education gave paid leave from a job, provided that consent was given by the employer. Even unemployed persons could get leave for education. Benefits were full UI benefits and the choice of education type was to be picked from a list. The number and variety of types of education started out with few constraints, but became more and more limited over time until the programme was abandoned at the end of 2000.

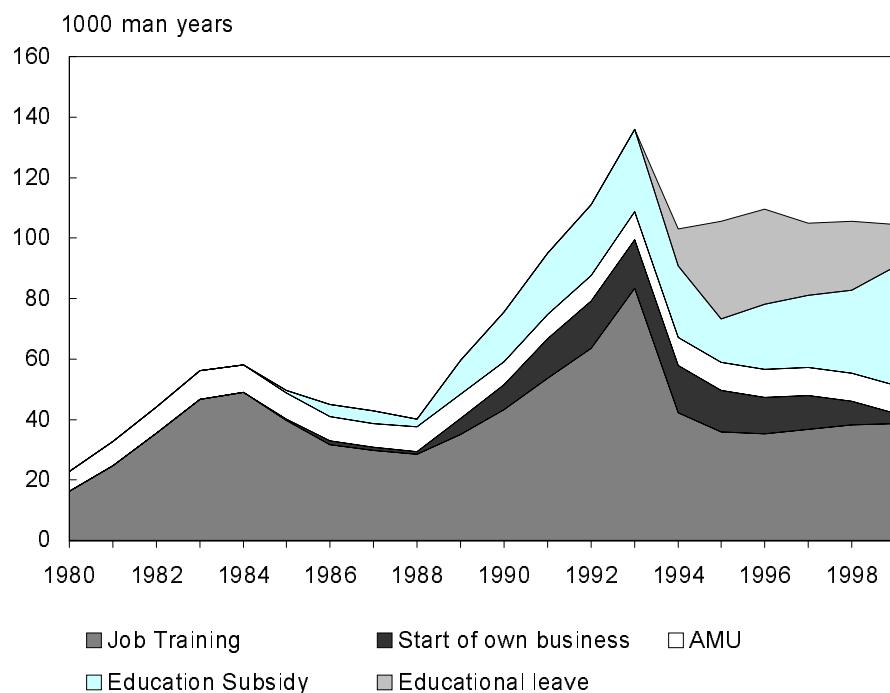
Finally, it should be mentioned that a few other programmes were introduced, which never really attracted large numbers of people, i.e., job rotation and home service. Job rotation (1992) gave support to education and training schemes for employed persons, provided an unemployed person was employed as a substitute. The improved business cycles probably worked as a severe tranquilliser on this programme. Home service is an arrangement where certified firms can get state subsidies to employ people to do household services. The subsidy makes these firms able to compete with black market activities.

A special youth programme was introduced in 1996, which covered youth below the age of 25. The first period with normal UI benefit is only 6 months.⁶ After that, the young person has the right and is obliged to receive education lasting at least 18 months, if he has no prior education. If the unemployed person has vocational training, the obligation is to receive job training. The benefit is, for both groups, 50 % of UI benefit. Non-compliance means a complete stop to all benefits.

Figure 5 shows the development of the different activation programmes over time. It clearly shows that different activation programmes have been competing with each other. This began in 1994, when a relatively large fraction of those on the short-term job offer scheme switched to the new education programmes. First, they transferred to the leave schemes and most recently, there has been a shift to ordinary education as a result of the

⁶ This programme started without any introductory period.

Figure 5. Active labour market policies 1980–1999



Source: STO, various issues.

reduction of benefits whilst on leave schemes. The reasons are most likely related to the relative constraints on the choice of education, the possible duration of benefits and the replacement ratio.

The total number of people on different measures is illustrated in Figure 6. Here, active and passive measures, except post employment wage, have been aggregated, while post employment wage and open unemployment have their own graphs. It should be noted that each of these graphs now covers a little less than 6 % of the labour force. Altogether, in 1999, a number representing some 16 % of the labour force is on some sort of labour market programme. So, even with sharply lowered unemployment and dramatically improved labour market conditions, there are still more than the equivalent of 300 000 persons on some sort of temporary transfer payment. However, many more people are actually involved, since the 16 % are measured as full year equivalents, and many have shorter stays in one of the programmes. In addition to the direct loss of production from the number of people involved, resources are used to activate, to train and to control eligibility. Comparing the graph for the open unemployment with

Figure 6. The total number of people under labour market programmes or openly unemployed



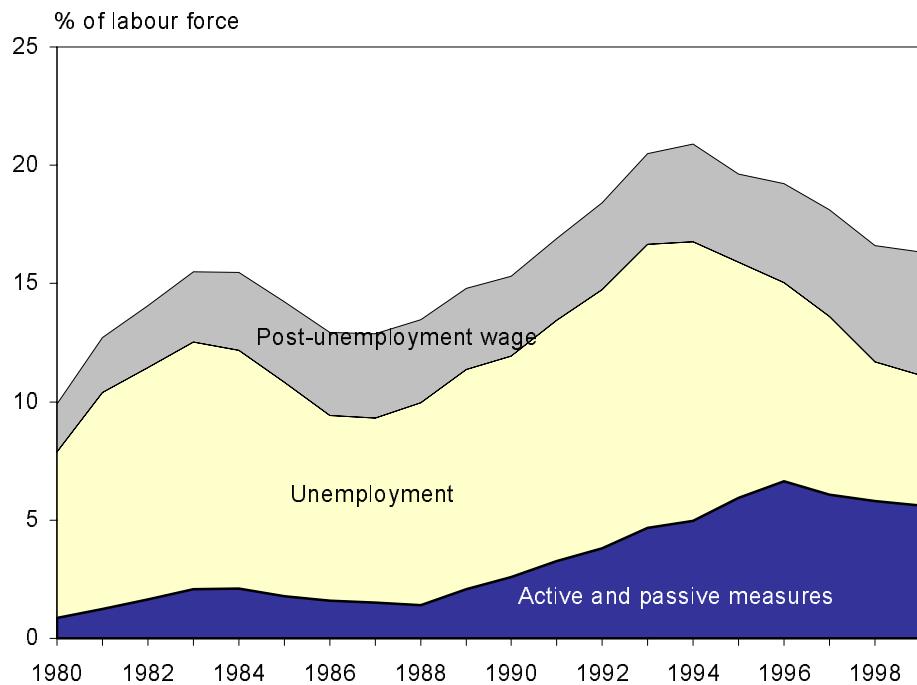
Source: STO, various issues.

the one for measures clearly shows that active and passive measures tend to grow more than unemployment in years with increasing unemployment, and fall less than the open unemployment in years with falling unemployment. It is also clear that the reforms in 1994 meant a decline, in the total number on active measures, of about 30 000 persons. This should be judged against the growth in passive measures of about 40 000.

Figures 7 and 8 show a remarkable reduction in unemployment since 1993–1994.⁷ However, the graphs also illustrate that the number of people participating in the labour market programmes keeps growing until 1996, and that more and more people decide to leave the labour market on post employment wage or transition pay. It is also remarkable that the total

⁷ Figure 7 uses Danish unemployment statistics that differ somewhat from the standardised figures due to different ways of measuring unemployment. The main difference is that the comparative statistics in Figure 1 use the ILO convention on availability to work, while the similar Danish unemployment measure in Figure 2 includes people who are not prepared to start working on short notice. Another difference is that the numbers in Figure 1 come from the Labour Force Surveys, while the data in Figure 2 come from register data. The difference is seen to be about 2 percentage points in 1993 and almost nothing in 1999.

Figure 7. The total number of people in measures measured as a percentage of the labour force



Source: STO various issues.

number of people on transfer income in 1999 (Figure 7) is significantly higher than during the last upswing in 1986. Thus, there seems to be a ratchet effect, that makes it easy to increase the number on transfer pay, but much more difficult to adjust it downwards.

The interpretation of the changes around 1993 is that the unemployed have, to some extent, substituted unemployment spells in active measures with participation in the new schemes.

The growth in active and passive measures raises a question about the use of the rate of unemployment as an indicator of the macro conditions of the country. The alternative is to use employment figures. But there are similar problems here too, because the active labour market policies also tend to increase the employment figures, as people in activation measures (which give them a job) will be counted as employed. Figure 8 shows the development in employment. In order to get a truer picture, we have deducted the number of full-time equivalent people, who are under some sort of activation programme. Still, in 1999, the employment figures are only close to the figures of 1988, when the previous maximum was reached.

Figure 8. The total employment with adjustment for direct employment effects of the activation programme



Source: STO and own calculations.

Judged against the development in the population over the same period, it is a small, relative decline. Nevertheless, the growth from the bottom of the cycle in 1993 is about 200 000 persons.

Additionally, it should be noted that the employment figures also incorporate those who are involved in the activation programmes, such as teachers, counsellors, consultants, and others. This number is undoubtedly significant, though there is no available information on the actual numbers.

Discussion of the labour market policies

To sum up, the labour market reform of 1994 with changes in the following years is going to gradually cut the benefit period to a maximum of 4 years, of which the passive period will be reduced to 1 year. The reform has accentuated activation as an obligation, and eligibility to unemployment benefits for another 4-year period can only be earned through a normal non-subsidised job. Thus, there has been a clear tightening of the conditions for obtaining unemployment benefits, but none of the reforms for adults have improved the economic incentives for the unemployed to

look for a job. Only the youth programme uses economic incentives.

Of course, the reduction of the benefit period and the new rules for eligibility have similarities to a declining benefit structure, given that there are no – or lower – supplementary benefits after the 4-year period. The effect of declining benefits is clearly that the reservation wage decreases over time, making it more likely that a person can accept a job offer. It is, however, unclear at the moment what will happen if more people hit the 4-year limit without having got a job. First, the demand for labour is presently high and second, it seems presently feasible for the labour exchange offices to provide regular jobs to those who would otherwise lose their eligibility. The other parts of the reform pull in the direction of increasing the reservation wage. Thus, the leave schemes tend to increase the reservation wage for those with a relatively low wage, who qualify. The reason is that the alternative to working now has a higher value. The only constraining factor is that the length of leave is limited and that people have to get back to their jobs. However, if they have wasted their time on leave, it may hurt their careers and thus turn out to be a real cost. This is probably, to a lesser degree, the case in the public sector, because the new programme was more readily accepted among those with lower ranking jobs, who used to have few opportunities to get training on or off the job. The same argument applies to the unemployed, though they have even less to lose. So, it is no surprise that these two groups dominated the education leave programmes immediately following their introduction. Activation programmes have similar effects. If they are considered as being beneficial to the participants, the reservation wage of the participants is raised before and during the activation programme. The result is that the unemployed search less intensively and tend to reject job offers simply because activation or training and education is "too good". This will clearly prolong all unemployment spells, and is only socially optimal if the activation programme significantly improves the productivity of the participant.

As a substitute for direct economic incentives, more intensive control measures have been introduced. The activation programme is one of these checks; another is the personnel at the employment offices, who are supposed to supervise that the unemployed really are looking for jobs and are available for work. These measures pull in the direction of a lower reservation wage, since it now becomes more cumbersome to stay on unemployment benefits.

The youth programme is the only part of the labour market reforms in recent years with an economic incentive that clearly lowers the reservation wage. The lower benefits mean that those with higher alternative wages will choose jobs and that those with relatively low alternative wages, will

choose training, because they have no further education.

The internationally high level of benefits for the low-wage earners, together with the high rate of tax have the effect that one finds a relatively high number of people who have received unemployment benefit at some time during the year. In 1999, around 1/4 of the labour force had received UI benefit for at least one spell of unemployment during the year. Most of these spells are relatively short, are more highly concentrated among low-wage earners and are also concentrated around the main Christmas holidays.

The widespread use of unemployment benefit to fill short periods of unemployment is, itself, a consequence of the UI system and of the low level of labour protection with respect to dismissals. First, the Danish UI system only has a weak incentive for employers to prevent short-term and temporary lay-offs (Jensen and Westergaard-Nielsen, 1990). In principle, after 1993, employers should have been paying the first two days of benefits directly to the worker. However, this is only paid in about 50 % of all cases, indicating that employer and employees, in many cases, share the burden in the sense described by Feldstein (1975). Second, employees have little incentive to look for jobs just after becoming unemployed because of the relatively high replacement rate. Danish workers are significantly less eager than their colleagues in the other Nordic countries, where the replacement ratio is lower (Torp et al. 1999). Third, statutory labour protection is low in Denmark (OECD 1999). Thus, employers can lay off workers with very short notice. However, the high replacement ratio should also be considered as compensation to workers for accepting the high flexibility.

To sum up, theoretically, some of the elements in the labour market reforms from 1994 onwards have increased the reservation wage (leave schemes, activation, individual plans), while others have meant that the reservation wage has been reduced (shortening of the benefit period, youth program). The net effect remains an empirical issue. There are two ways to go about investigating this issue. One can use conventional measurement of the effects of participation in labour market policy programmes, or one can look at a more simple measurement of the probability of getting employment.

4 Measuring individual effects of activation

The use of resources for labour market programmes is huge. Not only is the number of people on some sort of transfer income large and increasing, but

the number of people engaged in activating, sorting and counselling the unemployed is large as well. This, of course, raises the question of whether or not these measures are efficient, in the sense that they actually help people get back to work. The traditional view has been to look at individual effects, where one looks at the job opportunities for participants as compared to non-participants. The literature on effects and measurement is huge. A recent methodological overview is presented in Heckman, LaLonde and Smith (1999).⁸

The individual effects should be held up against the direct costs and indirect costs stemming from the fact that people do not search when they are participating in an activity. Most studies of the effects of different measures look at the direct effects and attempt to answer the question of whether or not a person gets back to work faster when he has taken part in some sort of activation.

The major problem with these effect measures is that it is often very difficult to control for all relevant aspects of the selection process of assigning people to different programmes. Thus, those ending up in one type of activation program may be those who are most likely to get a job anyway. Another issue is choosing the appropriate control group.

So far, analyses of the effects of activation in Denmark have focused on individual effects of participation. In the most comprehensive study of the job offer scheme and the educational subsidy scheme, which were in effect until 1994, Roshholm (1999) finds that job offers in the private sector have a significant positive effect on the probability of getting a job and on the length of the subsequent job. The main mechanism here is that a person continues in the subsidised job even after the subsidy has run out. Public-sector job offers do not have a similar effect. In a fairly thorough study of the effects of the labour market programmes, the Ministry of Labour (2000) has found that the departure rate from the group of unemployed is lower while the person is taking part in activation, and higher afterwards. This means that some people are actually kept longer in the UI system with activation than without. The latter study finds that the most important effect of the active labour market policy is that people become motivated to find a job by themselves just before they were supposed to start on their activation. Furthermore, there is another selection issue with respect to the type of activation chosen by each individual. This selection issue arises because people are not randomly assigned to different programmes, e.g. for job offers in the private sector versus the public sector. On the contrary,

⁸ For Danish studies of effects see Ministry of Labour (2000).

it is to be expected that those assigning people and the people themselves allocate according to where the highest rate of success is. It is unclear what type of partiality these selection biases create.

The main problem with these types of studies is that they do not take into account what would have happened had there been no activation at all. And finally, no study takes account of the different conditions over the business cycles. Thus, one should expect it to be much more difficult to get an unemployed person back to work when the economic growth is low as opposed to when it is high. One should also expect that it becomes more difficult when the group of unemployed persons is small and is dominated by the least employable.

Thus, there is an indication that some labour market programmes have prolonged unemployment durations and, at the same time, improved the probability of keeping a job. Other programmes (in particular the leave schemes) have had the effect that the reservation wages of the job searchers have increased with the result that people are less likely to get a job. Because of selectivity issues it is, however, difficult to identify a net effect from the labour market reform.

5 An alternative effect study

The alternative strategy looks at the total effect of various policies on the transition from unemployment to obtaining a job. If the Danish labour market reform in 1994 and afterwards has worked as intended, it should have become more likely that an unemployed person obtains a job – all other things being equal. If labour market policies have been improved and made more efficient, or if other things have influenced the probability in a positive direction, we should see a structural shift in the probability of an unemployed person getting a job. And this should coincide with the introduction of the new labour market programmes. If this is not found to be the case, it is likely that the counteracting factors from an increased reservation wage function dominate. I will test this simple hypothesis by first estimating a probability function for the probability that an unemployed gets a particular job. This estimation will “explain” part of the variation in the probability of employing an unemployed person. In a second step, the unexplained part is regressed on calendar time to see if there are systematic changes over time.

In the first estimation, I will use explanatory factors drawn from theory. First, better business cycles are expected to increase the probability because of a relative shortage of labour. Second, individual characteristics may

affect the chances that an employer will employ a given person, the intensity of the search and the probability that a given wage offer is accepted (the reservation wage). Gender, age and previous unemployment are believed to affect the chances that an employer will hire a given person. From other studies we will expect a negative effect for females and for the elderly. Long spells of unemployment will also have a negative impact, because long spells of unemployment harm individual productivity and may also make employers more suspicious about the quality of the worker. Finally, the replacement ratio of UI benefit could have an impact on the search intensity of each individual, assuming that a higher replacement effect makes people search less than a smaller replacement effect.

The data consist of data for all persons who have been privately employed at least once in the period 1980–1998. For each person, we have extensive information on background characteristics and we know the ID of their employer in November each year. This means that we can follow each individual move between jobs. For those who have no employer, we consider their status as being unemployed, out of the labour force, under education or retired. In this context, we are particularly interested in those individuals who are unemployed one November, but who are found to have a job the following November. Table 1 shows average figures for the period 1980–1998. Among all employees in November, 28.12 % have been hired within the last year and most of these come from other jobs. However, more than 1/3 or 10 % of total employment come from having no job and, of these, about 1/2 (4.46 %) have been unemployed the year before. The other sources are new entrants, education and those out of the labour force. The correlation with changes in GDP, dGDP, shows that the proportion coming from the unemployed has a substantial coefficient of correlation with dGDP. This indicates that the chances of getting a job are indeed highly dependent on the macro growth.

The next stage is to estimate a probability function for the probability that a hiring in one year comes from the group of persons who were

Table 1. Proportion of hirings compared to total employment coming from non-employment and unemployment. Correlation with changes in GDP, 1980–1998. Own estimates

	Total hirings	Hirings from employment	Hirings from non-employment	Hirings from unemployment
Corr. with dGDP	0.57	0.13	0.74	0.63
Average	31.08	15.84	8.56	4.46
Std.dev	2.17	1.95	0.95	0.76

Table 2. Logit estimates of the probability that a hiring is from the unemployed

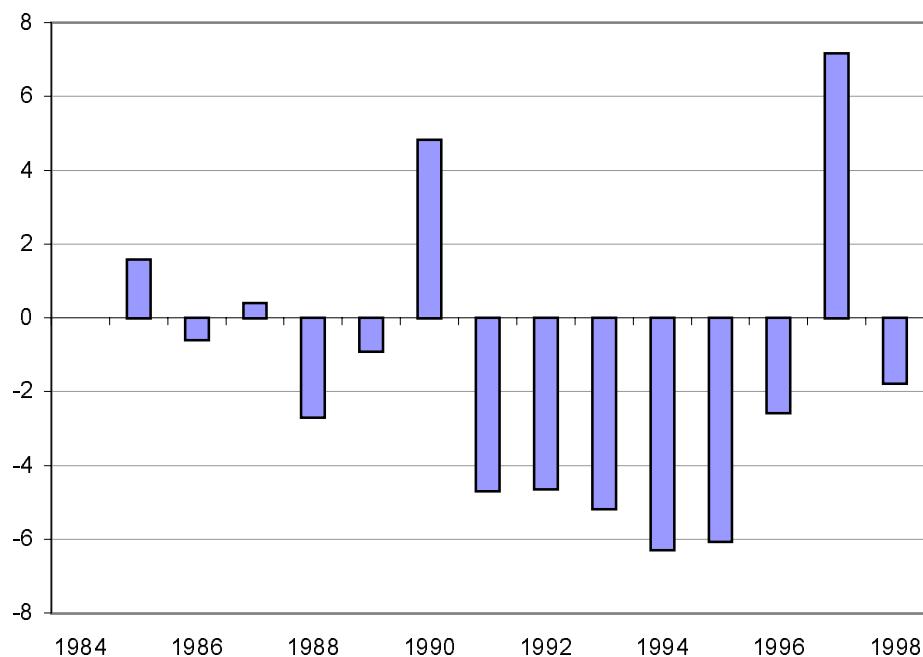
	Coeff.	Std.err.
Female	-0.561	0.005
Age group 18–25(reference)		
Age group 26–50	0.439	0.006
Age group 51–70	-1.316	0.009
dGDP	0.055	0.002
Unemployed and no previous wage .9>Replac>.7 (reference)	-0.459	0.007
.7>Replac>.5	0.013	0.006
.5>Replac	0.311	0.008
Number of years unemployed	-0.144	0.002
Constant	-0.183	0.008
No. of obs	940 056	
Pseudo R2	0.0529	

unemployed last year. There are altogether 1 145 134 transitions from unemployment to employment of which we are observing 943 136. The explanatory factors have to be rather limited, since most individual information relates to a person's previous job, although we want to include as many variables as possible that contain elements of the individual search function and the macro demand.

The coefficients show that the probability of hiring an unemployed person is highest for prime age males and that it is strongly pro-cyclical: when GDP goes up, the probability increases. Being female, young, having had no previous job, or having been unemployed for several years and having a high replacement ratio⁹ will all reduce the probability of an unemployed person being hired. All these findings conform to expectations. The most important factors are economic growth and the replacement ratio or the lack of previous work experience.

The remaining question is whether or not the change in labour market policies makes a difference. One way of observing this is to regress the generalised residuals (943 136) from the logit on time-dummies (1980–1998). The estimated coefficients are depicted in Figure 9. It is clearly visible that the residuals start by being positive but later become negative. After 1995, there seems to be a clear improvement of the effect of the labour market policy. The years before and after the labour market reform seem to represent the lowest effect. Thus, the results are consistent with the hypothesis that the reforms have increased the reservation wage of the

⁹ The replacement ratio is defined as potential unemployment benefit per hour (calculated according to rules) divided with hourly wage rate.

Figure 9. Residuals from the logit (Table 2) regressed on time

Source: Own estimates.

unemployed. This argument builds on an assumption that the structure of the unemployed has not changed and, in particular, that the proportion of long-term unemployed has not increased in comparison to the former upswing. Another cautioning factor is that the reform was not fully implemented in 1993–1995. One interpretation of Figure 9 is that the first implemented elements of the reform increased the reservation wage, while the elements which could reduce the reservation wage (limitations of leave schemes, the youth package) were all implemented later.

6 Conclusion

The new labour market policies from the mid-1990s seem to have been fairly successful in reducing unemployment, but a large part of those formerly counted as unemployed, are now found under different activation and education programmes. Thus, the total number of the relevant age groups receiving labour market transfer payment rose until 1996 and has not been reduced by as much as the open unemployment due to the labour market programs.

The main element in the reforms has been the activation of the unemployed at an earlier stage. At the same time, the quality of the activation programme has undoubtedly been raised. Another element has been the introduction of leave schemes. The earlier activation has undoubtedly lowered the reservation wage for the unemployed, while the other elements have increased it. Only the youth programme from 1996 has an element of economic incentives, where transfers are reduced to half of the usual level after a 6-month period provided that the youth take part in activation at this point.

This paper, has found that the single most important factor for increasing individual employment prospects is higher economic growth. Only reasonable economic growth creates enough new jobs for the unemployed. The new labour market policy with leave schemes and more educational activation has not, in itself, made it more likely that an unemployed person obtains employment. This finding is consistent with the hypothesis that the reforms have actually increased the reservation wage of the unemployed. As a result, the unemployed may have become more selective in their choices of possible jobs. Later, in the late 1990s, this negative tendency is partly offset by limitations in activation programmes, the youth programmes and similar constraints in the eligibility of UI benefits.

References

- Andersen, T. – Dalum, B. – Linderoth, H. – Smith, V. – Westergaard-Nielsen, N. (2001): The Danish Economy, An international Perspective, DJØF Publishing, Copenhagen.
- Calmfors, L. (2001): Wages and Wage-bargaining Institutions in the EMU – A Survey of the Issues, CESifo Working paper No 520.
- The Danish Employers' Confederation (1999): Lønstatistik (Wage statistics).
- Feldstein, M. (1975): The Importance of Temporary Layoffs: An Empirical Analysis, Brookings Papers on Economic Activity, 1975–3.
- Hansen, H. (1998): Elements of Social Security, The Danish National Institute of Social Research 98:4.
- Heckman, J. J. – LaLonde, R. J. – Smith, J. A. (1999): The economics and econometrics of active labor market programs in O. Aschenfelter and D. Card (eds.): Handbook of Labor Economics, Volume III, North-Holland, Amsterdam.
- Jensen, P. – Westergaard-Nielsen, N. (1990): Temporary Layoffs in Hartog, J. – Ridder, G. – Theeuwes, J.: Panel data and labour market studies, North-Holland.
- Ministry of Labour (2000): Effekter af Aktiveringsindsatsen, Arbejdsmiljøet, København.
- Ministerie van Sociale Zaken en Werkgelegenheid (1995): Unemployment Benefits and Social Assistance in Seven European Countries, Den Haag.
- Neumann, G. – Pedersen, P. J. – Westergaard-Nielsen, N. (1991): Long-run

- international trends in aggregate unionization, European Journal of Political Economy 7, 249–274.
- OECD* (1999): Economic Outlook, June 1999.
- Pedersen P. J. – Smith, N. (2001)*: Unemployment Traps: Do Financial Disincentives matter? CLS-Working Paper 01-01. Centre for Labour Market and Social Research, Aarhus School of Business.
- Rosholm, M. (1999)*: Evaluating Subsidized Employment Programs in the Private and Public Sectors, Department of Economics, University of Aarhus.
- Smith, N. (1998)*: Economic incentives to work (in Danish) in Smith, N. (ed.): Work, Incentives and Unemployment, Aarhus University Press.
- STO*: Statistisk 10-årsoversigt, (Statistical ten-year review in Danish), Statistics Denmark.
- Torp, H. et al. (1999)*: Dagpengesystemene i Norden og tilpasning på arbejdsmarkedet, TemaNord 1999:572, Nordisk Ministerråd.

COMMENTS

Martti Hetemäki

The Dutch case

Professor Hartog provides a lucid and comprehensive post mortem of the Dutch labour market policies and developments over the period from 1982 until the late 1990s. He describes the corporatist institutional framework which sets the rules that govern Dutch labour markets. He also explains why and how the turning point in labour market policies and wage behaviour took place in the early 1980s. This is followed by a description of the social security reforms which were implemented to curb rising disability and unemployment figures. He then goes on to explain the changes that led to the growth of the so-called 'flex job market'. Finally, he provides an assessment of the effects of the policies.

Before entering into a more detailed analysis of labour market policies, Hartog assesses the impact and causes of the 1982 change in economic policies. The so-called 'Waasenaar agreement' between the leading federation of labour unions and the employers' federation marked the beginning of a long period both of real wage moderation intended to restore profits and to create employment growth, and of emphasis on labour market flexibility. At the same time, the government set about implementing strict expenditure control, a reduction in the tax burden and reforms in the social security. According to Hartog, in 1982 the policy orientation definitely changed from being Keynesian to being a neoclassical, market based orientation.

Hartog refers to simulations by the Central Plan Bureau, according to which a 10 per cent drop in the private sector wage share in value added between 1979 and 1990 has reduced unemployment by 275 000 person years. This is a very major effect given that unemployment in 1990 stood at 419 000. The wage restraint has been strongest at the low end of wage distribution.

The Dutch social security reforms roughly fall – according to Hartog – into three categories. First, the replacement ratio for unemployment, sickness and disability has been lowered and the eligibility rules of these schemes have been tightened. Second, and starting only in the early 1990s, the responsibility of employers regarding disability and sickness absenteeism has been increased. Third, and even more recently, the social partners have lost their operational control over social insurance.

The combined effect of stricter eligibility criteria and reduced benefit levels appears to have had some effect. The share of workers on disability

declined from 13.5 per cent in 1984 to 9.7 per cent in 1996. According to Hartog, reductions in benefit levels in the 1980s and 1990s have, however, been rather ineffective. According to him, one factor behind this has been that the replacement ratios at the bottom have not really diminished. Furthermore, only single individuals would have a substantial income increase by exiting from unemployment.

The analysis by Hartog is a welcome contribution to the international debate on best labour market practices. His analysis makes it clear that there can be no simple generalisations and that much emphasis has to be placed on analysing the details of various policy measures. There are also, however, some important general lessons which Hartog stresses and which are of relevance for other countries. One lesson is that real wage moderation and macroeconomic stability are keys to good labour market performance. A second obvious general lesson from the Dutch case is that high reservation wages at the low end are apparently an important factor in eliminating low-skilled jobs. A third lesson is that, after the problem has been created, it is extremely difficult to bring down the high number of benefit recipients.

The Danish case

Professor Westergaard-Nielsen provides a post mortem of the Danish labour market developments from 1980 to 1999 which is as clear and informative as that provided by professor Hartog on the Dutch case.

After briefly describing the employment and unemployment developments, Westergaard-Nielsen describes the changes in the passive and active labour market policies. He then discusses in more detail the likely channels through which the policies have affected behaviour. After this, he provides interesting quantitative analysis on the likely effects of the policies.

As did Hartog in the Dutch case, Westergaard-Nielsen, too, stresses the critical contribution that real wage moderation and favourable macroeconomic developments have made to the improved labour market outcomes in Denmark.

According to Westergaard-Nielsen, more intensive control measures, such as earlier activation schemes, have been introduced as a substitute for direct economic incentives. He notes that the earlier activation schemes have undoubtedly lowered the reservation wage for the unemployed, while other elements have increased it. These other elements include leave schemes which make it possible to partly or totally exit the labour force, with reasonable benefits.

Westergaard-Nielsen addresses separately the issue of how to evaluate the effects of increased active labour market policies and leave schemes. The usual way to analyse these effects is to examine how participation in

these programmes affects the speed or probability of getting back to work from being unemployed. However, as Westergaard-Nielsen notes, this involves a number of selection problems. Hence he uses an alternative approach that attempts to avoid these problems by looking at the entire work force over a period of time. If the increased activation or leave schemes have had the desired effects, they should have increased the probability that unemployed persons get work. Controlling for economic growth, Westergaard-Nielsen finds that active labour market policies and leave schemes have not made a difference as regards the probability of employment among the unemployed. According to him, this supports the hypothesis that the intensified active labour market measures and leave schemes have increased the reservation wage of the unemployed. These effects appear to have offset the negative effects that the earlier activation has had on reservation wages. There are, of course, a number of major reservations concerning these conclusions.

The results from Westergaard-Nielsen are very important because they seriously question the role of active labour market policies and, especially, the various leave schemes, in reducing Danish unemployment. This is particularly important as, although these policies have significant budgetary implications, they are sometimes referred to as an example which other countries should follow.

Finally

The papers by Hartog and Westergaard-Nielsen analyse two different cases. However, the following three common conclusions can be drawn from both papers:

1. Real wage moderation and stable economic growth since the early 1980s have played a critical role in improving employment performance both in the Netherlands and in Denmark.
2. In addition to real wage effects, other incentives which work through the tax and benefit systems have also had a significant effect on employment. The favourable incentive effects have (at least partly) been offset by the fact that reservation wages, especially at the low end of the wage scale, have not been reduced.
3. The incentive effects of benefits are not confined to the statutory levels and the duration of benefits. The incentive effects of various benefit systems depend critically on how the systems are implemented and, especially, on the eligibility criteria of the systems.

Marja-Liisa Parjanne

The labour market performance in the Netherlands as well as in Denmark is impressive. Both countries have succeeded in restructuring the benefit and tax system, the labour market and economic policy. Both of them have attained almost full employment – a success story that has been called an unemployment miracle.

Nevertheless, the unemployment rate and the employment rate are indicators which only give a partial description of the functioning of the labour market. Behind these aggregate figures we may find aspects which are less positive.

Unemployment rate

First, the unemployment rate does not fully describe the labour market performance if a large number of people of working age have been shifted outside the labour market e.g., because of disability or early retirement – as has been the case not only in the Netherlands but also in Denmark and Finland.

Early exit from the labour market is a common feature in most EU countries. In 1998, the average participation rate for the age group 55 to 64 in the EU was only 40 %. The corresponding participation rate for Denmark was among the highest, equalling 53 %. For the Netherlands, however, the figure was below the EU average, standing at 34 % (EC 2000b). An important explanation to the low participation rate is the attempt to reduce labour supply through early retirement as a response to increased unemployment.

We could argue that broad unemployment is still quite high in the Netherlands. There is a considerable amount of hidden unemployment among the sickness and disability benefit recipients, although the numbers have been declining since the 1980s. In 1995, the share of sickness and disability benefit recipients within the population of working age was still as high as 13 % (Nickell and van Ours 2000). In 1999, the number of disabled was over 744 000 (EC 2000a). It was more than two times the amount of unemployed, which equalled slightly fewer than 300 000 persons.

Employment rate

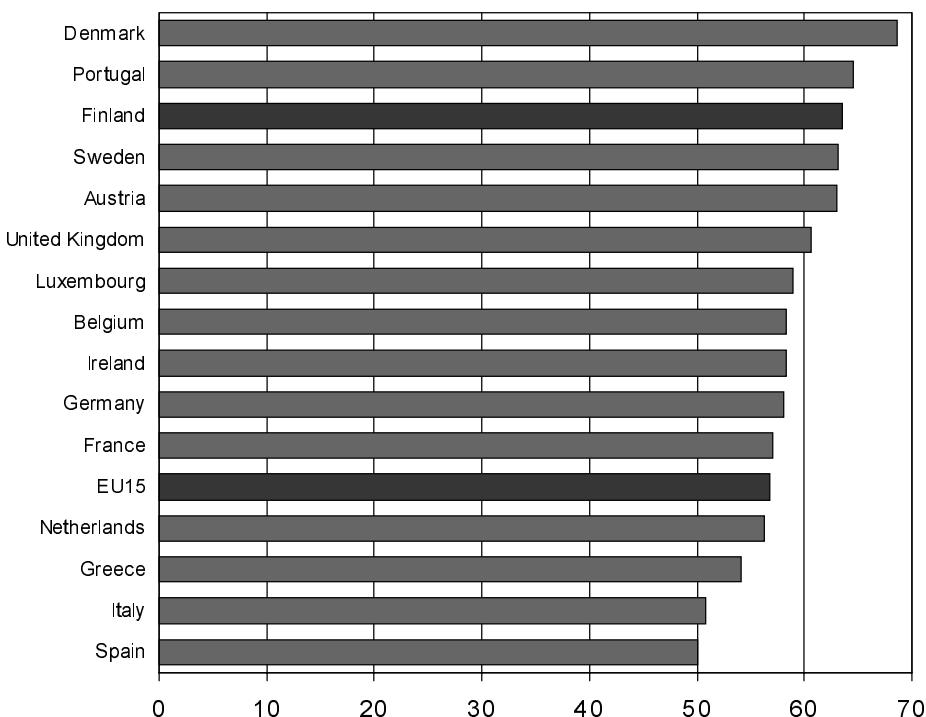
As opposed to the unemployment rate, the employment rate may better illustrate the labour market performance. However, when using this indicator we also have to examine its different elements.

In 1999, the highest employment rates of the EU were recorded for Denmark (76.5 %) and the Netherlands (nearly 71 %). Finland was also

above the EU average. In the Netherlands, however, a substantial share of employees, nearly 40 %, work part-time (EC 2000b). In fact, this is the highest share among all European countries. Therefore, if we calculate the employment rates in full-time equivalents, the picture changes considerably. As Figure 1 shows, Denmark is still at the top and Finland is ranked third, but the Netherlands is below the EU average.

The increase in part-time labour is the most important explanation for the Dutch miracle, i.e., the employment growth. As Hartog states, the volume of full-time jobs has been stable since 1970, whereas the number of part-time jobs has increased threefold (from 600 000 to 1.8 million). The traditionally rather low labour market participation of Dutch women has increased substantially and – because they wish to combine work and childcare – Dutch women search for part-time jobs. Nowadays, nearly 70 % of female employees work part-time. It is clear that this kind of reform cannot be transferred into countries where the female participation ratio already stands at a high level.

Figure 1. Employment rates in full-time equivalents in the EU member states, 1999



Source: EC (2000a).

In addition to the high incidence of part-time labour, the Dutch part-timers work less than the typical part-time worker in the EU. Consequently, in the Netherlands, the average annual working hours per employee are the lowest in Europe. Therefore, the crucial question is whether the prime objective is to increase the proportion of the population in employment or the aggregate amount of labour supplied.

Sustainability

Now, we may well ask how sustainable the good labour market performance is. The Netherlands and Denmark have implemented many reforms which have been successful. In particular, a positive feature in some of their reforms is that they have tried to create a link between the problem group and the labour market by using training systems, for example. Nevertheless, it seems that there are plenty of jobs which are subsidised in one way or another, not to mention a great number of benefit recipients. What, then, does all this mean from the standpoint of public expenditure and its financing? Is it possible to identify the employment effects of individual measures or to make some kind of cost-benefit analyses, at least roughly? Some of the measures seem to be very costly but the policy evaluation is, however, lacking.

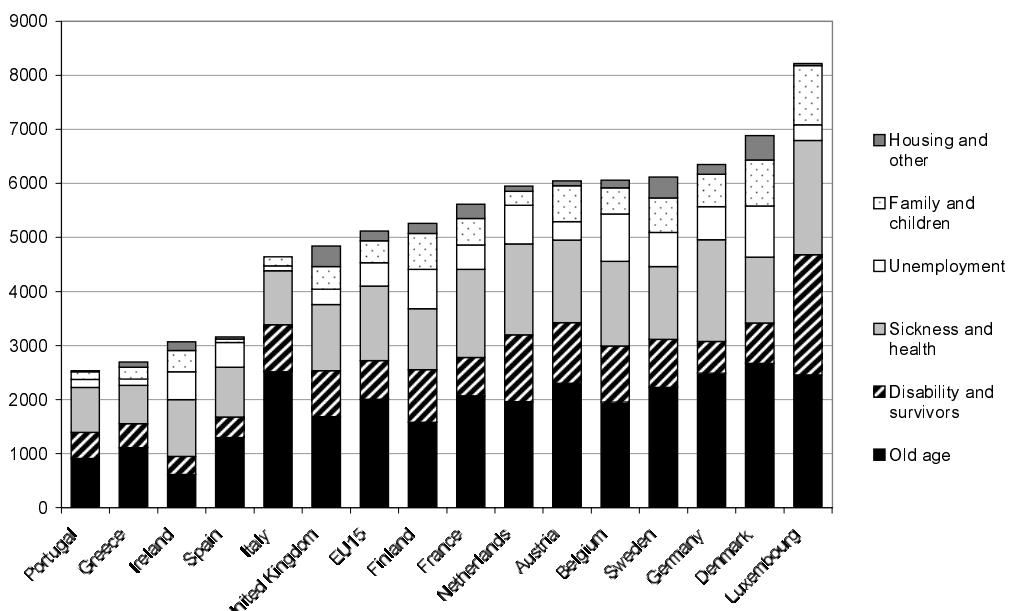
Let us consider one example from the Netherlands, i.e., wage cost reductions for low-paid labour, known as 'SPAK'. The SPAK programme is a reduction of non-wage costs for employers and the target group is all those low-paid workers earning wages of up to 115 % of the minimum wage. The reduction is about 10 % of indirect labour costs, without duration limit, and can be claimed for new workers as well as for those already employed. Therefore, the target group is considerable, covering nearly one million workers. However, rigorous evaluations of the net effects on aggregate employment have not been carried out. Some studies suggest that if the wage cost reduction is not strictly targeted, combined dead-weight loss and substitution effects are very high, amounting to around 90 % (Graafland and van Opstal 1999; Martin 2000).

In the Netherlands, labour market policies have laid more emphasis on income transfers than on active measures (Martin 2000). As Hartog states "...the increase in generosity of social security has created a large volume of benefit recipients". Many measures have raised the labour force participation rather than decreased the number of persons on social benefits. Therefore, despite the good employment performance in the Netherlands and Denmark, there is no big difference in the social protection expenditure as a percentage of GDP in comparison to Finland. In 1996, all three countries stood at the same level, slightly above 30 %.

When examining the social expenditure in purchasing power standards per capita, we notice that the figures for the Netherlands and Denmark actually exceed those for Finland (Figure 2). Studying the different categories of social expenditure highlights the Dutch expenditure on disability and sickness. We also notice that although the unemployment rate for Denmark and the Netherlands is lower than that of Finland, their expenditure on unemployment per capita is more or less the same.

Finally, let us examine the economic dependency ratio in these countries. The economic dependency ratio indicates the ratio of the non-working population to the working population. In 1997, the dependency ratio for Finland and the Netherlands was just about at the same level. In both countries, roughly for every two employed persons there were three persons outside working life (see Ministry of Social Affairs and Health 1999, Figure 6). This ratio is rather high with regard to the ageing of the population, which will further impair the dependency ratio in the near future. To ensure sustainable financing of welfare expenditure, the major challenge for Finland as well as for the Netherlands is not only to decrease the unemployment rate but also to increase the participation rate of the population of working age and to make working careers longer.

Figure 2. Expenditure on social protection in PPPs per person, 1996



Source: Eurostat

References

- EC (2000a): Joint Employment Report 2000, Part II, European Commission.
- EC (2000b): The social situation in the European Union, European Commission, Luxembourg.
- Graafland, J. – van Opstal, R. (1999): Targeted wage cost reductions in the Netherlands, Paper prepared for the Peer Review Project on good ALMP practices in The Hague, May 1999, Centraal Planbureau.
- Martin, J. P. (2000): What works among active labour market policies: Evidence from OECD countries' experiences, OECD Economic Studies No. 30, 2000/1, 79–113.
- Ministry of Social Affairs and Health (1999): Background paper to Conference on Financing Social Protection in Europe, November 1999, Helsinki.
- Nickell, S. – van Ours, J. (2000): The Netherlands and the United Kingdom: a European unemployment miracle? Economic Policy, April, 137–180.

VATT-JULKAIKISUJA / VATT-PUBLICATIONS

VATT-JULKAIKISUJA SARJASSA AIEMMIN ILMESTYNEET JULKAISUT

1. Finland 1990–2005. A time of challenge and preparation. Helsinki 1991.
2. Neuvostoliitto, itäinen Eurooppa ja Suomi. Toimittaneet Pekka Sinko ja Pekka Sutela. Helsinki 1991.
3. Proceedings of the Workshop on Economic Instruments in Environmental Policy. Edited by Seppo Leppänen and Pirkko Valppu. Helsinki 1991.
4. Vuosikirja 1991. Toimittaneet Seppo Leppänen ja Leena Saarinen. Helsinki 1991.
5. Suomi Euroopan Yhteisön jäseneksi? Taloudelliset vaikutukset. Helsinki 1992.
6. Proceedings of the Workshop on Economic Policy in European Integration. Edited by Pekka Alajääskö and Seppo Leppänen. Helsinki 1992.
7. Proceedings of the Workshop on the Evaluation of Public Sector Performance. Edited by Seppo Leppänen and Heikki A. Loikkanen. Helsinki 1992.
8. ECU Euroopan raha ja Suomi. Reino Hjerpe, Matti Korhonen, Sixten Korkman ja Markku Puntila. Helsinki 1992.
9. Vuosikirja 1992. Toimittaneet Reino Hjerpe ja Leena Saarinen. Helsinki 1993.
10. Kertomus ensi vuosisadasta. Pertti Hynynen, Osmo Kuusi. Helsinki 1993. 2. täydennetty painos. Helsinki 1994.
11. Avautuva Suomi – tulevaisuuden haasteet. Toimittaneet Antti Romppanen ja Seppo Leppänen. Helsinki 1993.
12. Valtion rahoitustuen suoriteperusteinen budgetointi. Toimittaneet Tuomas Jaakonsaari ja Rolf Myhrman. Helsinki 1994.
13. Opening Finland – Challenges for the Future. Edited by Antti Romppanen and Seppo Leppänen. Helsinki 1994.
14. Proceedings of the Symposium on Unemployment. Edited by Tor Eriksson, Seppo Leppänen and Pekka Tossavainen. Helsinki 1994.
15. Rahaunioni ja Suomi. Reino Hjerpe, Matti Korhonen, Sixten Korkman, Markku Puntila ja Timo Rauhanen. Helsinki 1994.
16. Materiaalit murroksessa. Osmo Kuusi. Helsinki 1994.
17. Yritysverouudistus – kilpailuetuko. Helsinki 1995.
18. Globaalitalous ja Suomi. Toimittaneet Seppo Leppänen ja Antti Romppanen. Helsinki 1995.
19. Hyvinvointipalvelut – kilpailua ja valinnanvapautta. Helsinki 1995.

20. Finnish Corporate Tax Reforms. Helsinki 1995.
21. Global Economy and Finland. Edited by Seppo Leppänen and Antti Romppanen. Helsinki 1995.
22. Innovation Systems and Competitiveness. Osmo Kuusi (ed.). Helsinki 1996.
23. Työttömyys, kansallinen veropolitiikka ja tulonjako. VATT-vuosikirja 1996. Toimittaneet Reino Hjerpe ja Timo Rauhanen. Helsinki 1997.
24. Sosiaalinen pääoma. Käsite ja sen soveltaminen sosiaali- ja talouspolitiikassa. Toimittaneet Jouko Kajanoja ja Jussi Simpura. Helsinki 1998.
25. Tehokkaampaan julkiseen talouteen. VATT-vuosikirja 1998. Toimittaneet Reino Hjerpe ja Pekka Mäkelä. Helsinki 1998.
- 25(S). Towards a More Efficient Public Sector. Edited Reino Hjerpe and Pekka Mäkelä. Helsinki 1998.
26. Urbanization: Its Global Trends, Economics and Governance. Edited by Reino Hjerpe with Pii Elina Berghäll. Helsinki 1998.
- 27:1. 1990-luvun talouskriisi. Suomen Akatemian tutkimusohjelman projektit. Jaakko Kiander (toim.). Helsinki 1998.
- 27:2. The Research Programme of the Academy of Finland: the Projects. Jaakko Kiander (ed.). Helsinki 1999.
- 27:3. The Research Programme of the Academy of Finland: Conference 1999. Jaakko Kiander (ed.). Helsinki 2000.
- 27:4. 1990-luvun talouskriisi. Suomen Akatemian tutkimusohjelma: Laman pitkä varjo. Seminaari 13.4.2000. Jaakko Kiander (toim.). Helsinki 2000.
- 27:5. 1990-luvun talouskriisi. Suomen Akatemian tutkimusohjelma. Jaakko Kiander: Laman opetukset. Helsinki. 2001.
- 27:6. 1990s economic crisis. The Research Programme of the Academy of Finland: Down from the heavens, up from the ashes. The Finnish economic crisis of the 1990s in the light of economic and social research. Jorma Kalela – Jaakko Kiander – Ullamaija Kivikuru – Heikki A. Loikkanen – Jussi Simpura (eds.). Helsinki 2001.
- 28:1. Hyvinvointivaltio 2000-luvun kynnyksellä. VATT-vuosikirja 1999. Toimittaneet Reino Hjerpe – Seija Ilmakunnas – Ilikko B. Voipio. Helsinki 1999.
- 28:2. Hyvinvointivaltio 2000-luvun kynnyksellä. VATT-vuosikirjan 1999 artikkelit. Toimittaneet Reino Hjerpe – Seija Ilmakunnas – Pirkko Valppu – Ilikko B. Voipio. Helsinki 1999.
- 28:3. The Finnish Welfare State at the Turn of the Millennium. VATT Yearbook 1999. Helsinki 2000.
29. Social Capital: Global and Local Perspectives. Jouko Kajanoja – Jussi Simpura (eds.). Helsinki 2000.

30. Työmarkkinat testissä. Seija Ilmakunnas (toim.). Helsinki 2001.
31. Kauko Aronen – Maija-Liisa Järviö – Kalevi Luoma – Tarmo Räty: Yhteistyöllä ja kilpaillen – Peruspalvelut 2000 -tutkimusraportti. Helsinki 2001.