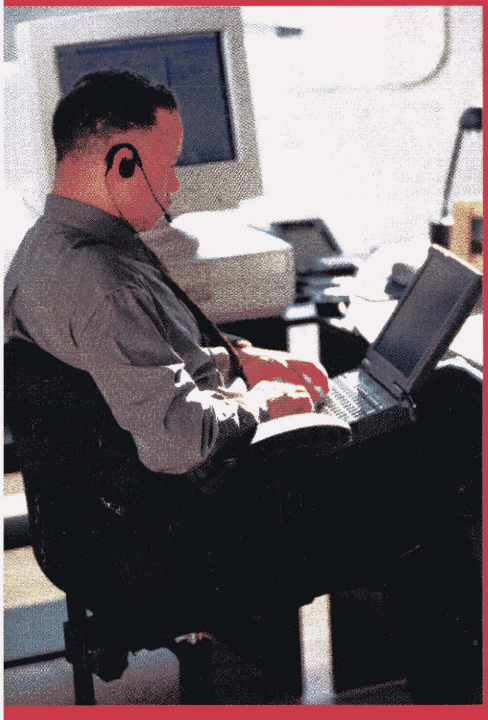
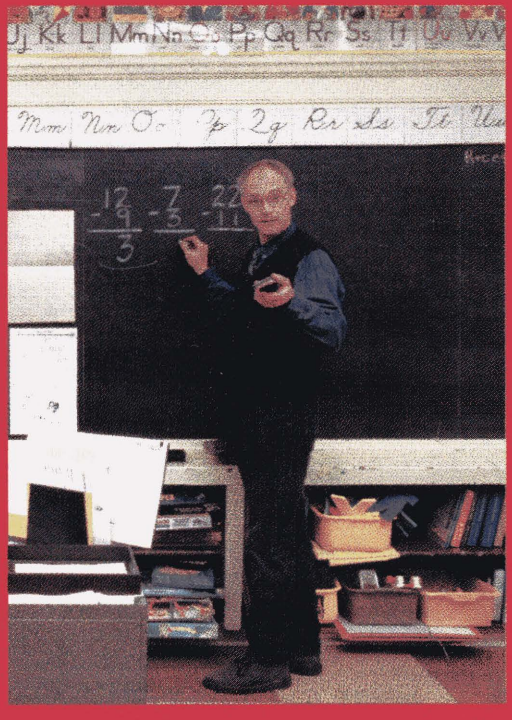
Employment & social affairs





European Employment Observatory

REVIEW: SPRING 2001

European Commission

The European Employment Observatory aims to contribute to the development of the European Employment Strategy through the provision of information and comparative research on employment policies and labour market trends. This publication replaces the MISEP "Policies" and SYSDEM "Trends" reports previously published by the European Employment Observatory. Policies contributions are compiled on the basis of information provided by national correspondents, through the MISEP network. Trends articles provide an in-depth overview of the labour market situation and employment policies in relation to a specific theme on the basis of articles provided by the SYSDEM correspondents. Signed articles are the sole responsibility of the author(s).

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Contents

Policies

Miscellaneous

Focus

Trends

Labour Shortages and Skills Gaps in Europe: An Overview

Labour Shortages and Skills Gaps in:

Overall Developments

Belgium

The Intersectoral Agreement 2001-2002

On 22 December 2000, the National Intersectoral Agreement 2001-2002 was officially signed by representatives of employers and workers. Such agreements set the framework for the sectoral and company-level negotiations which will determine wages and conditions throughout the private sector (some 2.3 million workers). Through this agreement, the social partners also show their commitment to European guidelines on employment and subscribe to the broad orientation laid down at the Lisbon Summit for developing a knowledge-based society. This article deals with the main points of the agreement.

Wage Norms

The margin for wage rises estimated by the Central Economic Council – a rise of 6.4% over two years (including an allowance for inflation and wage-scale increments) -was accepted by the social partners as an indicative norm for sectoral negotiations. However, sectors in which performance proves to be particularly positive may consider making a further "exceptional and non-recurrent" increase of 0.4% to the maximum hourly wage rate.

Reduction of Indirect Labour Costs

Insofar as the knock-on effects of the previous reduction have been positive and the requisite budget margin is available, the social partners call for the implementation of the reduction in contributions contained in the Federal Government Agreement.

Vocational Further Training

The partners confirmed the commitment made in the previous Agreement to making additional efforts in the field of vocational further training, with the aim of bringing Belgium, over a six-year period, to the level of its three neighbours (this will mean raising the amount devoted to this area from 1.2% to 1.9% of payroll). This means that between now and the end of 2002, companies are supposed to devote 1.6% of payroll to training, concretising regional and local initiatives in this field. The agreements which will be arrived at within this framework will focus particularly on older workers and occupations where there are labour shortages.

Furthermore, the payment of 0.1% of payroll in support of vocational training and employment promotion for jobseekers from high-risk groups will continue. In relation to this, all sectors are called on to achieve a better targeting of the groups concerned: namely older, non-native and disabled workers.

Operation of the Labour Market

Improving work-life balance

At the suggestion of the government, a new convention for achieving a better balance between private and working life will come into force on 1 January 2002. The provisions of that convention are as follows:

- Workers are granted an entitlement to a time credit of one year maximum over their entire working life, either in the form of a total suspension of work or a reduction to half-time working. Such suspensions or reductions may be taken in periods of a minimum of three months, provided the person concerned has been with the company for one year.
- There will be a system to arrange for specific absences (palliative care, leave to help a family member with a serious illness, parental leave etc.).
- A system of career breaks will be introduced. In order to replace and simplify the current legal and conventional provisions in this field, a career break will be allowed at a rate of 1/5 per week. This break, which will be available to full-time workers with more than 5 years' service in their company, will be for a maximum period of 5 years over an entire career. So far as this scheme is concerned, particular provisions will be introduced for workers aged over 50.

These commitments were given due legal form by the National Labour Council in Collective Labour Agreement no. 77 of 14 February 2001. This Agreement establishes a system of time credits and an overall reduction of working life, and for moving to half-time working (which comes into force on 1 January 2002). The Federal Government has, in turn, pledged to adapt the provisions of the existing legal framework regarding career breaks.

The social partners also noted the government's decision to extend parental leave to 10 days from 1 July 2002 onwards. They called for the benefit payable to be covered by the national sickness and invalidity scheme.

The adaptation of working time regulations

The social partners also noted the government's decision to reduce the legal working week from 39 hours to 38. Currently, more than 204,000 workers still work more than 38 hours per week.

38 hours is to become the norm in all sectors by 1 January 2003 at the latest. Sectors – or failing this, individual companies – will themselves determine the detailed arrangements by which this reduction in working hours is achieved (granting of compensatory time-off, reduction of the working week etc.). Employers who reduce the working week to 38 hours in the period 1 July 2001 to 31 December 2002 will receive a single reduction in their employers' contributions of between 148.74 Euro and 24.79 Euro per worker, depending on the quarter in which they introduce the 38-hour arrangements.

The social partners also noted the federal government's decision to simplify and harmonise the existing systems for reducing contributions as partial compensation for the efforts of companies which are collectively reducing their

working hours (below 38 hours) or moving to a 4-day week.

Older workers

In line with the previous intersectoral agreement, the social partners party to the Agreement wish to pursue two objectives. On the one hand, they want to improve employment opportunities for older workers who wish to carry on working and for the elderly unemployed wishing to return to employment. On the other, they are looking to maintain and improve the existing early retirement systems and the "end phase of working life" scheme for workers in difficulty.

The social partners agree to seek to improve employment opportunities for older workers through a variety of measures. They also intend to apply the mechanisms and obligations of the First Job Plan to workers aged over 45 who have been unemployed for more than a year, provided that there are not enough young jobseekers available for work.

So far as early retirement is concerned (from age 58 onwards), they agree to the extension of the existing sectoral and enterprise collective conventions for the period 2001-2, together with the current exemptions for those companies which are restructuring or in difficulty. Possible early retirement schemes for those workers who are no longer able to cope with working night shifts, whose employer is not able to switch them to day-time working, will be examined by the National Council of Labour (CNT).

A more efficient operation of the labour market

The sectors are invited to draw on all possible innovations in terms of work organisation both to meet companies' economic needs and to fulfil the collective and individual aspirations of the workers.

The sectors experiencing particular labour-market difficulties will be allowed to deal with questions of overtime, detailed pay arrangements and the length of time benefit is paid in the event of redundancy etc., through collective labour conventions. A study group from within the National Council of Labour will examine the possibility of adapting existing legislation to the new developments within sectors and companies. Lastly, given the problems of recruitment and work organisation facing companies in the construction sector, the social partners in the sector concerned are invited to consider how a system of temporary work or its equivalent might be introduced.

Mobility

The social partners subscribe to the government's aim of improving mobility, both in the interest of business competitiveness and the quality of life of workers and of the population in general. To this end, they have agreed to:

- abolish the 1.2 million BEF (29,743.3 Euro) cap on employers' payments towards public transport costs;
- raise such payments to 60% of the season-ticket price (the current average figures is 54%); and
- raise awareness among enterprises to organise transport plans and encourage alternative forms of transport (cycling, car-sharing etc.)

White-Collar and Blue-Collar Status

Noting the difference in status between white- and blue-collar workers, and in light of economic, social and industrial developments, and also developments within trades and occupations, the social partners have agreed to examine this distinction, within the National Council of Labour, and to propose measures aimed at achieving a lasting solution of the problem before the end of 2001. These measures are to be phased in over a six-year period.

Simplification of Administrative Procedures and Improved Legal Security

In order to improve the climate of enterprise and stimulate employment growth, it is crucial that the administrative formalities imposed upon employers are reduced as much as possible. Where possible, these formalities should be replaced by more modern and efficient techniques, which offer the same general safeguards in terms of quality of data and the same security for the insured employees. The principle that identical or similar information should not be requested twice should be the guiding thread here.

Trials are currently being conducted on a system of immediate declaration of recruitment (the Dimona project) and on the multi-purpose declaration of wage and working hours data. The social partners intend to contribute constructively to these trials, in order to achieve appreciable simplifications of the system and to reduce the demands in terms of paper work made on employers. In the short term, they also intend to develop proposals – in collaboration with the National Social Security Office – for bringing together and simplifying the existing systems for dealing with reduced social security contributions. Moreover, the social partners also feel that the social elections procedure could be simplified in various ways.

Equality Between the Sexes

The social partners agree to keep up the effort begun in the previous Intersectoral Agreement, encouraging recourse to analytic systems for classifying occupational functions or their equivalent. They call on the government to clarify its intentions on introducing tax measures designed to promote the reclassification of functions.

Attempting to Reduce the "Wage Wedge" for Low Incomes

In the implementation of the previous Intersectoral Agreement, efforts were made to increase the net wages of low-paid workers as part of an attempt to eliminate poverty traps. The social partners are of the opinion that these efforts have to be continued, without this increasing wage costs for employers.

They note that to persist with the development of the current system of falling reductions in workers' social security contributions is not just administratively complicated, but runs the risk of creating a "wage trap" by virtue of the very high marginal rate of combined fiscal and parafiscal levies in the categories concerned. They are therefore calling on the government to give priority, as part of its tax reform from the tax

year 2002, to the proposal to increase the deduction for work-related expenses, in particular raising the first band on the work-related expenses scale from 20 to 25% (phasing this in, if necessary).

Germany

The economic situation and labour market developments

At the start of 2001 Germany is undergoing a period of strong revival in economic activity. With an increase in GDP in real terms of 3.0%, last year saw the highest economic growth rate since the reunification boom. As a result of the stabilising monetary policy of the European Central Bank (ECB), a financial policy designed to achieve sustained consolidation, and a wages policy promoting stability and employment in Germany, last year the domestically determined price level remained relatively stable despite the oil price shock. There was also a further reduction in the national deficit. As in the preceding year, growth was spurred on by net foreign investment. At the same time the strongly export-oriented German economy profited particularly from a lively worldwide economy and from the Euro exchange rate, but also from strong development within the EU. In the second half of the year, the buoyant economic forces weakened somewhat from the effect of the increase in oil prices and less favourable monetary conditions.

The revival led to an evident easing of pressure on the labour market, albeit primarily in the old *Länder* of the former West Germany. Employment levels rose, most strongly in the services sector and to a lesser extent in industry. In the year 2000 the number of wage and salary earners increased by an average 1.5% reaching 38.5 million. In addition to a rise in the rate of full-time employment, the increase in part-time working also played a greater role than previously assumed. Although demographic factors further reduced the labour supply, this influence was more than compensated for by the greater numbers of people seeking work, which actually resulted in an increase in the size of the potentially economically active population. The constantly decreasing unemployment figures are therefore an expression of the economic revival in the labour market. Viewed over the period since the start of the year 2000 the seasonally-adjusted unemployment figures continued to fall below the 4 million mark. This in turn reduced the average number of registered unemployed from 4.1 million in 1999 to below 3.9 million in 2000.

Overall in the year 2000, the position in the training market continued to improve. The number of new in-company training contracts rose by 2.6% to 564,374. For the first time since the mid 1990's, at the start of the new training year the number of empty places exceeded the number of young candidates still seeking courses. Regional differences, however, particularly between East and West, are still considerable. In addition, the *Länder* with growing numbers of students attending full-time vocational training establishments are playing a large part in relieving pressure on the training market.

The prospects for continued economic revival in Germany remain good due, in particular, to the continuing favourable economic conditions worldwide, a medium-term wages policy promoting stability and employment, a financial policy designed to encourage growth, and continuing structural reform. This year the tax reform will give a strong boost to private consumption and continue to improve Germany's position as an attractive place for investment. At the same time, however, economic growth in Germany like everywhere else will slow somewhat in relation to last year, in particular due to the increase in oil prices. The structural adjustment crisis in the East German construction industry in particular outweighs increased growth in the other sectors of the economy. This year the Federal Government is anticipating an increase in GDP of 2.75% in real terms. The price level remains stable and conditions in the labour market will continue to improve. Here, like last year, a decrease due to demographic factors is balanced by an increase in labour supply owing to the greater numbers of people seeking work. It can be assumed that the average annual number of wage and salary earners will rise by approximately 480,000 while unemployment falls by some 270,000. Despite recent and foreseeable future improvements, the target of high employment levels set in the German Stability and Growth Law has not yet been satisfactorily achieved. This is particularly true of the labour market situation in the new *Länder*. The creation of new, competitive jobs therefore remains the Federal Government's most important objective over the coming period.

The strategy: creating jobs and preparing for the future

The overall strategy of the Federal Government in terms of economic, financial and employment policy is based on the central objective of new job creation. As such it is vital to strengthen the current trends of growth and increased employment in a sustainable manner over the long-term. In light of the challenges set by further developments in European integration, globalisation and the development of the knowledge-based economy, it is also essential to achieve economic and social modernisation at all levels. This is the only way in which Germany can increase its attractiveness as an economic centre in the worldwide competition for ideas, capital, innovation and investment. Given the increasing level of inter-dependence within the European Economic and Monetary Union, this is a challenge which Germany must face together with its European partners. In this context, the Federal Government shares the conviction held within the EU that the key to greater growth and employment lies in the combination of a joint economic policy designed to promote growth and stability, with sustained structural reforms in the produce, capital and labour markets.

The Federal Government's economic and financial strategy therefore marries happily with the "Essential Features of the Economic Policy of the Member

States and the Community". For the core element of these "essential features", as approved by the European Council in Feira (Portugal), is the correlation between overall economic conditions which promote stability and growth, and structural reform. The Federal Government is therefore sending out clear signals at both national and international level about the medium- and long-term goals of its economic and financial policy. In this way it is also helping to build up long-term investor and consumer confidence in the future, without which economic growth cannot occur.

In order to create new jobs, the government, business and individuals must take both a positive stance on and an active part in structural change. Here the Federal Government sees its particular responsibility as being to create a general economic setting in which economic activity can develop in the most efficient, employment-oriented and environmentally sustainable manner possible. It has therefore implemented a series of major economic, financial and employment policy reforms. The most important of these are:

- A thorough overhaul of government finances through the continuous reduction of public deficits within the framework of the Future 2000 Programme, and qualitative improvements in the pattern of public budget expenditure.
- The implementation of comprehensive tax reforms.
- The adoption of the reform of the statutory pension insurance system together with the promotion of a fully funded system of old age provision.
- An active employment policy which makes a significant contribution to the national employment strategy.
- The strengthening of competition and the promotion of entrepreneurial spirit, particularly in small and medium-sized businesses, through various measures including the further liberalisation of the produce and services markets.
- A wide range of initiatives designed to improve performance and innovation in Germany and to drive forward the transition to a knowledge-based society.

In terms of the development of a global knowledge society in particular, it is essential to strike a new balance between individual responsibility and the public conscience in a socially and ecologically aware market economy.

On the one hand, this means that the government is focusing more strongly than before on achieving its core tasks. This in turn creates freedom for private initiatives. At the same time, a higher degree of independence and private old age provision is being asked of individuals in both a business and a private context. This makes it possible to limit government expenditure and create openings for tax and contribution reductions.

On the other hand it means that the government has an obligation to ensure that both individuals and businesses are able to assume this increased degree of autonomy successfully. It must create an economic environment in which they can seize and utilise the opportunities offered by increasingly open markets and new technologies. It also means giving them the opportunity to maintain their skills and make their own provisions for old age.

A government which both encourages self-reliance and offers social security provision must complement its policy measures with targeted social support in order to give its citizens the level of security in changing times that they need. The Federal Government combines this with a particular responsibility for those individuals who for reasons outside their control are unable to share in the prosperity of our society. However, the best contribution which a socially responsible economic, financial and employment policy can make is to enable as many people as possible to enjoy a full working life and thus an income from their own efforts, by means of dynamic economic development and appropriate reforms.

Here the Federal Government is aware that any far-reaching modernisation of the economy and society can only be achieved with the support of all groups within society. Structural reforms in particular, which question and change the status quo, require the acceptance of society. For this reason the Federal Government has set up the "Alliance for Employment, Training and Competition" to provide the framework for a broad-based social dialogue designed to identify and harness reform and employment potential.

Active employment policy

Employment policy in Germany must achieve two basic tasks. One is helping to reduce existing unemployment, and the other implementing preventive measures to combat future unemployment. For this reason the active employment policy continues to be pursued intensively despite the fall in unemployment figures.

Total budget for the active employment policy by Federal Government and the Federal Employment Agency for 2001 is set at DM 44,400 million (22,701 million Euro), some DM 2,000 million (102 million Euro) above the level of investment made in 2000. This reflects the increased emphasis on the preventive aspects of the active employment policy this year. It will continue to focus on combating youth unemployment and on the prevention of long-term unemployment. Measures targeting women will reflect their proportion of the total unemployed.

As a result the tools of employment policy will be more strongly focused on the problem groups threatened by long-term unemployment. In 2000 the percentage of active initiatives as a proportion of total spending on employment policy rose to 33.2% (1999: 31.2%).

Resources will be spent on qualifications and job creation rather than managing unemployment. As a result, in the year 2001 the promotion of education and training at a cost of some DM 18,500 million (9, 459 million Euro) (not including rehabilitation) will form the focus of the active employment policy. In 2000 some DM 6,100 million (3,199 million Euro) were spent promoting employment in the first-jobs market.

Since the start of the 1990s the active employment policy has played a signifi-

cant part in supporting the social aspects of the German reunification process. The difficult employment situation in the new *Länder* continues to represent a great challenge. For this reason a disproportionate amount of the resources spent on employment policy goes to the new *Länder*. The annual average fall in unemployment by 211,000 across the entire Federal Republic in 2000 is the largest drop in one year since reunification.

Greece

Key developments in Greek labour market policy

Overall Developments

From a macro-economic point of view, the Greek government has been seeking to achieve a further strengthening of entrepreneurship through taxation policies and structural reform. Emphasis has also been placed on active employment policies which focus on the reintegration of the individuals in the labour market through improved vocational guidance and opportunities to acquire appropriate professional and vocational training and practical on-the-job experience. In 2000, subsidies for active employment measures were increased, thus providing more incentives for employers to create new jobs and providing encouragement to those unemployed wishing to start up businesses and become self-employed.

Finally, during recent months, greater importance has been placed on the monitoring and evaluation of programmes.

Job creation

In its efforts to promote job creation, during the past few years, the Ministry of Labour has been implementing a large-scale subsidy scheme supporting job creation within enterprises and a subsidy scheme supporting "new entrepreneurs", people wishing to set up their own business. More recently, a new law (Law 2874/2000), related to the promotion of employment creation, was published in the Greek Government Official Journal on 29.12.2000 and became operational. The Law contains provisions for the regulation of overtime employment, the allocation of working time, the lengthening of maternity leave and provides motives for the long-term unemployed towards their reintegration in the labour market with the overarching aim being that these provisions will lead to the need for new employment posts to be created.

Furthermore, during the year 2000, the Ministry of Labour implemented two new programmes to promote employment in the fields of culture and social services. The first programme "Gaining professional experience and strengthening employment and self-employment in the cultural sector", aims to exploit the job creation potential of the cultural sector. Cultural heritage, music, cultural tourism, audio-visual media etc, are areas that can offer solutions for growth and employment during the next four-years, particularly with a view to the publicity which Greece and its cultural tradition will enjoy when it hosts the Olympic Games in Athens in the year 2004. Thus as a first step, the programme is subsidising businesses active in the cultural field that provide practical skills and on-the-job experience with the aim of creating a total of 2,900 new jobs for unemployed persons of 18-64 years of age. An amount of 7,000 drachmas (21 Euro) per working day is paid per position, for a length of time up to 22 months. At the same time the programme is subsidising 2,000 jobless aged 18-64, with an amount of 4 million drachmas (over 11,000 Euro) per individual, in order to assist them in creating their own business in the cultural area.

The second programme "Gaining professional experience and strengthening employment in the field of social services" is designed to create posts for school-guards. The programme aims to provide 2,700 jobless aged 25-64 with the opportunity to gain experience in guarding school buildings. The subsidy is a daily wage of 12,000 drachmas (35 Euro) for 22 days per month, to be paid for a duration of up to 11 months. With this programme, the Ministry seeks to train a body of experienced school guards, thus meeting the needs of the unemployed, while at the same time addressing the security needs of schools and students.

Training

In recent months, the Greek government implemented programmes for initial training in the Apprenticeship Schools and Institutes for Vocational Training; a programme for continuous and alternate continuous training; and other training programmes for unemployed young people that combine theoretical training with practical training.

Training programmes for unemployed young people are also being implemented by the Ministry of Labour at the Vocational Training Centres, the Ministry of Education at the Institutes for Vocational Training, the Ministry of Merchant Marine at the Training Centres for Merchant Navy Personnel and by the Ministry of Agriculture at the Technical and Vocational Schools for Agriculture.

Also, the establishment of a National Agency for Vocational Training constituting the link between the labour market and local needs and specialities by designing, programming, co-ordinating and evaluating initial and continuous training. Furthermore, a new fund, the Employment and Vocational Training Fund which collects specific contributions from employers and employees, is financing special programmes, such as programmes subsiding employment for older unemployed persons and for unemployed persons approaching retirement age.

Finally, the Ministry of Labour implemented a programme of training for the self-employed and for employees in micro-businesses employing between one and five individuals, as well as a programme of training for businesses and organisations in the broader public sector.

Special categories of workers

Policy priorities have recently focused in promoting a labour market open to all and in offering increased opportunities to special categories of workers and individuals in risk of being disadvantaged and excluded from the labour market. The programmes that have been implemented concern incentives and target groups, as follows:

- grants for employers recruiting disabled people;
- start-up subsidies for disabled young entrepreneurs;
- subsidies to enterprises employing ex-drug users;
- subsidies to enterprises employing ex-offenders and young offenders;
- business start-up subsidy scheme for ex-drug users wishing to become self-employed;
- business subsidy scheme for ex-offenders wishing to start their own enterprise;
- programmes subsiding employers and young professionals to support the ergonomic adaptation of the workplace for the disabled;
- subsidy schemes within the framework of the EU Operational Programme "Tackling labour market exclusion".

The Netherlands

The Social Memorandum 2001 outlines labour market policy priorities

Unemployment in the Netherlands has halved in the last five years and will fall to 3 percent in 2001. More and more people are finding work, including people who for a long time were dependent on benefit. At the same time as employers are finding it increasingly difficult to find staff, however, many people are still unable to find or keep a job. Together with employers' and workers' representatives, the government wishes to work towards a new agenda for the future. An important element of that endeavour is to increase and strengthen the supply of labour. Attention must focus primarily on benefit claimants, disabled individuals, members of ethnic minorities, older workers and women.

These views are expressed by the Minister of Social Affairs and Employment, Dr Willem Vermeend, and State Secretaries Hans Verstand and Annelies Hoogervorst, with responsibility for social security and women, respectively, in the *Social Memorandum 2001*. This document outlines in broad terms the policy lines for the coming years. It was published in conjunction with the Ministry's budget in September 2000.

The Cabinet wishes to join with employers and employee organisations in investing in training, working conditions, childcare facilities and leave arrangements. Steps will be taken to make it financially more attractive for benefit recipients to enter the labour market. In order to combat drop-out from labour market participation and promote a rapid return to work, efforts to combat sickness, absenteeism and incapacity for work will be increased.

The *Social Memorandum* discusses the major policy domains of the Ministry of Social Affairs and Employment. This summary will limit itself to an account of the content of the Memorandum, focusing on the employment and labour market area.

The situation of the labour market

Employment levels increased significantly between 1997 and 1999, by an average of over 3% per annum. The number of jobs was predicted to increase by 165,000 during 2000, and grow by 150,000 in 2001, representing annual growth rates of 2.25 and 2%, respectively. In contrast, the unemployment rate has fallen sharply, from 8% in the mid-1990s to 4% in 2000. The Netherlands Bureau for Economic Policy Analysis (CPB) predicted a further fall in the unemployment rate, to 3%, (230,000 people), in 2001. Long-term unemployment has fallen more sharply on average than short-term unemployment. The ratio between the number of economically 'inactive' and 'active' individuals (the 'i/a ratio') is developing favourably. The ratio fell from 82 in 1990 to 67.5 in 1999, and is expected to fall further, to 64.75, in 2001.

The growth in employment in recent years has partly been made possible as a result of pay moderation. Pay moderation is also important given the deterioration of Netherlands' competitive position in the labour market, compared to other European countries. This deterioration developed over several years, because of wage increases in the Netherlands. For example, since 1996, wage costs per unit product have risen by 11% more in the Netherlands than in Germany.

The fact that employment demand has grown more quickly than labour supply in recent years in the Netherlands has resulted in employers' finding it increasingly difficult to fill some job vacancies. For example, in 1999 there was an average of almost 170,000 unfilled vacancies; around 50% of these positions were vacant for a significant period of time. Staffing problems are concentrated in particular sectors, such as the hotel and restaurant industry, construction industry, business services, health care and education sectors. Employers find it particularly difficult to recruit for vacancies requiring staff with a professional or higher education background.

A particular problem occurs at the lower end of the labour market. There are more low-skilled job-seekers than there are suitable vacancies. Despite this, employers find it difficult to fill a proportion of these vacancies.

Labour market policies

A preventative approach to unemployment will be introduced for newly unemployed people during 2001. Unemployed people who are unlikely to succeed in finding a job through their own efforts will be offered training or employment within one year of becoming unemployed. An additional 1,397,643.07 Euro has been ringfenced for this provision in 2001, enabling work or training places to be offered to more than 40,000 additional unemployed people.

A 'customised approach' is also being developed for working with existing unemployed people.

Subsidised employment may be available for young unemployed people, those who have been out of work for more than a year and those who require adapted work. As a result of the introduction of the Jobseekers Employment Act (WIW), an estimated 55,000 entry and transfer jobs 6,500 work experience places and more than 48,000 jobs will be created in 2001. In addition, around 2,350 jobs will be created in the cleaning sector (through the Cleaning for Private Individuals Scheme), and in excess of 89,000 jobs will emerge as a result of the Sheltered Employment Act (WSW). The waiting list for jobs through the WSW had decreased by the end of 1999 from 16,000 to 9,000. An additional 1,160 jobs will be created in the sheltered employment sector in 2001.

The aim of subsidised employment initiatives is to increase the number of people progressing into unsubsidised jobs. From 2000, local authorities may use funds not absorbed by sheltered employment initiatives, to fund training and active integration schemes the following year. Tackling the poverty trap should also enable more people to obtain unsubsidised work.

The Minister and State Secretaries are committed to increasing the labour market participation of older workers by 0.75% per annum over the coming decade. These projections could mean that in 2030 half of all people aged between 55 and 65 will be working for a minimum of 12 hours per week. In 1999, around 31% of older workers were in paid employment for at least 12 hours a week.

Older Workers

Employers' and workers' representatives are working with the Minister and State Secretaries to develop an age-conscious personnel policy and improve pension scheme incentives. For example, fiscal support for early retirement schemes will eventually be abolished. Early retirement schemes will be converted into flexible retirement schemes. People will pay for this provision according to their individual status. Flexible retirement schemes should also enable people to take a career break, without this having major negative consequences on their pension entitlements.

To encourage employers to recruit older workers, the Reduced Employer's Contribution scheme for the long-term unemployed will be extended from 1 January 2001 to include older workers. Through the scheme, employers who recruit an unemployed person, aged 50 or over, who does not earn more than 150% of the minimum wage, (or 130% of the minimum wage for those under 50 years of age), will receive a deduction in their wage tax and social security premium contributions. The present requirement for a minimum length of unemployment will not apply for older workers. The Cabinet has also proposed that employers who dismiss an employee aged 57.5 or older should bear a proportion of the costs of unemployment benefit.

Ethnic Minorities

The Ministry has set a target of reducing unemployment among ethnic minority individuals to 10% by the end of 2002. An additional 135 million guilders (over 61 million Euro) has been allocated to achieving this task between 2000-2002. Agreement was reached with the small and medium-sized business sector that 20,000 people from an ethnic minority background would be helped into work. Fourteen large companies have also agreed to provide employment for people from the ethnic minority community. The consultations (held in Spring 2000) resulted in a long term commitment towards increasing private sector support for this work, with a target to involve one hundred large companies.

A project organisation is to be established to reduce bureaucracy and 'red tape', which are seen as hampering the efficiency of the benefits agencies. The Employment of Minorities (Promotion) Act is to be extended for a further two years, to the end of 2003. The incentive projects targeting Aruban, Antillean, Turkish and Moroccan young people are to be continued. The possibility of replicating this successful approach with other ethnic minority groups, such as Yugoslavian young people, will be examined.

Local authorities will be allocated resources to appoint 'job intermediaries' to guide asylum-seekers into work more effectively. In 2001, the initiative aims to help 4,700 asylum-seekers.

Concluding Remarks

The changing labour market situation has resulted in a review of Dutch labour market policy. An interdepartmental working group will examine the combined effectiveness and efficiency of all reintegration measures.

The Netherlands

The reorganisation of Public Employment Service functions

The Minister of Social Affairs and Employment intends to reorganise the Dutch public employment service (*Arbvo*). Its services will be incorporated into new and established public or private organisations. The division of Arbvo services will occur in stages. Firstly, a clear *internal* division of service roles and responsibilities will be established; and secondly, the development of a framework for the reorganisation of Arbvo functions and services within external organisations.

The first stage was implemented on 1 October 2000. Five business units were created within the PES (*Arbvo*):

- *Basic services* (a nation-wide network of Employment Service offices; employing 3000 people);
- *KLIQ* (focused on reintegration and employability; employing 3300 people. At present this is a nation-wide network of branches, covering 6 regions);
- Centres for Vocational Training (with around 1000 employees);
- Facent (Facilitation services; with around 300 employees);
- ESF-Nederland (with around 70 employees).

All 5 business units are largely autonomous and accountable for their own performance within Arbvo.

The second stage in the restructuring of Arbvo is currently being implemented. From 1 April 2001 the revised governmental structure will replace the previous central (CBA) and regional (RBA) boards of Arbvo.

The five company divisions of Arbvo have a number of implementation plans:

January 2002: the "Basic services" will become integrated into a new, independently governed, public sector agency called Centres for Work and Income (CWI). The 'change manager' is tasked with promoting a cultural change amongst job seekers. The ethos of the CWI will be "Work is more important than income".

From 1 April 2001 the reintegration activities of the PES will be transferred from Arbvo/KLIQ to a newly established private company called *"NV KLIQ"*. The new company is expected to focus on reintegration of difficult to place jobseekers and people disadvantaged in labour market terms. Initially all NV KLIQ company shares will be state-owned. Once the company is established in the market place, the Ministry of SZW may consider privatisation options for the reintegration services of Arbvo. This is in line with the philosophy of the new implementation structure for work and income. The Bill that outlined the case for privatising Arbvo/KLIQ was sent to Parliament in December 2000. Approximately 30% of KLIQs' gross turnover in 2001 will have to be realised on the free market; this will rise to approximately 60% in 2002 (when state subsidies - through local communities and UWV - drop to dfl 125 million); and approximately 80% in 2003 (with dfl 65 million state subsidies). From January 2004 state finance will cease to exist. At this stage KLIQ turnover should be 100% based on the free market. NV KLIQ will have to reduce its staffing levels, (by approximately 23%), in order to be competitive in the private market for reintegration services. KLIQ staff made redundant as a result of privatisation will be supported in finding alternative employment.

- The *Centres for Vocational Training (CV)* will form an external, autonomous organisation. CV represents a culture shift, from supply-side orientation services to demand led services. It is the responsibility of the recently appointed CV managers to achieve a good market position for the company in the reintegration and training field. However, this must be achieved whilst retaining CV's specific concept of training. CV is in a good position to achieve this objective, as its products are quite unique, and the Centres offer the main source of vocational training courses for the unemployed. This provision is important for job seekers and specific target groups (i.e. ethnic minorities, former offenders, and other people disadvantaged in labour market terms).
- *Facent* will also be an external organisation. In 2001 the newly appointed manager will be responsible for ensuring the service maintains the existing level and quality of services to clients. The manager will also be responsible for selling Facent assets and liabilities.
- *ESF-Nederland,* will form part of a newly created agency within the Ministry of Social Affairs and Employment (SZW).

On the 1 April 2001 all present members of the Central and Regional Boards of Arbvo stepped down. The newly (SZW-) appointed governors of the 5 company divisions assumed their new duties on this date. A lead governor has been appointed by the Minister of SZW with responsibility for the Central Board function. He is charged with finalising the restructuring process and closing the Arbvo company in a competent and efficient manner. The transfer process should be completed by 1 January 2002. Until then, the major challenge for the five remaining company divisions of Arbvo is to deliver good quality service provision, in a climate of organisational change.

Portugal

The Agreement on Work Safety, Hygiene, and Accident Prevention in the Workplace

On 9th February 2001, the Portuguese Government signed an agreement with the Social Partners on work safety and hygiene and accident prevention in the workplace.

The agreement includes the following measures:

- The definition of an intervention plan, which should be completed by the end of May 2001. This plan intends to reduce the rate of exposure to occupational hazards.
- The definition of a national Prevention Action Plan (PNAP), to be carried out over the next 6 months.
- The immediate reactivation of the National Council of Work Hygiene and Safety (CNHST), set up by Joint Order nº 204/87 of 16.11.1982, and currently inoperative.
- Redefinition of the attributions, composition and structure of CNHST.
- The setting up of a Prevention Observatory which will collaborate with CNHST.
- The adoption of measures to reinforce the linkages between the Institute for the Development and Monitoring of Working Conditions, the Directorate–General for Health and the Centre for Protection against Occupational Hazards. The aim is to prevent occupational hazards and to monitor the compliance with legislation.
- The global revision of the National Table of Disabilities caused by accidents at work and occupational illnesses and of the list of occupational illnesses.

United Kingdom

Overall developments in the UK labour market

Employment continues to grow across society; for both men and women, across most age groups, amongst groups such as lone parents, ethnic minorities and disabled people, and in most regions. The message is clear, the current policies are working. The challenge now is continuous improvement and development of policies to create economic and employment opportunities for all – the modern definition of full employment. The strategy for taking this challenge forward is set out in "Towards Full Employment in a Modern Society", a Department for Education and Employment (DfEE) Green Paper published in March 2001.

A major new development, announced by the Prime Minister on 16th March 2000, is the establishment of a brand new, modern Agency - the Working Age Agency - with a clear focus on work. This will draw together the Employment Service (ES) and the parts of the Benefits Agency (BA), which support people of working age. It will deliver a single, integrated service to benefit claimants of working age and to employers.

The Agency will support the Government's ethos of work for those who can and security for those who can't. It aims to extend to other benefits the success of the Jobseeker's Allowance regime in helping people to leave benefit quickly. It will offer a better deal for taxpayers: an end to waste, with fraud squeezed out of the system.

The new Agency is part of the Government's modernisation agenda and represents the next step in its welfare reforms. It will be established alongside a new service for pensioners. The aim is to accelerate the move from a welfare system that primarily provides passive support to one that provides active support in reducing poverty and social exclusion. The new Agency is necessary to ensure a change in culture and the expectations of staff and customers. By increasing individuals' employability the Agency will act as an engine of economic growth, providing a productive supply of labour to employers.

On 25 January 2001 the Secretaries of State for Education and Employment and Social Security announced the appointment of Leigh Lewis as the Chief Executive designate of the new Working Age Agency. Leigh is currently the Chief Executive of the Employment Service. He will take up his post with immediate effect and will oversee the Agency's creation. Leigh will be working up early proposals to develop the new Agency's proactive culture; one of his first tasks will be to establish 50 pathfinder offices. These will bring together the BA and ES at a local level, under one management with shared targets, as a model for the new organisation.

Pathfinder offices, to be up and running from October this year, are a first stage in the launch of the Working Age Agency. People of working age making a claim for benefit in these offices will be required to participate in a work-focused interview as an integral part of the benefit claims process and will be offered specialist support to help them into work.

The DfEE Green Paper and other key information can be accessed via the DfEE website **www.dfee.gov.uk**

Addresses of other websites can be found at the end of this article.

Placement and Vocational Guidance

The dynamic nature of the UK labour market means that an average of 223,000 new vacancies are notified to Jobcentres each month. This is estimated to be one third of the total job vacancies available. The dynamism is also reflected in the flows through unemployment with most people leaving unemployment very quickly. The speed with which people in the UK get jobs is indicated in the chart below (figure 1).

The Jobseeker's Allowance (JSA) regime is very effective at keeping jobseekers in touch with job opportunities, so helping them to move into work quickly. The Employment Service (and in the future the Working Age Agency) will continue with the challenge of matching people without jobs to jobs without people. It will maintain and improve its links with employers and other partners to achieve this goal. The Annual Performance Agreement (APA) between ES and DfEE will adapt and develop to take into account the focus of assisting those most at risk of exclusion from the labour market.

Although the active nature of the JSA regime is vital, the support, advice and guidance offered to Jobseekers by ES is key to ensuring that all unemployed claimants are able to take advantage of the opportunities available.

The policy intent is to adopt an approach to address the individual needs and circumstances of clients and the barriers they face in finding work. The ES puts this into practice through a partnership approach and has great flexibility to deliver local solutions to local issues.

Five core values are fundamental to the success of the ES:

ACHIEVEMENT: "we will focus on our people, on service, on partnership and on quality to achieve the results which ministers and the community want from ES"

SERVICE: "we are here to serve the public and will always do our best to meet the individual needs of jobseekers and employers"

PARTNERSHIP: "we will work closely with partners, meeting our objectives whilst helping them to meet theirs"

PEOPLE: "we will value our people and recognise that ES's success depends on them"

QUALITY: "we will strive continuously to improve what we do and the way we do it"

A programme of modernisation is underway within the Employment Service. More details of this programme are given in a separate section of this publication.

Whilst this Government is committed to delivery through a public employment service, it also recognises the strengths that private industry can bring to these functions. The existence of private and private public partnerships within ONE, Employment Zones and Action Teams, demonstrates a clear intent to consider all options to find practical solutions to the issues.

Job Creation

The Government's long-term ambition is employment opportunity for all. Macroeconomic stability is the prerequisite for this. Stable and sustained economic growth is key to generating a constant stream of new job opportunities.

Ensuring that there is a ready supply of workers to fill these opportunities is also important. That is why these policies are backed up at microeconomic level to ensure that individuals throughout the country are able to compete equally for jobs. Additionally, policies are in place to ensure that those willing and able to set up their own businesses are able to do so without burdensome regulation.

Included at the microeconomic level are policies such as the reform to the tax and benefit system and the National Minimum Wage. By pursuing these policies, the Government has established the foundations for sustainable employment.

Training

The UK accepts that more needs to be done at all levels to equip people with the skills they will need throughout life as well as the opportunity to continue to learn and adapt as progress, particularly in information and communications technologies (ICT), is made.

The development of the Learning Skills Council (LSC) addresses this issue.

The LSC will be a leading agent of change in realising the Government's vision of a learning society in England. It has a statutory duty to encourage participation in learning.

The LSC will bring together the planning and funding of all post-16 learning below higher education, reducing bureaucracy and duplication, and providing effective co-ordination of learning provision and a real focus on skills and employer needs.

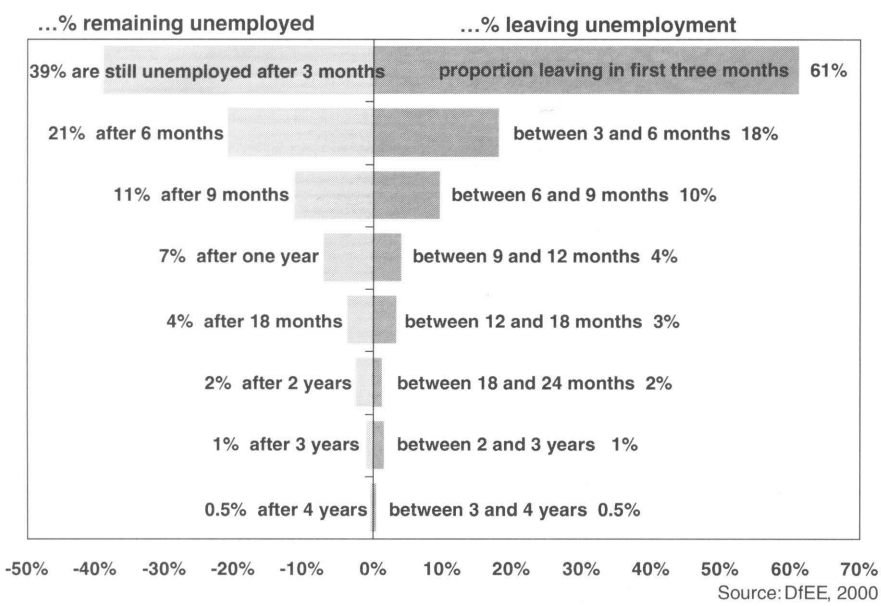
Key objectives include encouraging more young people to stay on in learning; increasing demand for learning amongst adults; and raising the skill levels of the workforce as a whole, including tackling basic skill needs. It will also take forward the work to develop teaching skills and qualifications.

The LSC will operate through 47 local LSCs, which will deliver national priorities and policies at local level, and ensure that the needs of local communities, businesses and individuals are reflected and met through Government funded provision.

New funding arrangements will ensure high quality provision for learners, and the development of a wider range of learning opportunities which recognise the higher costs involved in meeting the requirements of those with special learning needs.

Figure 1

Likelihood of Leaving or Remaining Unemployed
Of those becoming unemployed...



Source: DfEE, 2000

Business will be in the driving seat - 40% of board members, together with the national chair and the majority of local chairs have substantial recent business or commercial experience.

Working Time

The Working Time Directive regulations includes a right for workers not to work over an average of 48 hours a week; entitlements to paid annual leave and daily, weekly and in-work rest periods; and special conditions for night workers.

The Commission's proposals on sectors (road, rail, air, inland, waterway and lake transport, sea fishing, "other work at sea", and doctors in training) excluded from the Working Time Directive were published on 18 November following a White Paper in July 1997 and a second consultation with the social partners in March 1998.

We will be looking carefully at the Directive and will seek to ensure it does not adversely effect the competitiveness of industry or the delivery of healthcare within the National Health Service. We will want to ensure the agreed Directive is balanced, sensible and accommodates our concerns.

The Government sees the EU agenda as being a balance between increasing the flexibility or adaptability of labour markets and providing decent minimum standards of fairness at work; avoiding undue burdens on business which inhibit employment growth and the need for active employment policies to promote employability.

Miscellaneous

A number of new developments are underway to further enable those without jobs to become active in the labour force.

The Job Transition Service (JTS) will offer additional help in areas where large-scale redundancies occur and where unemployment is already high. It will not only help those people directly affected, but also people from communities indirectly affected by the job losses.

JTS is a new programme and key to the way in which this Government is tackling large-scale redundancies. JTS builds on existing ES support to provide the extra help needed to move people rapidly back into work. In particular

it works with employers to identify skill shortages and match people to jobs.

We will continue to improve both the policy and delivery of the New Deal to build on the success of over 270,000 young people off benefit and into work.

We have evaluated the programme very carefully and listened to a number of views from young people, employers and training providers. We will have a greater focus on the needs of employers in crucial sectors of the economy helping fill their vacancies and end their skill shortages starting with the information technology (IT) sector, where we will guarantee IT training for all people entering the New Deal. Lone parents, older people and people with disabilities, whose working potential may have been written off, will be given more opportunities to get work and lift themselves and their families out of poverty.

We will have:

- a clearer focus on job retention and progression;
- improved option performance with more employment focus;
- greater flexibility for personal advisers (building on example of success of greater discretion given in Employment Zone areas) to spend money where it leads directly to a job;
- help for the hardest to help through greater investment in specialist provision, outreach and transitional employment;
- strengthened employer engagement and built on the success of initiatives in key sectors such as IT, retail, construction, hospitality.

Useful Websites

Department for Education and Employment
www.dfee.gov.uk
Department of Social Security
www.dss.gov.uk
HM Treasury
www.treasury.gov.uk
Employment Service
www.employmentservice.gov.uk
New Deal
www.newdeal.gov.uk
Worktrain
www.worktrain.gov.uk
Learning and Skills Council
www.lsc.gov.uk

Austria

Organisational reform in the Austrian labour market service

Background - The "BVS Analysis"
In 1998, a firm of management consultants was asked to carry out a comprehensive "analysis of the tasks and activities in the advisory and placement service". The objectives of this study were:

- to provide an up-to-date, comprehensive picture of the tasks and activities of staff working in the advisory and placement service; and
- to provide an evaluation of this situation as regards the customer-oriented use of resources at the current staffing levels.

The result of the analysis was that, aside from the positive development potential and many strengths of the organisation, there was also a need for some fundamental improvements and changes.

One of the consequences was that a **new organisational model** for the structure of the regional offices was developed.

The new organisational model
The new **basic organisational model** is based on the following **principles/ cornerstones**:

- a clear **segmentation of customers** according to their problems and support requirements;
- the specification of a clear, transparent **range of services** in accordance with the different support requirements of the individual customer segments;
- an organisational design and definition of the various support services in the form of a **3-zone concept,** in combination with clear customer management; and
- a spatial and organisational **merger of job placement and subsistence assurance services** as a basic provision in the "service zone" - and thus the creation of a single contact point for the majority of customers.

Essentially, the new organisational model is based on a clear, consistent segmentation of customers – that is to say, a division of customers into individual sub-groups.

This is based, in turn, on categorising customers in groups with more or less the same problems and support requirements, so that they can be served or supported specifically, in the way that best meets their needs.

The following factors were given as criteria for identifying and classifying customers.

- the customer requirement or need;
- the complexity of the problems; and
- the time dimension (length of time without work/time searching for work).

On the basis of these criteria, four segments or sub-groups were defined for the 'job-seekers' customer group:

- "Information customers"
- "Service customers"
- "Support customers"
- "Integration customers".

Building on this customer segmentation and the classification of the corresponding services offered, the organisational design and consolidation of this concept was undertaken in the next model development phase.

Considerations of customer flow and how best to control it, the customer structure and customer requirements, or the support services derived from these, finally led to the services' being organised, grouped and offered in 3 zones:

- an "Information Zone"
- a "Service Zone"
- an "Advisory Zone"

After examining the question of the segmentation of customers, their particular needs and the corresponding range of services, it was found that many job-seekers need a "basic package" of information, placement support and subsistence support.

The Service Zone is now the place where this customer group is primarily supported and in which, therefore, this basic package must be provided.

Merging the job placement and subsistence assurance services into this area, in both spatial and organisational terms, was therefore an important and consistent step forward in the development process.

The pilot schemes
This new basic organisational model was developed on the basis of the empirical results of the strengths and weaknesses analysis, in continuous consultation between external consultants and the staff of the labour market service at all levels. To test the feasibility and success of this new model in practice, it was piloted in six selected regional offices to assess its practical viability and effectiveness.

Progress report / Evaluation of the pilot schemes
Because of the complex objectives of the pilot schemes, the evaluation had to cover a number of dimensions. Various types of criteria were therefore applied in the evaluation of the new organisational model.

a) Satisfaction criteria

- Customer satisfaction
- Staff satisfaction

b) Criteria relating to labour market policy (achievement of objectives) amongst

- job-seekers
- job-providers

c) Organisational efficiency criteria in the areas of the

- advisory and placement service
- insurance services

a) The central dimension in the evaluation of the piloted organisational model was taken to be the concrete, **immediate assessment by the customers** of the regional offices. The general result of a broad customer survey was that the changes in the pilot offices had been noticed by the customers and were regarded as clear improvements. Customers were particularly positive about

the reductions in waiting times and better appointments planning in the advisory service.

As part of the evaluation of the pilot model, a further important cornerstone was defined as being the **assessment by staff, or staff satisfaction**.

In comparison with 1999, overall satisfaction in the pilot offices rose; the desire for changed working conditions was less pronounced, and clarity as regards tasks and procedures further improved. Specifically, the new organisational model was well received and, in the view of the staff, achieved clear improvements in the quality of customer support, the ability to plan appointments, and cuts in waiting times.

b) Results regarding the achievement goals in terms of **criteria relating to labour market policy** show that the pilot offices were generally able, during the pilot schemes, to record major improvements in the provision of support to job-seekers. For those criteria in which the reference offices were doing better at the start of the pilot schemes – which was often the case – the difference between the pilot office and the reference office generally became smaller. As regards the number of vacancies filled, the pilot and reference offices both improved considerably during the observation period. The speed with which vacancies were filled, on the other hand, often varied. No general trend can be detected here.

c) Organisational efficiency criteria in the job-seekers' service measure the frequency of contacts, whether the placement data are up-to-date, ease of search and the use of automatic search support. In the companies' service, they measure the frequency of contacts, placement attempts and checks on whether vacancies are still available, and support planning. Here, there were no noticeable developments in these indicators and, even in the very critical phase of the changeover, no setbacks. The results were generally maintained throughout the entire observation period and often both the pilot and the reference offices showed the same developments.

The indicators as regards insurance services (time required to settle the application, return requests, deductions due to incorrect assessment, number of computer entries per application) also provided mainly positive or equally good results; any observed deterioration in the time required to deal with an application in a regional office was rectified.

One of the cornerstones of the model is the (initial) access to the service zone for all customers and the forwarding of those customers with a greater need for support to the consultancy zone. The **referring of customers from the service zone to the consultancy zone** was therefore seen as being a particularly important factor which was analysed in detail.

To this end, the pilot offices kept records on the people who became unemployed in September 2000 and monitored their stay in the service zone or their transfer to the consultancy zone over a period of 3 months.

As an average over all six pilot offices, 23% of customers were referred to the consultancy zone. This means, in turn, that almost 80% of incoming customers are provided with support in the service zone until (successful) completion and receive their full range of support there, in one place.

Of the customers who were transferred, the majority (51%) are forwarded immediately; the remaining customers are transferred in the course of the three months. Only a small proportion of customers are forwarded at the end of this period, i.e. after more than three months (around 18% of the "transfers", which is around 4% of incoming customers altogether). The reasons for these transfers are generally promises of jobs that have come to nothing.

The records thus prove that the previously defined "transfer criteria" are accurate and that the staff in the service zone are able on the one hand to successfully support and place job-seekers, and on the other to recognise people with a greater support requirement.

Implementation throughout Austria

The organisational reform of the regional offices is being implemented gradually in all of Austria's regional offices as from February 2001; it aims to be completed by the end of 2003.

Austria

Successful objectives management in the Austrian labour market service

The development of objectives management from 1995 to 2000

In 1995, the Austrian labour market service established an objectives system throughout Austria which controls the performance of the organisation in the labour market through the quantified agreement of labour market policy objectives (8 national targets, 1 state target and 1 regional target).

This system adapts dynamically to the forecast for the labour market situation, with annual and medium-term objectives being agreed. Part of the annual bonus paid to the Austrian labour market service staff depends on the extent to which these objectives are achieved.

When the effects of the recession were starting to impact the labour market in 1995, the Austrian labour market service defined the following longer-term strategic objectives against a background of increasing unemployment figures and shrinking job availability:

- preventing long-term exclusion from the employment system;
- helping the workforce to adjust to structural change;
- improving labour market matching; and
- providing the best possible state services.

The Austrian labour market service is thus making its influence on the labour market clear: it is ensuring that unemployment / job vacancies last no longer than the market situation justifies.

The annual focus within these main objectives is determined by the perception of the problems by the Austrian labour market service, all three members of the social partnership and the representatives of the owners. Thus the focus in the last five years has been on the following groups: the long-term un-

employed and high-risk people such as older workers, the disabled, female carers or women requiring training, those receiving emergency aid and young people who have been registered for some time.

In order to help with structural change, targets were set for training employees.

The position of the Austrian labour market service in the job market was successfully strengthened by measures to increase the number of jobs available and fill them quickly. Imbalances between labour supply and demand were evened out through cross-regional job provision in the tourist industry.

Provision of the best possible public services was achieved consistently through the prompt processing of all benefit applications, by the Austrian labour market service.

The objectives for 2000

On the basis of the probable development of the labour market in 2000, the labour market service highlighted the following priorities:

- **Preventing long-term exclusion from the employment system**

Stopping people from becoming long-term unemployed represents the preventive aspect of fighting unemployment. The opportunities for integrating the long-term unemployed and older workers into the first or second labour market were to be increased. Women were to be supported in taking up work through the provision of training courses, and the disabled were to be supported through the provision of career rehabilitation measures.

- **Improving labour market matching**

The placement process was to be supported through the provision of the greatest possible number of vacancies. In the tourist industry, regional bottlenecks between labour supply and demand were to be eased.

- **Prevention of youth unemployment**

Support was to be provided for young people entering the labour market; the onset of long-term unemployment was to be prevented as far as possible.

Achievement of objectives in 2000

A major factor in reducing unemployment is **meeting rapidly the need for workers** in the commercial world: 65% of jobs are filled within a month. The potential number of vacancies available to the Austrian labour market service for forwarding to job-seekers increased by 18%.

Prevention is the key strategy in the **avoidance of long-term unemployment**. The measures applied by the Austrian labour market service are therefore aimed at cutting the number of people who become long-term unemployed (> 12 months). With a 23% reduction compared with 1999, this was achieved in 2000 to such an extent that it had an adverse effect on the second objective, i.e. increasing the number of the previously long-term unemployed finding work. In absolute figures, because of the reduction in numbers, fewer long-term unemployed could be integrated into the labour market. The number of women entering work after training measures increased by 13% compared with 1999. The participation of disabled persons in career rehabilitation measures was considerably expanded.

Similarly, the **situation for young people improved dramatically.**

With all the objectives, performance improved for women; this means that the differences between women and men are gradually being eroded.

With this system of objectives, the targets set for the Austrian labour market service in the National Action Plan for Employment for 2002 were also largely achieved: the rate of transfer to long-term unemployment was to be halved for both adults (starting from 9% in 1996) and young people (6.9% in 1996); in 2000, the figures were 3.5% for adults and 3.8% for young people. The targets in guideline 3 were also achieved: whilst only 10.7% of unemployed persons were undergoing active training in 1996, the figure had reached 19.81% in 2000.

Developments in 2001 and outlook for 2002

In the current year, the Austrian labour market service is focussing on the internet as a new distribution channel, with the aim of increasing market transparency. 95% of all those registered are to be listed on the internet through anonymous job-seekers' ads, and will be contactable by companies.

A further key development is the regaining of company clients who had not sent vacancies to the Austrian labour market service for some time.

The preliminary work for the labour market objectives of 2002 has been influenced to a large extent by the introduction of a comprehensive quality management system. The goals have been derived strictly from the model and the longer-term plan, with particular emphasis on reviewing the results, which are incorporated into future developments.

Finland

Employment Offices introduce electronic transactions for jobseekers

The Finnish Labour Administration has expanded its Internet services, and Employment Offices have introduced electronic transactions for jobseekers. Employment Offices already have some 80,000 presentations (CVs) made by jobseekers in their data system, about 3,000 of which are available on the Internet.

Jobseekers can now send their curriculum vitae (CV) straight to the Employment Offices' data system and, if they want, put their details on the Labour Administration's web pages. Profiles can be updated regularly or deleted. Employment Offices use these profiles when presenting jobseekers to potential employers. If a jobseeker wants a personal profile on the Internet for employers to access, the information can be stored there for two months.

This new service allows jobseekers to check that the information held, which includes name and contact address, occupation applied for, qualifica-

tions etc., is correct. As these web pages are linked to Employment Offices changes have to be requested by e-mail or by telephone.

For electronic transactions the client needs a user ID and a password from the Employment Office. Electronic transactions are also possible using an electronic identity card granted by the police.

Electronic transactions were first introduced in Finland at the end of 2000 and by early February 2001, 3,300 persons were granted user IDs.

Enhancing the Electronic Services of the Labour Administration

The Labour Administration's web pages (**www.mol.fi**) include plenty of information. There are over 5,000 daily job advertisements and one advertisement may include several vacancies. The pages also show European Employment Service (EURES) vacancies as well as providing links to vacancies in Finland and other countries. Additionally, the pages show information on training and occupations, a jobseeking manual, the Avo vocational guidance programme and plenty of information on the Labour Administration and the European Social Fund. It is also possible to print out Employment Office forms from the site.

E-mailing Employment Offices for advice, information and to provide feedback on services, has been possible since 1996.

Employment Offices have a telephone helpline called Työlinja (the Job Line) (tel: 0203 66066). It provides information on vacancies, labour market training and the range of services offered by Employment Offices.

The teletext pages of the Finnish Broadcasting Company (YLE) also provide information on vacancies, on labour market training and what is happening in the labour market.

Popularity of the Labour Administration's Internet Services

According to a survey (**www.alexa.com**), in January 2001, the Labour Administration's web pages were the third most popular in Finland. And according to a user profile study (SPOT user study) in Autumn 2000, more than half of those using the Labour Administration's web pages were working, about one-fifth were unemployed and one-fifth were students. Compared with other services, the proportion of women users was high and, according to the study, the average age of users was 32.

In 2000, employers notified Employment Offices of more than 19,000 vacancies via the Internet. In the same year the Job Line received 91,000 calls.

Objective	Actual, 1999	Target 2000	Actual, 2000
Prevention of long-term unemployment (number of persons moving into long-term employment > 1 year)	25,372	Not more than 26,531	19,551
Finding work for long-term unemployed	10,527	min.10,461	8,915
Increasing labour market opportunities for women through training	25,821	min.22,140	29,248
Of these, from longer courses (> 3 months)	5,440	min.5,179	7,202
Stabilising the level of career rehabilitation for disabled people registered as unemployed (average number in training)	1,873	min. 1,625	2,273
Increasing the labour market opportunities of older workers (from age 45 years)	75,609	72,679	80,807
Prevention of long-term youth unemployment (number of young people moving into long-term unemployment > 1/2 year)	9,035	Not more than 9,123	6,734
Vacancies filled	227,688	Min. 232,303	267,958
Job placement across different states, in the tourist industry	4,446	min.5,614	6,270

Italy

The Ordinary Job Placement System for workers in Italy

In the past, the work placement system in Italy has not functioned as was hoped and expected, especially by unemployed people and by workers in search of new opportunities.

One exception up until two years ago was represented by registered disabled workers, for whom placements were earmarked by regional employment agencies according to professional category and qualifications.

The Italian work placement system has developed through small incremental steps following the passing of Law no. 264, establishing ordinary employment placement, in 1949. A new approach was adopted as a result of the employment services reform initiated under Legislative Decree 469 of 1997, resulting in the delegation of responsibilities for the management of job placement and active labour policies to regional and local government bodies. This took place under the provisions of Law 59/97, the so-called "Bassanini Law".

Over the last three years, the reform of the system has worked its way through a number of measures. These have included:

- regional laws for the local organisation of new bodies with jurisdiction over such activities, plus measures which identify the resources to be transferred to the regions with regard to the job market;

- a legislative decree for the distribution of the relevant administrative functions between the regions and local government bodies;
- the Legislative Decree no. 181 of the year 2000, which set the rules for bringing together the demand and supply of labour, in implementation of Article 45, paragraph 1, letter a) of the related labour law (Law no. 144/99).

The most important element completing the reform, at least from a legislative point of view, was the Presidential Decree no. 442 of 7 July 2000, published in the *Gazzetta Ufficiale* on 13 February 2001, which regulated the simplification of the procedure for the ordinary placement of workers.

The regulation in question was issued as part of the general powers for orientation, employment promotion and co-ordination which remained within the purview of central government, even after the transfer of functions and responsibilities at regional and local level. One of the decree's objectives was to ensure the effective implementation throughout the national territory of the S.I.L. (Labour Information System) coordinated by the old district employment agencies. As a result these agencies will acquire a new role. They shall no longer provide a merely administrative-bureaucratic service, consisting of gathering unemployment statistics through registry checks, but they shall operate as modern employment agencies, attempting to find jobs for those requesting the service through a modernised labour demand and supply matching system.

The Labour Information System was established in the Legislative Decree 469/97 on the reform of employment services. It consists of the sum total of organisational structures, hardware, software and network resources regarding the functions and responsibilities involved in the job-placement service and in active labour policies. The Labour Information System is managed on a national level, but all the parties involved in the management of employment services, whether public or private, must provide data on the supply and demand of labour through a network connection.

The process of placement matching in the past clearly lacked efficiency, as a result of its cumbersome and bureaucratic procedures and failed to respond to the changing labour market context.

To gain a better understanding of how these shortcomings have been addressed, the recent regulations need to be looked at more in depth. Chapter II of Decree 442 set the basis for the creation of two new instruments, the registry list and the professional charts, both of which were designed to contribute to the organisation and supply of "services to individuals in search of employment".

Moreover, Article 4 of the regulation calls for the creation of a registry list on which unemployed individuals in search of their first job, or employed individuals seeking to change jobs, are to be entered. This list will contain the complete registry data on the individual, as well as the information regarding his or her residence, domicile - if different from the residence - family status, qualifications, as well as current employment status.

This information, when used to support access to the labour market or other professional or training activities, may be disclosed by the employment agencies without the prior consent of the individual, unless the latter opposes this for legitimate reasons. Moreover, such "sensitive" information, as well as information regarding legal measures, cannot be disclosed under the conditions set by Article 22 of the law safeguarding personal data (Law no. 675/96). The recipients of this data could be private employers, public economic organisations, authorised placement enterprises, pension and social security entities, professional training centres and the branches of the Public Administration.

The list is to be updated with additional information supplied by the worker and, on an automatic basis, through the obligatory communications regarding hiring, the transformation of employment relationships and their termination. These communications must be made by the employer to the employment centres, as a rule within 5 days of the event in question. This information will also be sent to the temporary employment agencies and the companies active in the field of private placement, two categories recently authorised to operate in the labour market.

Records are kept on the list for the duration of an individual's working life, unless he/she asks for them to be removed.

The co-ordination between the registry and the Labour Information System is to be regulated by a decree issued by the Ministry of Employment and Social Security. The decree was issued upon receipt of the opinion of the most representative unions of workers and employers and within sixty days of the regulations coming into force. Decree 422 is to define the contents and procedures for the processing of the data contained on the registry to integrate it with the Labour Information System. It will also define the division of roles in the process of handling the data, set the basis for the basic professional codification and, finally, support the classification of the information contained for statistical purposes, based on criteria which prove consistent with those established on the Community level and internationally. The registry list prepared by the employment agencies shall be managed electronically, following procedures to ensure that data aggregation and dis-aggregation match the purposes of the Labour Information System.

As mentioned above, the other significant new development regarding Decree 442 is the preparation of a professional chart which shall hold, in addition to the data already examined for the registry list, all information regarding the training and professional experiences of the individual in search of employment, as well as his or her actual availability and, finally, his or her professional qualifications and skills.

The professional chart is to be drawn up, within sixty days of the date on which the regulations go into effect, under a decree issued by the Ministry of Labour and Social Security, after opinions have been received from the Ministries of Public Education, of University Affairs and Scientific Research, of Public-Sector Functions and of Equal Opportunity, and from union organisa-

tions, as well as from the Unified Labour Conference.

Finally, the regional governments are granted the right to create a personalised electronic data card enabling the entry onto the Labour Information System databanks, to be presented to individuals in search of employment, so as to favour access to employment services.

Netherlands

Implementation of a one-stop-shop structure for job seekers and benefit claimants

On 17 January 2001 the Minister and State Secretary of the Department of Social Affairs and Employment (SZW) sent a draft plan of the new Implementation Structure for Work and Income (SUWI) to the House of Representatives of the States General. The draft plan contains details of the main aspects of the new implementation structure. This was agreed by Ministers and Parliamentarians in the House of Representatives in Spring 2000.

Realising a "One-Stop-Shop"

A new organisational structure for the Employment Service and Social Security in the Netherlands will come into effect on 1 January 2002 transforming the existing system. One hundred and thirty (130) Centres for Work and Income (CWIs) will be established. The Centres will function as 'one-stop-shops', enabling people to register as job seekers and apply for Social Assistance Benefit (ABW) and/or Unemployment Insurance Benefit (WW). The CWIs will offer a wide range of services. The new Implementation Institute Employee (social) Insurance (UWV) will operate from CWI sites. It is intended that both CWI and UWV will become independently governed public sector agencies (i.e. not governed by the state).

The vision is for CWIs to provide an "open market place" for employers, employees and other relevant parties to meet. *The centres will be strongly work-focused.* The amalgamation of job search functions with the public benefits agencies will streamline the Employment and Social Security systems, ensuring benefits assessments and payments are carried out accurately and efficiently.

The objectives of the new implementation structure are:

- promoting work;
- providing customer-oriented services;
- achieving effective and fair implementation.

Customer-oriented services will encourage clients to assume ownership of their reintegration into paid employment. Clients' rights and obligations will be clearly defined in the new implementation structure. A clear distinction between public and private provision will be evident in the new structure. Public sector functions will be: "JSCI/phasing"; basic employment services; social benefit assessment and implementation. Private sector companies will provide reintegration activities for job seekers. These companies will be contracted by public benefit agencies (UWV and local social services), and employers.

CWIs will provide employment services and data collection functions. The data will be used to assess benefit entitlements. It is envisaged that around 500 local community social services will be represented through the "one-stop-shop".

Most CWIs will be housed in "assembly company buildings". Both public organisations, (such as CWI and UWV) and private organisations (such as safety and health services; reintegration companies and temporary work agencies), will have their 'front offices' in the assembly company buildings.

The CWIs will provide a national service, with offices across the Netherlands. This will ensure the provision of a quality service that is accessible, (CWI provision should be within one hour travel time for all clients). The structure aims to provide an effective and flexible service.

CWIs will also conduct disability benefit assessments. Social Insurance medical doctors and labour experts will provide consulting hours in all CWIs to aid this process. This will significantly improve provision. Prior to this, implementing bodies of the Employees Social Insurance, (the current 5 UVIs), provided services in a maximum of 40 municipalities.

Customer service will be enhanced through the creation of a client manager role. This post will ensure a holistic service is provided, for long term benefit claimants in particular, who may have to liase with a number of agencies. The client manager will provide continuity for the client in dealing with CWI, the benefit agency and, in some instances, a (private) reintegration company.

The CWI will mediate between employers and job seekers, assessing the distance of job seekers from the labour market. This will be achieved through the "JSC/phasing" process, and the collection of information to assess benefit claims. It is the intention that clients of the CWI initially deal with only one CWI consultant for both work and benefit issues. The CWIs will offer a standard level and range of services across the country. Local implementation differences should not be evident, and therefore CWI employees could be interchangeable.

The organisational structure of the CWIs

CWIs will employ between thirteen and one hundred employees. The average sized CWI will employ around thirty people. Overall management of the 130 CWIs will be led by six District Directors.

The CWI will be headed by a Governing Board. The Board will consist of 4 members. They will give accounts of their activities to the Minister of Social Affairs and Employment. The Board will receive advice from an Advisory Council. A Client Council will also be established.

The CWI organisation will recruit its employees from the following sources:

- those currently employed at the public Employment Service (Arbvo);
- those employed at the present 5 implementing bodies of employee social insurances (the UVIs: i.e. Cadans, GAK, GUO, Sfb and USZO);
- municipal social services.

It is anticipated that by January 2002 the CWI will have more than three thousand employees. Services will gradually be transferred from the existing administrations to the new CWI. From 1 April 2001, the previous "basic services" of the Employment Service (i.e. the non-privatised part of Arbvo) will be brought under the direct responsibility of the newly formed CWI Governing Board.

A Council for Work and Income (RWI)

The new implementation structure will establish a Council for Work and Income (RWI). The aim of the Council is to guarantee the involvement of employers, employees and municipal organisations in the development of policies concerning work and income. The RWI will draft an annual policy framework that identifies proposals across the work and income domain. This will be submitted to the Minister of Social Affairs and Employment.

The RWI will also have the authority to subsidise sectoral, regional and company initiatives. The RWI subsidy budget will be tied to current (PES) subsidy levels ringfenced for these types of initiatives.

The RWI is scheduled to become operational on 1 January 2002.

The Implementation Institute of Employee (social) Insurances (UWV)

There are currently five implementing bodies for Employee Social Insurances (i.e. UVIs). These will merge during 2001, to form the new Implementation Institute of Employee (social) Insurances (UWV).

In December 2000 the UVIs relinquished their shares to a new organisation called the "Foundation to Prepare for UWV". The UVIs will be involved in the innovation process. However, their level of involvement will be tempered by their primary function being to maintain current service performance levels.

UWV duties will be relegated to 3 Units: "Unemployment"; "Disability" and "Collection of contributions". Customer assessment and applications for unemployment or disability benefit will take place at the CWI. Those elements of the claim assessment process and administration of benefit payments that do not require direct contact with clients will take place at around 40 "mid-office desks". This figure closely relates to the present number of branches of the 5 UVIs. Social insurance policy administration will be centrally organised in the new structure.

Client Participation

Client participation is considered vital in the vision of the new structure, to realise a high standard of service. The new Institutions are required to identify the quality standards they will adhere to.

The new structure will empower individual clients. Clients will be given the opportunity to co-determine the content of reintegration advice or be involved in choosing a reintegration company. Both CWI and UWV will establish Client Councils and Client Platforms at various levels.

Information and Communication Technology (ICT)

ICT is an important aspect of increasing the quality of services. ICT will increase the efficiency of data collection, ensuring that data required by a number of personnel and for a variety of functions within the SUWI will only be collected once. This will allow centrally stored information to be utilised in a number of ways. However, accessibility to client information will be limited by client confidentiality regulations. The introduction of an efficient, comprehensive internal communication system should improve clients' perceptions of the SUWI, promoting the units within the SUWI as part of a unified organisation.

Two ICT policy initiatives will be implemented:

a) to eliminate evident bottlenecks in existing systems, by designing a workable "SUWI chain" in 2002;
b) a complete overhaul of the SUWI information system (to replace the present Client Monitoring and Communication System).

The first policy initiative is currently being pursued. The second initiative will take 5 to 10 years to realise.

Supervisory structures

The supervisory structure for the implementation of the new centre for work and income must be less fragmented than previous structures. The supervision of both municipalities (i.e. the Supervision Directorate of the Ministry of SZW) and of the implementing bodies of employee social insurances (i.e. Ctsv) will be integrated into one agency: a Supervisory Inspectorate of the Ministry (IWI). This Inspectorate will be an independent body. The Inspectorate is scheduled to begin work with the new Supervisory Inspectorate in January 2001. However, the actual start date for the integration process will be determined by debates on the SUWI Bill in parliament.

United Kingdom

Modernising the Employment Service

The Modernising the Employment Service (MES) Programme will help the Employment Service (ES), and, later in this year, the Working Age Agency (WAA), to deliver a more effective and efficient service to employers and jobseekers in the 21st Century. It will mean major changes in the way ES delivers its business, building on new technology to create an outward-looking and customer-focused agency at the very forefront of the Government's modernisation plans.

MES projects

A great deal has been, and is continuing to be, achieved. The majority of Jobcentres have had the PCs and servers used by ES staff replaced, and the six jobs databases have been successfully merged into a single, national database to make information quicker and easier to retrieve. In turn, this has paved the way for the Internet job bank, which was launched in November 2000.

In 2001 a new set of IT gateways will be introduced through which our customers can access services. In particular:

- the Internet-accessed Learning and Work Bank, **www.worktrain.gov.uk**, developed by ES and the Department for Education and Employment (DfEE), together with the University for Industry (UfI), contains a job bank holding all ES vacancies (around 400,000) and UfI training and learning opportunities. The site was launched on 8 March;
- touch screen Jobpoints in Jobcentres, giving our customers access to the information held on the job bank;
- a new service for employers, Employer Direct, will enable employers to notify vacancies and will help ES follow up vacancies more easily. This service will be increasingly available throughout 2001.

Infrastructure rollout

Replacing and upgrading the IT equipment and systems of an organisation the size of ES is a mammoth undertaking. Over 30,000 PCs are being installed across the Jobcentre network taking into account the varying needs of the people who will use them, e.g. screens that display larger sized text to help overcome a visual impairment. There are also over 1,000 new servers to install and connect to support the new Windows NT system.

Many local offices have already been converted to the new hardware and we hope to complete the rollout of equipment to Jobcentres and District Offices by January 2001. Regional Offices and Head Office sites are being considered within the context of the new Working Age Agency.

The job bank

The job bank is a database that holds details of all our job vacancies, EURES (European Employment Services) vacancies, Employment Agency vacancies and opportunities such as New Deal. The information it contains can be accessed in a number of ways. For example:

- clients can access it via the ES website, **www.employmentservice.gov.uk**;
- the Learning and Work Bank, **www.worktrain.gov.uk**, means that people with Internet access can search for jobs from the comfort of their own homes, at times that suit them;
- by using the Jobpoints that are being introduced in Jobcentres. These Jobpoints allow more rapid searching than the Internet and have the advantage of being located in places where specialist help and expertise is close at hand;
- staff will be able to access it via a new icon on their workstation PC.

The job bank will revolutionise job searching in Britain. It allows users to search for jobs by job title, postcode or the numbers of hours they wish to work. In addition, clicking within an image of a map of Great Britain shows vacancies available in that particular locality.

The job bank is one of the largest databases in the world, holding details of around 400,000 national and international vacancies.

Jobpoints

Between December 2000 and February 2002, Jobpoints will replace vacancy display boards in Jobcentres, beginning with 12 pathfinder offices receiving the equipment in December and January. Their introduction will provide a more flexible and efficient way of managing vacancies and opportunities and remove the need for maintenance of conventional display boards.

Whereas display boards mainly carry local vacancies, Jobpoints will hold details of all vacancies, international and private sector/agency vacancies plus information on ES opportunities such as New Deal. As soon as new data is input to the internal ES system it will appear on the job bank and also be accessible through Jobpoints. Jobcentres will be allocated Jobpoints according to a number of factors, for example the number of jobseekers on the register and number of submissions.

Jobpoints are stand-alone units with a robust casing, housing a flat, colour, touch sensitive screen and a printer. Their unique design allows wheelchair users to access the information easily. They are safe, easy to use, and simple to maintain.

Once jobseekers have found the job they are looking for they can print the vacancy details and either speak to a member of staff or use Employment Service Direct (a single access telephone number) to find out further details.

In addition Jobpoints will have an attractor screen similar to a screen saver. This will allow Jobcentres to promote local and national initiatives.

Learning and Work Bank

The Learning and Work Bank is a website that was launched on 8 March 2001. Alongside the 400,000+ job vacancies on the site, there are details of over 500,000 courses and over 600 different careers. The website has been branded as 'worktrain'. The site will be a comprehensive job vacancy/career planning/training information resource unlike anything there has been before.

Employer Direct

Employer Direct (ED) will modernise and enhance the way we take vacancies and follow them up to provide a more modern, convenient and flexible service for employers. A single, national telephone number will allow employers to contact us for the cost of a local telephone call between 08:00 - 20:00 Monday to Friday and 10:00 -16:00 Saturday. The service will also allow vacancies to be notified by e-mail, fax and eventually the Internet.

A total of 11 Employer Direct Customer Service Centres will be located in all ES regions, Scotland and Wales.

London and the South East will have three. All will be linked by IT into a single, national service. The telephone system we will use will identify where a call is coming from and route it to the appropriate centre. If a centre becomes overloaded, or breaks down, then the call will be routed automatically to another centre.

The network of Customer Service Centres will ensure the new Working Age Agency will not only offer operational flexibility and marketing opportunities but will also be more easily adaptable to future change.

ES employees will staff the Customer Service Centres. They are likely to be a mix of existing, experienced ES people and new recruits. Training will be designed and delivered in good time. An ES manager and team leaders will manage each customer service centre. Technical support will be provided by working in partnership with EDS.

Employer Direct does not mean the end of Jobcentres. They will still be responsible for delivering the crucial job of matching and filling vacancies. Customer Service Centres will be responsible for taking all vacancies and all follow-up activity. Employers will contact ES via a single national number or by e-mail or fax then:

- using the ES job bank, a Customer Service Centre adviser will access an existing employer record or set up a new one - the postcode package will help this process and also allow the vacancy-owning office to be identified;
- the Customer Service Centre adviser will take details of the vacancy and discuss any relevant information about the Jobcentre concerned - for example whether there are interviewing facilities, and any local initiatives and grants, which are appropriate. This information will be available to the adviser on a new knowledge database;
- the adviser will give contact details of the vacancy-owning office and deal with any other queries the employer may have about ES services. Where the employer requires more in-depth or localised advice, the customer service adviser will liase with a nominated Vacancy Service Manager in the appropriate Jobcentre;
- the Customer Service Centre adviser will agree appropriate methods and times for follow-up with the employer and any outstanding vacancies may be discussed. A letter confirming vacancy and contact details will be generated automatically and posted to the employer. The vacancy-owning office will be automatically alerted and details of the vacancy will be available immediately on Labour Market System, the Internet job bank and Jobpoints in Jobcentres.

Employers can also use Employer Direct to give feedback on ES products or services. Customer service advisers will record compliments, complaints and suggestions and these will be passed to the appropriate Jobcentre.

CV Database

Finally, work is commencing on the establishment of a CV database for jobseekers and employers, to provide an on-line matching service. Pilots will commence in three locations in Britain in October 2001.

Germany

CAST

(CAST=Chancen und Anreize zur Aufnahme Sozialversicherungspflichtiger Tätigkeiten) is a special programme for trialling model approaches to the promotion of employment among workers with few qualifications and the long-term unemployed.

The programme implements the decision made by the Alliance for Employment, Training and Competition on 12 December 1999 to set up model projects designed to promote employment opportunities for workers with few qualifications, and the long-term unemployed. Two systems are being trialled – one proposed by the Saar Community Initiative (SGI model) and the other by Rheinland-Pfalz Employment Minister Florian Gerster (Mainz model).

The aim of the model projects is to help workers with few qualifications or on low incomes and the long-term unemployed, in particular those with children, to escape from the unemployment and social welfare benefits trap and to create additional competitive jobs.

Under the SGI model, employers' and employees' contributions to the social insurance system on gross hourly wages of up to DM 10 (5 Euro) receive a 100% subsidy which decreases on a sliding scale up to gross hourly wages of DM 18 (9 Euro) for additional employment relationships liable to social security contributions. However, the subsidy on the employees' portion of social insurance contributions is not paid to the worker in cash but credited in the form of training initiatives. In principle, all general and vocational training courses qualify for support.

Under the Mainz model, workers receive a subsidy towards their employers' contributions to the social insurance system, which means for a worker on a monthly income of just over DM 630 (322 Euro) that the employee will have its contributions refunded in full. The amount refunded decreases to zero on a monthly income of DM 1,575 (805 Euro). Under the Mainz model, employees' contributions in the case of married couples on gross incomes of up to DM 1,260 (644 Euro)attract a full subsidy which drops to zero on gross incomes of DM 3,150 (1611 Euro). The Mainz model also makes provision for increased child benefit for low earners, with a child benefit supplement of up to DM 150 (77 Euro) per eligible child, graded according to income.

The Saar Community Initiative model will be trialled throughout the Saarland and in the Employment Agency district of Chemnitz in Saxony. The "Mainz model" will be trialled in the Montabaur, Koblenz, Neuwied and Mayen Employment Agency districts in Rheinland-Pfalz and in the Employment Agency districts of Eberswalde and Neuruppin in Brandenburg. These four regions were selected because they permit an East/West comparison and appear particularly suitable due to their economic structures.

Local implementation will be carried out by the Federal Employment Agency. The CAST Special Programme started in autumn 2000. New entries are being accepted until the end of 2002. Since the individual support period is 18 months, the model projects will be completed by 30 June 2004.

All model projects will be subject to an ongoing technical support and evaluation process until one year after completion (mid 2005). This is essentially because there is insufficient experience in Germany of initiatives designed to reduce social insurance contributions within an employment policy context, or which supplement child benefit.

A first interim report will be available in the autumn of 2001.

Spain

Increasing and Improving the Quality of Employment

On 2 March 2001, the Government passed a Royal Decree-Act 5/2001, containing urgent measures for labour market reform, aimed at increasing and improving the quality of employment.

The purpose of this new Act is to build on the reforms, which began in 1997, with agreements reached between the social partners to improve labour market conditions. These agreements have made a significant contribution to the positive developments that have taken place in the employment sector in recent years.

The Government would have preferred that further reforms be based, again, on social dialogue. However, no agreement had been reached between unions and employers within the time allocated and so the Government deemed it urgent to adopt measures to bring about immediate reforms and to prevent distortions in the workings of the labour market.

The Government acted on the basis that it was necessary to take advantage of the positive growth of the Spanish economy in order to continue with the transformation of economic growth by creating employment, as well as bringing about an improved adaptation of the labour market to new economic conditions.

In line with earlier reforms, the new reforms are aimed at promoting more stable and better quality employment; while making the necessary changes to address problems created by labour regulations which may impede employment growth. The measures adopted are aimed primarily at:

- reducing excessive temporary employment and avoiding the abuse of temporary employment contracts;
- promoting part-time employment, with the aim of reaching levels comparable to other European Union countries;
- facilitating access to the labour market by women and disadvantaged groups;
- promoting employment for indefinite periods;
- strengthening guarantees for use of sub-contracting.

The most important changes, which affect the form, duration and type of employment contracts, are as follows:

Temporary contracts
Certain restrictions have been imposed on this kind of employment contract in an attempt to reduce high levels of temporary employment. An indemnity payable at the expiry of a temporary employment contract, equal to 8 days remuneration for each year worked, is established (except for contracts for temporary substitution of staff, training and placement contracts). The maximum duration for casual employment contracts is reduced.

It is now possible to establish additional requirements through collective bargaining in order to prevent the abusive use of successive temporary employment contracts.

The new law brings the rights of temporary employees into line with those of employees with contracts for an indefinite period. Employers will also be under a duty to inform temporary employees of the availability of positions for indefinite periods.

Part-time employment contracts
In light of the important role which part-time employment plays in the stable growth of employment and in the adjustment of employment to suit the needs of businesses and employees, the regulations governing part-time employment contracts for indefinite periods are improved, adapting it to suit the needs of the labour market, while also bringing it closer to European standards.

The maximum limit of 77% of the working day for full-time employment contracts is abolished - previously this limit distinguished between part-time and full-time employment contracts. The distribution of working hours has been made more flexible so that the working day is calculated on the basis of the total number of hours worked, regardless of its distribution.

Training contracts
The original aim of this kind of contract was to facilitate entry into the labour market for young persons lacking training or qualifications, by providing work-based training.

Changes have been made to this kind of contract so that it can only be used to employ groups with special needs. Such contracts establish a maximum age limit of 21 years, which will not apply to the following new groups (in addition to disabled persons) after the present reforms take effect:

- foreigners during the first two years of the validity of their work permit;
- persons unemployed for more than 3 years;
- unemployed persons who are socially excluded;
- unemployed persons participating in programmes offered by School Workshops (Escuelas Taller), Learning Centres (Casas de Oficios) and Employment Workshops (Talleres de Empleo).

Placement contracts
Regulations are established for a new placement contract for carrying out projects or services of general or social interest in Public Administration, as a way of providing the unemployed with work experience to improve their employability. The labour costs of these contracts will be financed by the relevant Public Employment Services.

The inclusion of the unemployed in this kind of contract will take place in accordance with the State's priorities for complying with the guidelines laid down in the European Employment Strategy.

In order to guarantee that the objective of these placements is fulfilled, workers participating in these contracts will not be able to participate again until three years have passed from the termination of any prior contract of this nature.

Contracts to Encourage Employment for Indefinite Periods
A contract to encourage employment for indefinite periods, as established in Act 63/1997, was conceived as a means of promoting employment stability for groups that have special difficulties entering the labour market. Such contracts have lower dismissal costs than those for indefinite period contracts of a general nature (the indemnity being equal to 33 days remuneration for each year of service in the event of wrongful dismissal, with a maximum of 24 months pay, as opposed to the 45 days remuneration established in respect of such contracts of a general nature). This contract was introduced for a provisional period of 4 years, with the possibility of extending the period if the results were satisfactory.

The Government believes that this contract has had a positive effect, with the result that it is extended to include more groups. Consequently, this contract may be used for workers who fall into any of the following groups:

- young people between 16 and 30 years of age;
- unemployed women, when employed in professions where they are under-represented;
- unemployed persons who have been registered as job seekers for more than 6 months;
- persons over the age of 45 years;
- handicapped persons;
- workers who are already employed by the relevant company on a temporary contract concluded before 31 December 2003.

Other changes

Contract Termination
A new objective clause is established for the termination of indefinite period contracts concluded for the purposes of carrying out public projects and programmes, where such projects do not have any stable financial resources and are financed by way of annual budgetary allocations.

Subcontracts
Advances have been made with the regulations governing contracts and subcontracts, with the purpose of better determining where within the contractual chain the responsibility lies for the payment of salaries and social security contributions as well as the prevention of occupational risks.

The principal contractor will be jointly responsible for the salary obligations undertaken by its contractors and subcontractors *vis-à-vis* their employees, as well as their corresponding social security obligations, for the duration of the contractual period.

Employers must disclose the identity of the principal contractor to employees and to Social Security. The right to information enjoyed by the legal representatives of persons employed by the principal contractor, the contractor or the subcontractor, is also expanded.

The maximum legal age limit for employment

The Royal Decree-Act revokes the Tenth Additional Provision of the Worker's Statute, which encouraged the adoption of measures directed at retirement of elderly workers and their withdrawal from the labour market. This was an instrument within the framework of an employment policy based on certain perceptions and demographic conditions within the labour market which clearly do not apply anymore.

The Royal Decree-Act further incorporates the Job Creation Programme for the year 2001.

The job creation programme for the year 2001

The initial part-time or full-time employment contracts for an indefinite period that were concluded during the period running from the start of the enactment, until 31 December 2001, will confer the right on the employer to reclaim certain social security contributions. These benefits will be charged to the relevant section in the National Employment Institute's budget and will be applicable in the following cases (see table 1):

- women who are unemployed for a long period during the 24 months following the birth of a child;
- unemployed women between 16 and 45 years of age;
- unemployed women, in professions with a lower female-to-male employment ratio;
- persons who are in receipt of unemployment subsidies in terms of the Social Security's Special Agricultural Scheme;
- unemployed persons who have been registered as job seekers for a minimum period of 6 months;
- unemployed persons from the age of 45 up to the age of 55 years, and unemployed persons from the age of 55 up to the age of 65 years;
- unemployed persons in receipt of unemployment benefits or subsidies, when such persons have more than one years benefits remaining;
- persons in receipt of the special benefit entitled Active Placement Income;
- the refunds envisaged in the cases mentioned above, will be increased by 5% in the case of a self-employed worker who takes on his first employee.

In cases where employment contracts relate to the last five points above, and they are for the full-time employment of women, then the refunds will be increased by ten percent.

In addition, further measures have been adopted to facilitate entry into the labour market by disadvantaged groups:

- the existing job creation measures for temporary employment of handicapped workers remain in place;
- benefits will be paid for employment of workers who are socially excluded, whether such employment be for a temporary or indefinite period;
- businesses who employ temporary cover for persons who are on maternity, adoption or foster care leave, will receive a 100% refund of employer social security contributions. This benefit will be paid provided that the period of the cover contract coincides with the period for which the substituted persons are on leave on the grounds mentioned.

In addition, incentives are provided for the conversion of fixed period or temporary period contracts concluded before the date on which the enactment comes into effect, into contracts for an indefinite period. Incentives are also provided for the conversion of training contracts, as well as contracts for the relief or substitution of employees, in anticipation of their reaching retirement age, into indefinite period contracts, regardless of the date on which the first mentioned contracts were concluded.

Table 1: The Job Creation Programme for 2001 - Refunds

Full-time Contracts For An Indefinte Period		
Group	**Amount**	**Duration**
Women who have been unemployed for more than 12 months and who have a child	100%	12 Months
Women between the ages of 16 and 45 years	25%	24 Months
Women who are employed in occupations with a lower female-to-male employment ratio	If such women have been unemployed for 6 months or more: 70%; If they are older than 45 years: 60% If neither of the above requirements met: 35%	12 Months 12 Months 24 Months
Persons unemployed for a minimum of 6 months	Men: 20%; Women: 30%	24 Months
Workers from the age of 45 up to 55 years	Men: 50%; Women: 60% Men: 45%; Women: 55%	12 Months Remaining Period
Workers from the age of 55 up to 65 years	Men; 55%; Women: 65% Men: 50%; Women: 60%	12 Months Remaining Period
Persons in receipt of unemployment benefits or subsidies, where more than one years benefits remain	Men: 50%; Women: 60% Men: 45%; Women: 55%	12 Months 12 Months
Persons in receipt of unemployment subsidies from Social Security's Special Agricultural Scheme	90% 85%	12 Months 12 Months
Persons in receipt of Active Placement Income	Men: 65%; Women: 75%	2 Years
Unemployed persons taken on by a self-employed worker	An additional 5% added to the refund established for the particular group to which the employee pertains	The period established for the particular group to which the employee pertains

Part-time Employment For An Indefinite Period
The same refunds shall apply to part-time employment contracts, except for an additional 10 percent in respect of unemployed women, which will be added to the refunds applicable to full-time employment contracts.

Other Refunds		
Group	**Amount**	**Duration**
Unemployed persons who are socially excluded	65%	Up to 2 Years
Employment of handicapped persons for indefinite periods	70% < 45 years 90% > 45 years A subsidy of 650,000 Pesetas.	The full duration of the employment contract
Temporary employment of handicapped workers	75% to 100% (first worker)	3 Years maximum
Substitution of workers who are on leave on the grounds of maternity, adoption or foster care	100% in respect of the contract of substitution 100% in respect of the substituted employee	The duration of the contract of substitution The duration of the contract of substitution

Conversion of Temporary Contracts into Indefinite Period Contracts		
Type of contract	**Amount**	**Duration**
Temporary and training contracts, as well contracts for the relief or substitution of employees in anticipation of their reaching retirement age	25%	24 Months

Spain

The Third Agreement for Continuous Training Is Signed

On 19 December 2000, the Government and employer organisations, namely the Spanish Confederation of Business Organisations (CEOE) and the Spanish Confederation of Small and Medium Enterprises (CEPYME), as well as the labour unions, the Workers' Unions (CC.OO), the General Workers' Union (UGT) and the Galician Inter-union Confederation (CIG), signed the Third Agreement for Continuous Training. This agreement consists of two sections, the Bipartite Agreement for Continuous Training and the Tripartite Agreement for Continuous Training. The signing of this agreement represents an important step in the national social dialogue process. It builds on and consolidates the dialogue between employers and business on continuous training that was established in the agreement signed in 1992. At the same time, the Administration's role has been increased, a step which had already been initiated in the Second Agreement with the inclusion of The National Employment Institute (INEM) in the Foundation for Continuous Training (FORCEM).

The national system of continuous training, within the framework of the National Programme for Occupational Training, is based on the bipartite section of the Third National Agreement for Continuous Training. This defines the participatory structure of this system, as well as the Agreement's tripartite section, which provides for its management and financing. The Agreement sets out the system's basic principles, namely the leading role played by employers and employees, national coverage, freedom of assignment, training development and a single fund.

The Agreement will be in force for a period of 4 years, 1 January 2001 to 31 December 2004. For this period funds will be increased and certain changes considered improving access to this kind of training for workers and businesses including:

1. The Administration will have a stronger role as the Tripartite Foundation for Occupational Training will replace the Foundation for Continuous Training and will include social partners. The Tripartite Foundation will have its own legal status and will fall under the aegis of the Ministry of Labour and Social Affairs. It will have a management board, with equal representation from the Ministry and social partners, as well as a management committee, which will be responsible for the running of the Foundation under the authority of the management board. Amongst the Committee's tasks will be the preparation of proposals for the concession of the public subsidies paid for by the National Employment Institute. The purpose of involving the Administration in the management of the system is to simplify and rationalise administrative procedures, making them simpler and more efficient for both workers and businesses.
2. Inclusion in training projects of workers where there is no obligation (neither by the workers themselves, nor by the businesses to which they belong) to contribute towards occupational training, such as the self-employed, certain civil servants and agricultural workers. For such workers a further five thousand million Pesetas will be added to the funds generated by contributions towards occupational training from the National Employment Institute's budget. The Government will distribute the occupational training funds annually according to employment and unemployment levels and training needs.
3. Workers' co-operatives and societies will be able to present training projects specifically addressing the needs of the social economy.
4. Adapting financial aid for continuous training to meet workers' training priorities as established in the European Employment Strategy, which was adopted at the Lisbon Summit, and by the European Social Fund. As was indicated at the Summit, the existence of a system for continuous occupational training, which provides for the acquisition of new skills and the continuous retraining of workers, is the key to increased competitiveness of companies, the creation of employment and the maintenance of employment levels.

France

The Accreditation of Prior Learning in France

Traditionally in France, the validation and accreditation of learning by individuals occurs at the end of a course of training or education. The aim at that point is to verify whether all the "knowledge" individuals are supposed to have acquired – particularly knowledge formally laid down in a syllabus - has actually been acquired. To this end, specific tests are established to assess mastery of this knowledge. In the French cultural context, an examination, taken at the end of a course by all candidates at the same time, is the pre-eminent mode of assessment. This is so whatever the geographical situation or mode of delivery of the course (initial, continuous or alternating training, distance learning etc.).[1]

The development of vocational training – and, more particularly, of continuous or alternating training – has led to the introduction of new approaches to the evaluation of learning. This has brought with it the idea that general or occupational "knowledge" can be acquired in places other than schools or training centres. The idea has also be-

[1] The archetype of this model is the "baccalauréat", which is regarded as a reliable, objective principle of social fairness.

come prevalent that learning is possible in work situations – and with it the acquisition of knowledge sufficiently structured to be recognized by the world of training and hence to enable a part of training or of examinations to be dispensed with.

Up to the present, a law of 1992 on the accreditation of prior learning ("*validation des acquis professionnels*" or VAP), administered essentially by the Ministry of National Education, allowed vocational qualifications to be acquired in this way, though it did so only to a certain extent. Though the principle of taking occupational experience into account to reduce the length of training periods was widespread in continuous training schemes, the principle of totally exempting trainees from examination represented a kind of cultural revolution in France. Consequently, the law did not have the desired impact.

For two years, France has been looking at introducing a more general reform. A series of experiments with a system of Accreditation of Prior Experience ("*validation des acquis de l'expérience*" or VAE) was initially launched, and these turned out to be very interesting. As a result, a law is being drafted for June 2001, allowing for occupational qualifications to be attainable in their entirety – and not just in part - by this route.[2] This will be a fourth route by which such qualifications - including higher education qualifications and the diploma of engineer - may be recognized, and it will stand on an equal footing with the others (including vocational training).

How will this work in practice?

A panel for accrediting prior learning will examine whether the evidence presented by a candidate is sufficient for him/her to receive the qualification in full. In the case of partial accreditation, the jury will determine the nature of the further tests the candidate must undergo to achieve the full qualification.

For the accreditation of their prior learning to be considered, candidates will have to have a minimum of three years' occupational experience relating to the content of the vocational qualification or diploma sought – not five years as under the 1992 legislation.

The notion of "prior learning" is understood in a broad sense: it includes experience acquired both in paid and voluntary activities.

The costs of this accreditation will be met from the training plan in companies with ten or more employees; otherwise, they will be financed by the bodies which manage the employees' mutual funds.

The diplomas delivered by the state will be laid down in a government decree. A national register of professional certification will be created, listing all certifications, after these have been passed by the consultative commissions. We may note, that training in France is increasingly becoming disconnected from certification: it is certifications which are now recorded, however gained (including through occupational experience), not the training which leads to certification.

[2] The Social Modernization bill, which includes, among other things, this Accreditation of Prior Experience. It had a first reading in the National Assembly in January 2001. The parliamentary procedure will recommence after the elections in March.

Special Categories of Workers

Belgium

Legislation on First job agreements (Rosetta Plan)

The legislation on First Job Agreements lays down that all public or private employers who are not "in difficulty" and who employ at least 50 workers, are obliged to increase their workforces by taking on young workers.

The young people must be under 25, and must be employed within six months of leaving school at most, or at the end of a programme of vocational reintegration (consisting of training or guidance which is available, within three months of leaving school, to those who obtained no secondary school-leaving qualifications). Where there is a shortage of school-leavers from the last six months, young people under 25 may be taken on under the First Job Agreement scheme. Where no members of these first two categories are available, jobseekers under 30 will be considered.

The First Job Agreement may take one of three forms:

a) an open-ended or fixed-term contract of employment for at least half-time work. The contract may exceed one year, but only the first year of its operation falls within the First Job Agreement provisions;
b) a part-time contract (for at least half-time work) combined with training. As in the first case, the contract may either be open-ended or fixed-term. The length of the contract – which may not be shorter than one year – is equal to the length of the training undertaken, up to a maximum of three years. This training may take one of several forms, but an employment contract must be drawn up in each case; lastly
c) an apprenticeship in an occupation normally carried on by waged workers, a course or apprenticeship for a self-employed occupation, or a vocational reintegration agreement. As in b) above, the length of the First Job Agreement is identical to the length of the apprenticeship or training period, with a minimum of one year and a maximum of three.

In short, the First Job Agreement consists either of an employment contract, a contract for employment and training, or an apprenticeship. These last two arrangements are forms of alternation between employment and training which are particularly well suited to the least qualified school-leavers.

The First Job Agreement has another characteristic which particularly concerns the least qualified young people: when an employer offers an unqualified secondary school-leaver an employment contract, he receives a significant reduction in the level of his employer's social security contributions. This advantage is intended to promote the employment of young people, who are most at risk of becoming long-term unemployed.

During the First Job Agreement, the young people enjoy all the advantages of the social security system and receive a normal wage if they have an employment contract. Otherwise, they receive the benefits and allowances applicable for training or apprenticeships.

In order to encourage reintegration when the First Job Agreement comes to an end, employers who keep on unqualified young people beyond the termination of the Agreement enjoy a reduction in their social security contributions of at least 75% in the first year and 50% in the second. In this way, a sufficiently long-term perspective is offered to the employer who decides to employ an unqualified young person. If the young person is not kept on after the First Job Agreement, and is not taken on by another employer, a new reintegration programme will be offered to him/her.

The First Job Agreement has been highly successful. Only 11 months after its creation (in April 2000), 46,500 employment contracts have already been signed, 42% of them by women and 39% by those with the lowest qualifications.

Denmark

25th Anniversary of the Danish Equal Pay Act

In March 1976 the Folketing (the Danish Parliament) adopted the "Equal Remuneration Act". At that time, the average wage differential between men and women was more than 30%. According to the Equal Remuneration Act men and women performing the same work, or work of the same value, are entitled to the same remuneration.

During the first 5 years of the Act, wage differentials between men and women were significantly reduced by between 5-10%, depending on the sector. However, this early progress did not continue. The 70s saw a period of low growth, but even the strong economic growth that characterised the 80s and 90s did not lead to the expected reduction in pay differentials.

The idea of the Act, when it was introduced, was that employees should be able to base a claim for equal pay on the provisions of the Act in relation to the employer or the trade union. The problem was that information on wages was not always available.

This has led to a recognition that greater wage transparency is needed. This is why the Government submitted a proposal to amend the Equal Remuneration Act in March 2001 - 25 years after the adoption of the original Act. The purpose of this proposal is to create greater transparency about wage data. The proposal gives employee representatives and trade unions, that wish to work actively to reduce wage differences between men and women, better tools to do so. The main elements of the new legislation are:

1. The right for employees to communicate wage data relating to themselves to any third party;
2. The obligation for businesses to draw up wage statistics broken down on the basis of gender, on request.

This means that it will no longer be lawful for employers to use the so-called "confidentiality clauses" prohibiting employees from passing on information about their wages to any third party. The employee will be bound by the principle under existing law concerning secrecy and discretion in relation to the employer i.e. employees must not impose any unnecessary harm on the employer. A more precise interpretation of these rules will be established on a case by case basis.

The lack of wage statistics broken down by gender has made it very difficult for individuals and trade unions to pursue claims for equal wages. The co-operation agree-

ment for the state sector sets out that state employers have a special duty to promote equal rights for men and women. This includes public access to wage statistics broken down by gender. In the private sector many collective agreements contain clauses concerning wage data, for instance submission of quarterly wage statistics to employee representatives.

Under this new legislation employers will - in the absence of provisions in collective agreements about this matter - be required to draw up wage statistics broken down by gender on request. This will apply to businesses with more than 10 employees.

Under the Act the Minister of Labour and the Minister for Equal Opportunities must submit a report every three years on the measures taken to ensure equal pay for men and women.

The new Act will come into operation on 1 June 2001. Some provisions will, however, not take effect until 1 June 2002.

Germany

Improved Employment Prospects for Older Workers

Despite a disproportionate drop in unemployment levels amongst older people over recent months, older workers continue to be harder hit by unemployment than other workers.

In the interests of the older workers themselves and in the light of expected demographic changes and the increasing labour shortages in certain regional and sectoral part-time labour markets, on 9 January 2001 a working party of the "Alliance for Employment, Training and Competition" took the decision to change policy relating to older workers. In future the priority objectives of employment policy initiatives will be to increase employment amongst older workers, to take a preventive approach to unemployment and to reintegrate those already unemployed rather than forcing older people out of the employment market early.

A central element in the improvement of employment opportunities for older workers is the greater involvement of this age group in in-company training initiatives. The Alliance partners agree that in-company training is primarily the preserve of businesses and their employees. Accordingly, in order to accelerate increased involvement of older people in in-company training initiatives, the possibility of a programme designed to support training costs for workers over 50 in small and medium-sized businesses for a limited period is currently under consideration.

Within the framework of the emergency programme launched by the Federal Government and representatives of companies in the ICT sector to meet the demand for specialist IT personnel in Germany, the economy has promised to develop a concept for internal company training, in terms of Internet-related technologies, which includes older workers.

In order to increase employment opportunities for unemployed older people, a statutory regulation effective until 2006 will reduce the age limit for integration subsidies for older workers from 55 to 50. A further tool which may have a positive effect on reintegration opportunities for the older unemployed is job rotation. If an older unemployed person is brought in to deputise for a worker away on a training course, he or she can use this time to prove his/her capacities and thereby help to break down prejudices about older workers. The government intends to enshrine job rotation as a statutory measure under the Employment Promotion Law.

Sweden

The Swedish Activity Guarantee in Operation

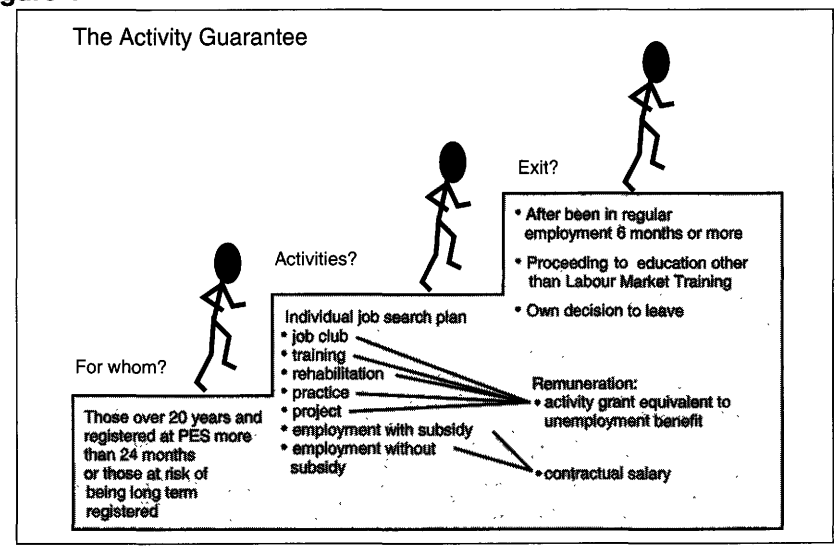
The days when unemployment levels in Sweden were undisputedly among the lowest in the Western world are now gone. The deep labour market shock in Sweden, emerging at the beginning of last decade, left in its wake unemployment levels previously unheard of in modern times. However strong economic growth together with a sustainable and active labour market policy has, in recent years, reduced the unemployment rate rapidly. At the end of February 2001 the level of unemployment stood at 4%. The national target set by the Government in 1996 - which was to halve the unemployment rate by the end of 2000 - was reached in October 2000. Long-term unemployment has also been reduced rapidly. The present national target, set in 1998, is to increase the employment rate to 80% of the 20-64 age group by the end of 2004. Gainful employment has continued to rise swiftly and about half of the number of jobs lost in the early nineties have now been recovered.

The focus has gradually shifted from the declining number of **long-term unemployed** to those who have been **long-term registered** with the Employment Service (PES). In Sweden the definition of long-term unemployed covers those adults who have been unemployed for more than 6 months and young people who have been unemployed for more than 100 days . The long-term registered are those registered with PES for more than 2 years without a job. This group has rapidly declined in numbers between 1999 and 2000, from 83,000 to 60,000 persons. On the other hand, the average registration time for those who are unemployed or in programmes has increased from 680 to 695 days. Those individuals have got stuck in a vicious circle alternating between Labour Market Programmes and open unemployment. At the same time new vacancies appear where employers face recruitment problems and experience shortages of applicants with the right skills. This is the justification for the introduction of a new programme called the Activity Guarantee.

Objectives

The new programme is designed to guarantee greater co-ordination and continuity in supporting the unemployed to gain employment or go on to regular education. It should break the ineffective circle of unemployed persons yo-yoing between participation in labour market programmes and open unemployment, with poor co-ordination between job support and job seeking activities and irregular contacts between the unemployed person and their designated employment officer. It should also facilitate a more active and effective job-seeking efforts and activities and counter the development of a lifestyle pattern of expected periods of open unemployment. The Activity Guarantee Programme will also have a positive impact on social inclusion.

Figure 1



Target groups

Following a brief pilot in some employment offices, the new programme was launched nationally in August 2000. People over 20 years of age that were - or were at risk of being – long-term registered with PES comprised the target group. Good reasons are required for refusing a position offered within the Activity Guarantee. Those who refuse to participate also risk losing their unemployment benefit.

Design

The Activity Guarantee is designed to improve regular job opportunities for the unemployed. Each participant receives the support of a coach/supervisor at the Employment Service in groups initially comprising between 10-15 persons. At the start of the programme the coach and each participant jointly design a job action plan. This plan should specify the individual's current skills and experience and what jobs and necessary skills training they are interested in. The plan should also specify what the Employment Service can offer and what is required of the participant. For example the plan can include requirements of both professional and geographical adaptability. The participants in the group have access to all the standard Labour Market Programmes 'under one roof'. This programme can be compared to the main thread which, through the individual job action plan, links together the various resources and initiatives provided to the unemployed by the Employment Service.

Contents

The Activity Guarantee Programme provides a wide range of job support modules, the most basic and common module being intensive job-search training and activities. Additional modules can include any of the other relevant Labour Market Programmes, in suitable combination and frequency. Throughout the Programme, the job seeker must be willing to accept an offer of employment if it arises.

Partnership

One of the cornerstones of the Activity Guarantee is that work should be conducted in close co-operation with the government, municipalities, companies and other labour market partners. Active job search is one important activity and should focus on employers from both the public and private sectors. Jobs can be eligible for government subsidies and serve as a way of entering the regular labour market. Working partners, private companies, organisations and municipalities, can get reimbursed up to a maximum of SEK 150 (16 Euro) per day to meet administrative costs for organising activities within the Activity Guarantee.

Work environment

In accordance with the Labour Market Policy Programmes Act a participant in a programme shall be treated as an equivalent to an employee when they participate in workplace activities. The organiser is treated as equivalent to an employer and must apply the rules of Work Legislation. The organiser is also obliged to report injuries to the Social Insurance Office and to the Labour Inspectorate.

Terms and benefits

Participation in the Activity Guarantee Programme is on a full-time basis. Participants receive an activity grant, which is equivalent to their unemployment benefit, or not less than SEK 143 (16 Euro) per day. When a participant is offered subsidised employment they shall receive a wage from the employer. The employer will get compensation through tax deductions. There are opportunities for other forms of support for industrially disabled people, e.g. wage subsidies.

Duration

There is no limit to how long an individual can be in the Activity Guarantee Programme, but they are signed out if they find regular employment lasting at least 6 months. They will also be signed out if they opt to go on to a regular education programme or if they voluntarily wish to leave the programme.

Further developments

A number of new employment initiatives, linked to the target group for the Activity Guarantee, were introduced during the second half of 2000. Among them are special employment incentives for persons of 57 years of age and over who have spent 3 months with the Activity Guarantee, increased employment incentives for people registered for four years and also new guidance and recruitment activities.

At the end of March 28,000 people were covered by the guarantee. More than 1,500 coaches/supervisors are now engaged in the guarantee. Out of the first batch of 7,000 participants starting in August 2000, 21% had obtained jobs with or without support by the end of February 2001, 3% had left for regular education and another 4% had voluntarily left the programme. The National Labour Market Board expects enrolment in the guarantee to reach close to 40,000 by the end of this year and close to 50,000 as an average for 2002 and 2003.

Legislation concerning the unemployment insurance system in Sweden was amended in February this year. These amendments are also linked to the Activity Guarantee, as it is no longer possible to qualify for a new benefit period through participation in an active Labour Market Programme. The qualification for a new benefit period can only be allowed through a period of employment. Further information can be accessed via the following website: **www.ams.se**

Austria

The modification of unemployment insurance

At the interface between a proactive employment policy and social policy, the creation of objectives and the paying subsistence benefits are important in overcoming a dependence on benefits and, above all, in strengthening the individual's desire to take up employment rather than passively accepting the benefits paid.

For this reason, a number of modifications have been made in **unemployment insurance** on the basis of experience to date:

- In unemployment insurance, the hitherto confusing and administratively time-consuming wage classification system has been replaced with a uniform net reimbursement rate system which will cover 55% of the net remuneration to date. For income groups below the equalising supplement guideline rate, social provision has been linked with an adequate work incentive: single persons will receive 60% at most and unemployed persons with family supplements 80% at most of their previous payment.
- As an incentive to extend temporary or seasonal jobs, the necessary employment time before entitlement to benefits is granted has been increased from 26 to 28 weeks.
- As an incentive to acquire a new entitlement to unemployment benefits at a higher or at least equal level, the present possibility for continued payment has been limited to those cases in which the new application for entitlement is not successful.
- As an incentive to take up employment, unemployment benefit / emergency assistance will not be increased in the future.
- As an incentive for young people to become part of the working world, they will only be entitled to unemployment benefit if the Labour Market Service is unable, within 4 weeks, using whatever incentives are necessary, to arrange for them to start work or participate in suitable employment-related activities.

Collection of unemployment benefit

The maximum period for collection of unemployment benefit is extended to 78 weeks for unemployed persons who have been employed for 780 weeks (15 years) in the last 25 years with compulsory unemployment insurance, or for unemployed persons over 50 who have worked 468 weeks (9 years) in the last 15 years with compulsory unemployment insurance.

With the reorganisation of **education leave** and the opportunity to claim continuing education benefits, the Federal Government has created important preconditions for the current and long-term modification of qualifications, skills and knowledge. The essential elements of this innovation are:

- continuing education benefits at the same level as maternity leave, or the same level as unemployment benefit for people aged 45 and over;
- reduction of the minimum period for educational leave to 3 months; and
- facility for additional payment by the employer whilst still collecting education benefits.

Regulations on working hours

The "educational leave" model and the "solidarity premiums model" link flexible worktime models with the employment of unemployed persons. At the end of October 2000, there were 3,929 people on education leave, 93% of whom were female and 1% older than 45. Part-time work for older people had been taken up by 1,046 people at the end of October, around half of whom were women. Changes were made in educational leave as regards the level of continuing education benefits for older people and in the elderly persons' part-time payments (no need to provide replacement staff, increase in duration, more flexible worktime framework, etc.).

As regards worktime models aimed at extending employment in seasonal industries, it should be noted that these have also had positive effects on seasonal unemployment in the building trade in winter 2000/2001. Unemployment from November 2000 to February 2001 fell by 7.2% (-4,470) in comparison with the same period last year. Since the new worktime regulations, winter unemployment has thus already fallen by 16%. Present experience with the new worktime models in the building trade shows that a clear levelling off of the peaks in winter unemployment has been achieved.

With effect from 1 October 2000, access to **elderly persons' part-time benefits** has been made easier. This is because the need for the compulsory employment of a replacement employee has been dropped, and it is now possible to reduce the worktime by 40 - 60% of normal worktime and extend it up to six and a half years.

To promote the continuing education of employees aged 45 and above, the continuing education benefits, if they take advantage of educational leave, will be increased to the level of their unemployment benefit, with the maternity leave benefit as the minimum threshold. In addition the period of time when they can collect unemployment benefits will be extended by the period of the training measures.

As from 1 October 2000, the **'bonus-malus' system** has been improved in that, when persons over the age of 50 are taken on, the employer contribution to unemployment insurance is completely dropped (only half was allowed before; the whole contribution was only allowed from the age of 55) and the basic sum for calculation of the 'malus' (an extra premium on termination of employment of a person aged 50 and above who was employed for at least 10 years) is doubled.

Safeguarding contribution-equivalent periods in pension insurance

From 1 October 2000, unemployed people born in 1940 (men) or 1945 (women) (and, from 2001, those born in 1941 (men) or 1946 (women) and, from 2002, in 1942 (men) or 1947 (women)) who do not receive emergency assistance because they are not in an emergency situation, will be granted, until the other re-

quirements for emergency assistance are fulfilled, a contribution-equivalent period and a claim requirement for early retirement pension, if they are unemployed during pension insurance.

Change in the Employment Promotion Act

To allow an increase in the employment rate of older people through employment protection, or the guarantee of a longer working life and the promotion of a return to work for older unemployed persons, an early warning system specially designed for this target group has been created. This instrument can be used to apply measures, if there is a threat of notice being given, in the shape of development measures, increased worktime flexibility so as to affect employment for older staff (e.g. partial retirement) or the (early) qualification of older employees.

Child care benefit

From 1 January 2002 maternity leave benefit will be replaced by **child care benefit** as a pure family benefit. Childcare benefit – according to the principle of freedom of choice – is aimed at partially reimbursing the costs of child care provided by the parents or of buying in external child care. It will also be available to those groups of people who have so far not had any claim to maternity leave. In order to make it easier for both women and men to combine a career and family, the Federal Government has decided to apply an individual additional earnings regulation of ATS 200,000 (14,535 Euro) (gross income limit) per year for the partner caring for the child.

In contrast to the maternity solution (full leave) applied to date, an income for the carer had generally only been allowed up to a minimal level of approx. ATS 4,000 (290.69 Euro) p.m.; the new regulation thus increases the individual options for employment for carers and thus facilitates their integration into the labour market.

France

The new convention on unemployment insurance in France

A new convention on unemployment insurance was signed on 1 January 2001.

The convention sees UNEDIC (National Union of Employment in Industry and Commerce), AFPA (Association for Adult Vocational Training, a government body) and ANPE (the National Agency for Employment, an agency of the Ministry of Employment and Solidarity) participating together in the government's employment promotion schemes.

Under this arrangement, UNEDIC will provide support for any person involuntarily deprived of employment who has paid contributions to its unemployment insurance scheme. This body, managed on an equal basis by the social partners, offers a regime of unemployment insurance for three years. This is given legal sanction by the state if there is agreement between the partners.

The convention of 1 January 2001 supersedes that of 1 January 1997, which terminated on 31 December 2000. This convention will apply until 31 December 2003. Its provisions will come into force gradually, with transitional arrangements applying over the period 1 January 2001 to 30 June 2001.

The Characteristics of the New Convention

The convention has a dual aim. On the one hand, it attempts to promote positive job-seeking arrangements, by taking into account, inter alia, the particular situations of vulnerable young people and the long-term unemployed. On the other hand, it provides personalized assistance to jobseekers, while putting their commitment in contractual form.

The new convention introduces a number of changes. The rate of benefit is changed; benefit is no longer regressive; there is monitoring and back-up for the unemployed; aid is given to companies; and contribution levels are lowered.

Transitional Arrangements from January 2001 onwards and Full Application in July 2001

From 1 January 2001, within the framework of the transitional arrangements, changes are made to the calculation of benefit and the periods for which it is paid. All employees whose contracts terminate after 31 December 2000 may receive benefits if they have contributed for four months out of the preceding eighteen (and not for the preceding eight months, as in the previous convention). The seven-day delay before benefit is paid (eight days in the previous convention) no longer applies when the jobseeker registers as unemployed for a second time within a twelve-month period.

The rate of Unemployment Insurance contributions falls from 6.18% to 5.8%. This makes the current figures 3.7% for the employer and 2.1% for the employee.

Lastly, from 1 July 2001 onwards, all the new arrangements will apply.

The reducing scale of benefits will be ended. All jobseekers registered as unemployed will receive Aid towards Return to Employment (ARE), whether they are seeking work or receiving training.

An Individual, Contractual Commitment on the part of Insured Jobseekers

When potential beneficiaries request registration as a jobseeker at ASSEDIC, they are offered a Plan of Aid for Return to Employment (PARE), as part of which they commit themselves to seeking employment and, at the same time, receive assistance with their efforts.

In the following month, this commitment is concretised with the signing of a Personalized Plan of Action (PAP) with the ANPE, after an in-depth interview to assess the jobseeker's ability to pursue their search for work independently.

On this occasion, the following points are defined:

1. types of employment which correspond to the occupational skills and qualifications of the jobseeker, at a wage rate customary for the occupation and region in which he/she is looking for work;

2. other types of employment into which the jobseeker may possibly wish to transfer;
3. training required to find employment appropriate to the Plan, priority being given to training carried out within the framework of a contract. If the worker who has lost his/her job has committed to an accredited personal procedure, he/she is regarded as having fulfilled his/her commitments.

The ANPE makes available to jobseekers the full extent of the vacancies notified to it. It also makes available its job-finding services, provides assistance with drawing up training and career-action plans, particularly through joint schemes run with the AFPA. Training Assistance and Geographical Mobility Aid can be granted throughout the duration of the PAP.

An examination of the full range of occupational skills is made for those likely to find difficulties in searching for employment. The jobseeker may request such an examination if it has not been offered.

The commitment signed by the jobseeker entails rights *and* obligations.
The jobseeker must not, without good reason, refuse a job offer, or refuse to undertake training or undergo a medical examination. He/she must attend interviews and submit such documents as are required.

Failure to fulfil these obligations may lead to temporary or permanent withdrawal of benefit.

The implementation of penalty procedures is covered by a convention between UNEDIC and the state (which is the guarantor of equal treatment of jobseekers), defining the modalities of collaboration and delegation between the ANPE and the ASSEDICs (the regional offices of UNEDIC).

Suggested Adaptations
If the jobseeker has still not found employment after six months, the Personalized Action Plan is updated. This may lead to a skills review.

If, after twelve months, it has not been possible to offer the jobseeker an appointment of the kind he/she is looking for, further measures are taken to transfer him/her into a different form of paid employment.

Complementary arrangements to support these general measures
Recruitment subsidies for companies
In order to assist persons encountering particular difficulties in returning to employment, subsidies can be granted to an employer, on a falling scale, for a maximum period of three years. ADE (Regressive Aid for the Employer) is paid by ASSEDIC on recruitment of a jobseeker who has been out of work for more than one year.

Access to insurance cover for those starting up businesses
Jobseekers who start up or take over a business can be covered by the insurance scheme for the case where that business fails. If the company ceases trading within 36 months of its creation or takeover, those concerned may claim unemployment insurance. This measure also applies in cases where an employee has resigned from another job to start up or take over a business.

Sweden

Legislative changes in the Swedish unemployment insurance system

Unemployment insurance legislation in Sweden has been reformed with the aim of reinforcing its role as transition insurance. The requirement for individuals to seek work has been clarified, and there is an increased requirement for occupational and geographical mobility. The aim is to facilitate labour market mobility and to improve the match between vacancies and job seekers.

The following major changes came into force on the 5th February 2001:

- During the first 100 days of a benefit period an unemployed person may limit their search for new employment both geographically and professionally. Thereafter the Employment Service may offer any job or labour market programme that is considered suitable for the unemployed person.
- To be entitled to unemployment benefit the unemployed person must co-operate in the drafting of an individual employment action plan. Such a plan must be agreed upon within three months of registering with the Employment Service.
- Participation in labour market programmes will no longer be sufficient to qualify for a new benefit period. The unemployed person must fulfil the work requirement by working for a period of at least a six-month. The work requirement is also satisfied for people who are employed with recruitment incentives or wage subsidies, or have sheltered jobs with public sector employers or employment with the Samhall Group.
- The maximum duration of the benefit period is 300 benefit days, irrespective of age. However, under certain circumstances, the benefit period can be extended by an additional 300 days without fulfilling the work requirement.
- During the first 100 days of a benefit period the allowance may be higher than during the rest of the period. The levels of the basic benefit and the income related benefit shall be increased as from July 1st 2001 and also from 1st January 2002.
- Refusal to accept a suitable job or a labour market programme will result in the reduction of benefit in a period of 40 days. The first refusal within a benefit period will mean a 25% reduction in benefit, the second refusal will result in a 50% reduction and the third refusal will mean withdrawal of benefit.
- An unemployed person who is at risk of being long-term registered with the Employment Service must be offered a full-time labour market activity, i.e. the Programme Activity Guarantee. The offer must be made within 27 months from the date of being registered as unemployed at the Employment Service.

Miscellaneous

Finland

The new Finnish Employment Contracts Act Comes into force on 1 June 2001

The 30 year-old Finnish Employment Contracts Act will soon be completely revised. The Act aims to improve the position of workers in short-term employment relationships, to specify the nature of generally binding collective agreements, and to clarify the provisions for employment security. The application of the new Act will be helped by the clarity and coherence of the text. The Employment Contracts Act and 32 other relevant acts were adopted by the Finnish Government and then ratified by the President of the Republic in January 2001.

The system for generally binding collective agreements will be clarified. The minimum employment term applicable will still be determined according to generally binding collective agreements. Of those terms of employment and working conditions that apply to work done by the worker or to some closely comparable work, the employer shall comply at least with the rules and regulations of the nationwide collective agreement that is considered to be representative in the branch concerned.

A committee, set up by the Government, for five years at a time, will confirm whether a nationwide collective agreement is representative within its scope of application to the effect that it could be considered generally binding. An appeal on the Committee's decision can be made to the Labour Court, whose decision is final. The decision concerning the generally binding nature of a collective agreement will be published in a register of norms kept by the authorities. Collective agreements that have been ratified as generally binding are available free of charge on the Internet. This method of notification aims to improve legal safety for all parties. Provisions for the ratification of the generally binding nature of collective agreements will be laid down by a new separate act.

The new provisions will approximate indefinite and fixed term employment contracts. The Act includes provision for the accrual of fringe benefits for workers who are employed in recurrent fixed-term employment contracts by the same employer. The employer is obliged to consider the position of part-time and fixed-term workers so that they are informed about vacancies or jobs opportunities. When in need of new labour, employers are obliged to offer the additional work primarily to part-time workers.

The Act provides that employment terms less favourable than in other employment relationships must not be applied to part-time or fixed-term workers, unless objectively justified. The employer shall treat workers equally unless justified by the workers' tasks and position.

Periods of notice will be reduced in the case of short employment relationships and increased in longer ones. Employers shall observe a six month period of notice if employment has been continuous for 12 years. Under the current Act the period of notice is only applied in employment relationships of over 15 years.

Grounds for notice and cancellation of an employment contract will be clarified and specified and all grounds should be objective and weighty. The Act provides separately when an employment contract can be given notice of termination for reasons due to the worker and when notice of termination can be given due to changes in the employer's operational conditions. Employment contracts can only be cancelled for very serious reasons, e.g. violation or negligence of the obligations of one of the contracting parties so that the other contracting party cannot be expected to continue the employment relationship - even for the period of notice. The Act clarifies grounds for notice and cancellation, but does not change established legal practices concerning the gravity of the grounds.

The new Act is based on the fact that there is a compensation system linked to groundless termination of an employment contract. The minimum compensation for workers is equivalent to three months' pay and the maximum 24 months' pay. Compensation for groundless termination of a shop steward or elected official's employment contract may be equivalent to a maximum of 30 months' pay. However, minimum compensation is not applied if the employment contract has been terminated solely on production or economic grounds. Nor is the three months' minimum compensation applied if the employer terminates the employment contract without any serious reason specified by the Act, if there are grounds for termination.

The Act includes provision for workers to choose an elected official as their representative in cases where the workers are not represented by a shop steward chosen on the basis of the collective agreement. The elected official is chosen primarily by each specific staff group. With respect to the shop steward referred to in the collective agreement, the elected official has a secondary position.

The new Act has taken into consideration Finland's international obligations. Provisions have been made so that the Employment Contracts Act meets the requirements of the EU Directive on fixed-term employment, the Directive on part-time employment and the Directive on transfer of a new business.

The Employment Contracts Act applies to work undertaken to earn an income. When the new Employment Contracts Act enters into force, valid collective agreements may be applied as such till the end of the collective agreement period

The Future of the Public Employment Services (PES)

Joint Mission Statement of PES in Europe (EU/EEA)

(The Heads of PES adopted unanimously the present Joint Mission Statement during their meeting on 5 December 2000 in Paris. The document is the result of a proposal of the High Level Prospect Group of the PES).

Background

On 16 November 1998 the Public Employment Services (PES) adopted „A Joint Mission Statement of Public Employment Services in Europe (EU/EEA)" which is to serve as a "minimal description" of each single organisation. The document also refers to the role of the PES in implementing the European employment strategy. A modern public employment organisation forms part of the EU' strategy of prevention and active intervention at the local, national and European levels.

The economic and technological background against which the PES are acting has drastically changed in recent years. Demographic changes (ageing of the labour force), rapid changes in information and communication technologies (from analogue to digital), reorientation of social policy (from "welfare" to more "workfare"), as well as the involvement of private agencies in the market for guidance and placement (deregulation/adoption of ILO Convention 181) present new challenges to the PES. It becomes more and more obvious that purely national ways of thinking and acting are insufficient in the light of progressive globalisation and European integration.

As the scenario has undergone further changes and the developments have gained momentum the PES of the Member States of the European Union and the European Economic Area agreed on this updated and expanded declaration to describe their future role. Each PES will act within the framework set by their national legislation and give special attention to the particular circumstances of their national employment markets. The PES are not striving for harmonisation at the European level, but rather for the definition of common, European objectives which will contribute to improved co-ordination and co-operation.

The New Perspective

The following economic, social, and technological conditions have changed or evolved:

There is a change of paradigms in the discussion on employment policy: from mass unemployment in the nineties to full employment (in some countries) and an imminent shortage of labour (in almost all EU and EEA countries) in the next years.

More shortages of skilled labour are consequently expected. There will be a stronger demand for new and modified/ complementary qualifications. In the context of an ageing labour force companies are stepping up their efforts to introduce new models of further training. Lifelong learning is gaining significance in the enhancement of the management of changes in companies.

6 c Structural changes in the economy, in organisation, work-flow, and processes in companies foster new forms of employment and of employment behaviour. The distinction between dependent employment and self employment is becoming blurred. Interruptions in career paths have become more frequent.

Customers have much higher expectations of the PES. Companies and jobseekers expect services to be more market-oriented and professional.

It has become more urgent to adapt the services to regional needs. The PES' knowledge of their labour market problems, their closeness to the enterprises, their comprehensive information about the potential labour force and about occupations as well as their local presence make them important factors for economic development at local level. Their novel - locally and regionally focused - forms of cooperation contribute in an important way to local economic development.

There are more players entering the market in addition to the Public Employment Services – some are private commercial agencies and some non-profit organisations; some compete, some cooperate with the services of the PES. The services of these organisations will expand further with the use of new technologies.

Thus, from today's perspective, the 1998 Joint Mission Statement is too limited in scope. In the Statement the reorientation of capacities was focused on the sociopolitical dimension and too specifically on one segment of the labour supply, i.e. unemployed persons and in particular the hard-to-place. The economic dimension of the PES' activities, specifically their contribution to the national economy, went largely unnoticed.

The PES form an integral part of the national economy. They fulfil tasks fundamental for economy and society which may not be considered a mere appendix to economic and social policy.

The PES' responsibilities reach further than the traditional ones of placement or unemployment insurance institutions. Rather they make an important contribution to labour market adjustment by opening up employment potentials (i.e. by actively offering specific training when there are skill shortages). Their competent and timely involvement reduces friction by avoiding mismatches. Thus they indirectly help to maintain and also create jobs.

The PES are contacts and service-providers for basically all forms of employment and for the demand and supply side of the labour market. If they design their activities in line with this comprehensive approach they can focus more effectively on the social aspects and their responsibility for the unemployed and other disadvantaged groups.

The structures and strategies of the PES require repositioning - particularly in view of the demographic development. As the active population ages a pro-active role is required to develop young newcomers to the labour market and to maintain and expand the employability of those already active.

It is increasingly important to think outside National boundaries. National

PES actions and programmes must take cognisance of the European dimension. Global and European perspectives must be imbedded in PES activities

Consequences

To live up to the challenges described the PES will:

Operate as experts, and maintain transparency

The PES offers the supply and demand sides access to the 'employment market' by offering comprehensive and detailed information about occupations, employment opportunities details of job-seekers and an efficient vacancy and recruitment service. Information is supplied in a non-biased manner to ensure transparency and to guarantee more and higher quality employment opportunities.

Act as an expert service-provider

- ***A for all employed and all forms of gainful employment***

For all partners in the market the PES will provide tailor-made services in the field of employment and offer effective placement and counselling at local, national, and European level. This includes targeted initiatives for job-seekers aimed at regaining their employability.

The services offered to *job-seekers* are aimed at improving their chances to be placed by acquiring, re-gaining and maintaining their competitiveness. To this end the PES offer a wide range of services: qualified and comprehensive counselling and assistance when people are looking for the first job or making a transition from one phase of employment to another (fixed-term employment contracts, part-time work, self-employment, temporary work or interruptions, e.g. by educational leave).

In addition the PES offer reasonable support for self-help. The use of modern information technology (including the Internet) will be increased. Any capacities released in this way can be redirected to offer and develop a greater number of new and personalised services which job-seekers and companies demand.

If required, the PES will assist an individual throughout his or her entire working life in order to promote occupational mobility and flexibility for the employed.

- ***B for enterprises , including their need for new forms of personnel administration***

At a time of a dwindling labour force the PES' services for *enterprises* include both more assistance to overcome bottlenecks in recruitment and more counselling on human resources, training and qualifications – in particular for SMEs. This includes acting as expert and advisor for human resource development as well as suggestions for tapping human resource reserves, e.g. employment of older workers, or company start-ups.

For maximum efficiency the PES will always give consideration- whether fully or partly - to outsource services to third parties. It is important in these circumstances that the PES continues to manage the process.

Fulfil social tasks of a constitutional state

In keeping with their responsibilities as a public agency the PES will provide extra assistance to individuals facing special difficulties (e.g. in case of disability or social disadvantage) in the search for employment. The PES help those persons whose special problems limit their possibilities of successful integration into the labour market to access to comprehensive, individualised services – if necessary, by co-operating with other partners. By doing this the PES promote equal opportunities and avoid social discrimination.

Furthermore the PES shall encourage and enable the job-seekers to develop adequate initiative to work for their own (re) integration into the labour market.

The PES shall promote employability. From an economic perspective they thus contribute to the development of human resources, including activities that prevent the devaluation of qualifications.

When their scope of action is defined more widely the PES have more opportunities to facilitate the non-subsidised labour market for socially disadvantaged individuals in this period of ample employment.

Fields of action

The future modification requires a appropriate training of PES-staff. It is the key to master the new challenges. In view of the changes in the overall conditions and the likely consequences, PES will emphasise the following in their future work:

- ***Networking of the PES with the relevant actors in the field of employment***

The PES work towards a strategy of active partnership with all parties in the market, in particular the social partners, the chambers/associations, the institutions in initial and further training, vocational guidance, local governments, social and welfare authorities, and private providers of employment services in order to facilitate and to provide a comprehensive range of services for their customers. Networking is a key factor in the attainment of employment policy goals. Establishing and expanding partnerships at all relevant levels is a key strategy for an efficient PES. By co-operating with third parties the PES can focus several complementary capabilities thus widening their range of services. In cooperation with their partners PES services are delivered locally and decentralised. This makes the PES an important element of local economic development.

- ***Extensive use of modern information and communication technologies,***

Using and expanding modern technologies, including the Internet and other media, is of central importance. The PES need to become market leaders for employment services on the Internet.

To live up to its duty as information providers and to improve their methods of work the PES will provide a comprehensive, computer-based system. This system shall facilitate access to information for everybody. The PES must guarantee the quality, content and relevance of the information. The PES must offer extensive assistance for users of the systems ("help for self-help").

The resources released by the new matching methods shall be redirected to counselling and personal assistance, addressing skills and labour shortages as well as to issues relating to internal organisation (e.g. reassignment of personnel and complimentary training of staff).

- **Pro-active strategies hold priority over re-active strategies**

More than before the PES will concentrate on identifying obstacles to employment. They will reinforce profiling methods.

When combining the full range of services in information, counselling and placement, the opportunities on the employment market and unemployment benefits, pro-active-preventive strategies have to be articulated with reactive ones.

When the economic situation develops positively and more intensive counselling can be offered to individual jobseekers, those whose integration is particularly difficult will stand a better chance to find employment in a non-subsidised job.

Quantitative or qualitative imbalances of the market will be identified without delay, and if at all possible, anticipated. Good relationships with employers are crucial. This will facilitate access to information about employment developments within enterprises. In co-operation with the local partners the PES can thus act as an early warning system.

The provision of services will be subject to careful observation and an extensive analysis of the situation and trends on the different sections of the labour market. The PES will advertise their services in a professional manner, thereby maximising marketing strategies.

- ***Co-operation of the Employment Services in Europe***

In view of the new challenges the PES will strengthen their co-operation at the European level. This will serve to improve their services as required. In particular the following fields have been identified for co-operation:

Exchange of best practices, e.g. for:

- assistance to older workers for reintegration
- processes in support of lifelong learning
- co-operative relationships with private placement services
- performance indicators (quality management, human resource development

Successful procedures and initiatives implemented by any of the PES in the different Member States should be subjected to peer reviews and publicised widely.

A higher profile and presence with respect to the relevant European bodies (and beyond) as well as better co-operation with these.

Making use of technical opportunities, for example by setting up a European PES web-site with links to the member countries' databases, in order to facilitate regional mobility – among other things - and also to take joint action against labour -and especially skill shortages.

Trends

Labour shortages and skills gaps in the European Union – An overview

Introduction

At the European summit in Lisbon, Heads of State set ambitious targets for improving the European Union's employment performance over the next ten years. Despite a significant increase in employment and a concurrent decline in unemployment, employment rates in the European Union continue to lag behind those of the United States and Japan (although the latter experienced a decline in recent years). In Lisbon, the European Council committed itself to achieving an average EU employment rate of 70% for men and 60% for women by the year 2010. The new strategic goal to be attained is for the European Union "to become the most competitive and dynamic knowledge based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion".

While a number of member states are already achieving, or are close to achieving this target, the European Commission has highlighted the emergence of two concurrent, paradoxical developments in the European labour market in its 2000 Joint Employment Report. The improvement of the employment situation has begun to raise concerns about the emergence of bottlenecks in the labour market, which it is feared could impede the economic development of the European Union, particularly in the knowledge intensive sectors. At the same time as labour shortages and skills gaps have begun to appear, unemployment and particularly long-term unemployment continues to persist in the European labour market.

In the European Employment Guidelines for 2001, a new Guideline 6 has therefore been introduced under the heading "active policies to develop job matching and to prevent and combat emerging bottlenecks". The Guideline calls upon member states and social partners "to step up their efforts to identify and prevent emerging bottlenecks, in particular by:

- Developing the job matching capacities of employment services;
- Developing policies to prevent skill shortages;
- Promoting educational and geographical mobility;
- Enhancing the functioning of labour markets by improving databases on jobs and learning opportunities which should be interconnected at European level, making use of modern information technologies and experience already available at European level."

The challenge for policy makers therefore appears to be twofold: to assess the nature of individuals who continue to be long-term excluded from the labour market and design measures to reintegrate them actively into the labour market. At the same time, they need to identify regions, sectors and occupations where skill shortages are most acute and most likely to have a significant negative long-term impact on the European economy, and to design policies to effectively address these skills gaps.

The contributions provided by the SYSDEM network of experts in this edition of the European Employment Observatory Review present available evidence of skill shortages and policies aimed at addressing the problem. The theme was also recently the subject of the annual European Employment Observatory conference which took place in Stockholm on 31 May and 1 June 2001.

This overview seeks to summarise some of the key findings and conclusions of the member state reports and the presentations and discussions at the conference and will focus on the following themes:

- What evidence there is for the incidence of labour shortages and skills gaps within the European Union;
- What the distribution of this phenomenon is at regional, sectoral and occupational level;
- What policy measures have been introduced or are being considered to address the problem of skill shortages.

Evidence for the existence of labour shortages and skills gaps

Before looking at the available evidence of labour shortages and skills gaps in the European Union, it is important to define what is meant by these two terms as the same definitions are by no means uniformly used in the academic community or by policy makers in the different member states.

For the purposes of this overview, the term labour shortage is held to denote an overall shortage of labour at national level across sectoral and occupational areas. A skill shortage is seen to exist when employers are unable to recruit staff with the skills they are looking for at the going rate of pay.

The lack of uniformity of definition is one problem when seeking to answer the question of the extent of skill shortages within the European Union. Another is the absence of detailed reliable and comparable data on vacancies, unfilled vacancies and the length of time taken to fill vacancies. While at national level data on the length of time taken to fill vacancies are sometimes available, this is by no means the case in all countries nor is it always a reliable measure of the extent of the problem as not all vacancies are reported to the Public Employment Services (PES). In addition, PES data can not take account of a) employers exaggerating their requirements and b) employers recruiting an individual even if he/she does not meet the full specifications for the job as a compromise.

Presenting the situation in Austria at the EEO annual conference in Stockholm, Profession Wagner-Pinter (of Synthesis Forschungsgesellschaft and Austrian SYSDEM correspondent of the EEO) suggested another measure of the level of skill shortages. He argued that the level of skill shortages was mirrored in the number of job-to-job movements where a wage premium of more than 15% was paid. According to the figures gathered by Synthesis, there were 305,000 job-to-job transactions in Austria in 2000 and in 97,000 of these cases a wage premium of more than 15% was paid to attract skilled staff.

Another alternative source of information on skill shortages is employer surveys which ask questions on the difficulties experienced in finding suitable personnel. However, evidence from such surveys is often criticised for lacking representativity. Nevertheless, they can often yield some interesting information on employer perceptions of the skills of potential recruits as well as of any existing skills deficits within their organisation.

The problem of defining the extent of skill shortages is further aggravated when seeking to predict future skill shortages (rather than pinpointing current bottlenecks), thus giving policy makers the potential to design pro-active policies to avoid future skill shortages. WZB (Wissenschaftszentrum Berlin), together with research institutes in different countries inside and outside the European Union, has been seeking to establish just such a forecasting system based on a macro-model using an occupational and qualification matrix to project demand side information and population, employment and training data to forecast supply side information. This approach was presented at the EEO annual conference. The data gathered by WZB show a clear decrease in future demand for low level qualifications and an increase in higher level qualification. The main growth areas can be found in the tertiary sector, with ICT and health care being among the fastest growing sectors. Among occupations, data show the highest growth potential in administration, finance and legal professions. However, a number of objections were raised to such a system of macro modelling which makes it difficult to factor in the results of policy changes.

From the evidence presented in the national reports it appears clear that one cannot speak of a general problem of labour shortage existing in the European Union today.

However, all member states pinpointed areas of existing and emerging skill shortages going hand in hand with persistent levels of unemployment and particularly long-term unemployment. The majority of studies show that the potential for long-term unemployment increases significantly the lower the level of training and educational achievement. In most cases this is mirrored with greater evidence of skill shortages in sectors and occupations requiring higher levels of specialist education and training. However, the picture between member states, regions and sectors is by no means uniform.

Evidence of skill shortages at regional level

There are some differences in the scale of the problem between member states, with the Netherlands arguably showing the most significant problems in filling vacancies as the country approaches structurally full employment. Differences are also clearly visible between the different regions of one country. In Italy, for example, skill shortages are far more prevalent in the more highly industrialised North than in the South. While in the 1950 and early 1960s there was a significant impetus towards migration, this is no longer the case, partly become demand for labour is more diffuse and not driven (as in the earlier period) by large industrial employers with highly visible labour demand. The example of Belgium highlights the full complexity of the picture of skill shortages, where data show both unemployment rates and the level of skill shortages (calculated by duration of unfilled vacancies) to be highest in the Brussels region. The mismatch hypothesis argues that there could indeed be a positive correlation between unemployment and skills gaps as the latter leads to a restraint of economic growth and subsequently higher unemployment.

Significant problems with skill shortages are also visible in the large urban conurbations where affordable housing is scarce and expensive and can make it difficult to attract workers in public sector occupations such as teachers and nurses and also in the private sector.

Evidence of skill shortages at sectoral and occupational level

The ICT sector is the prime example of a sector facing a significant skill deficit in the majority of member states. It is estimated that in the European Union, there is currently a shortage of 1 million ICT workers. However, even in a sector of overall shortage a more differentiated picture has to be taken into account when seeking to target policy measures. Most member states report particular problems in recruiting system designers and analysts and less difficulty in finding help desk and associated customer service professionals. A study carried out by the Fundacion Tomillo in Spain shows that many employers in the ICT sector are prepared to recruit workers to help desk and other associated functions who do not have any formal ICT qualification. The dominance of a number of systems providers means that in the area of applications it is often easier to recruit individuals without formal ICT qualifications and to provide training through short courses and the most recent releases of application options.

Other sectors facing recruitment problems in a significant number of member states are teaching, nursing and social care professions, as well as engineering and construction.

Policy measures aimed at tackling skill shortages

Policy measures instituted aimed at tackling skill shortages fall into the following broad categories:

- Measures aimed at enhancing internal or external mobility;
- Measures aimed at improvement of the job matching function of public employment services;
- Improvements of the training system.

Surprisingly few countries appear to so far have experimented to any significant

extent with measures aimed at encouraging internal mobility. While in some countries such flows are already significant, in others there is little internal flow of labour into regions of labour shortage. In countries such as Belgium this is partly linked with language difficulties, in other countries such as Italy cultural factors are quoted as a significant factor inhibiting cross-regional mobility. A pilot project in Spain, presented at the conference, is seeking to attract workers to meet specific skill needs for other regions with promises of open-ended employment, the provision of training and significant assistance with removal and social and cultural integration.

In relation to cross border flows in the European Union, these can be significant in immediate cross border regions, but remain negligible in the wider context. Again this can be attributed to language and cultural factors, but also to difficulties in the comparability of training and educational qualification - an issue which is already being addressed at European Union level, but is only set to be addressed more fully in the much longer term.

At the same time, many member states are already actively considering and implementing measures for the more active encouragement of "targeted" immigration to meet particular skill needs (e.g. by increasing "green card" quotas for immigrations with particular skills profiles). However, as it was pointed out at the conference, if such policies are to become more widespread equity questions would need to be addressed and further measures undertaken to limit discrimination in the labour market and society as a whole.

There has in recent years already been a significant trend towards the improvement of the job matching function of the PES firstly through the gathering of more detailed intelligence on skill requirements and the increasing individualisation of matching and placement services. Nevertheless the conference highlighted a number of examples where communication remains insufficient between the PES in different regions which could assist in encouraging mobility flows.

The overall improvement and better targeting of the education and training system was a key concern highlighted by all member state contributions. Emphasis was particularly placed on the role of the state in providing funding and the role of the social partners in assisting in identifying future trends and skill requirements to be integrated in training modules.

Emphasis ranges from boosting initial education and training and generic skills to improved provision for higher and specialist education. In Germany, for examples, measures are being taken to speed up the review of content of the occupational dual vocational training system, with significant input from the social partners. Efforts are also being taken to render the system more modular and therefore more flexible in responding to emerging skill needs.

The importance of the mapping and forecasting of skill needs is not only important in avoiding skills shortages with potential future impact on competitiveness, but also in avoiding low returns on investment and to avoid expectation failure.

Conclusions

It is clear that the emergence of labour shortages and skills gaps is a highly complex and multi-faceted phenomenon. The importance of addressing this phenomenon is highlighted by evidence available in the member states which shows that skill shortages can lead to wage cost inflation, difficulties in maintaining competitiveness and even an indication of the emergence of the "discouraged recruiter" which could impede job creation in the short to medium term.

It is a phenomenon which has only recently begun to attain greater prominence in the academic community, partly on the prompting of employer representatives and policy makers. More detailed investigation of the level of skill shortages has been impeded by differences of definition and a lack of available data. However, existing evidence can give an indication of sectoral and occupational skill areas where shortages are already evident. Among the most important measures to be taken to avoid future negative impact of such skill shortages are efforts to re-integrate excluded groups into the labour market through:

- targeted training;
- the provision of family friendly working conditions and the improvement of childcare facilities;
- greater emphasis on lifelong learning which could serve to improve the position of older workers in the labour market;
- the improvement of the education and training system; and
- greater emphasis on forecasting and assistance for mobility measures.

Austria

Evidence of labour shortages and skills gaps

Employment growth in recent years has pushed Austrian labour market conditions close to a position of full employment. The rate of unemployment dropped to 3.7% in the year 2000, and a further decline is expected for the period 2001 to 2005.

Under such circumstances, it is quite clear that the number of employers experiencing difficulties in filling vacancies is likely to rise. The Austrian PES has noted an increasing flow of vacancies onto its register by employers experiencing labour shortage. As recently as the second quarter of 1999 the average stock of vacancies registered with the PES stood below 33,000 (see table 1); in the third quarter of 2000 it had surpassed the 35,000 threshold. Projections show that demand for labour in certain sectors is set to grow significantly, while in others it is expected to decline (see table 2)

Tight labour market conditions have elicited three responses from employers having difficulties in recruiting additional employees. Firstly, they raise the wages offered to prospective employees (in particular if they are holding a job in another firm). Secondly, they tailor employment conditions to the needs of their employees. Thirdly, they mobilise as an interest group to put pressure on policy makers.

Table 1: Vacancies in Austria 1999

	Vacancies
Agriculture	2,100
Mining and energy	100
Manufacturing	4,300
Construction	2,900
Distribution	5,000
Hotels and restaurants	7,600
Transport, communications	1,200
Banking and insurance	200
Public administration	700
Education	400
Business services	4,200
Health and social services	1,000
Other services	1,500
Total	**31,200**

Source: Public Employment Service

Table 2: Employment in Austria 2000 and 2005

	2000	2001 to 2005
Agriculture	25,600	-800
Mining and energy	43,200	-5,000
Manufacturing	612,300	+3,500
Construction	257,600	-22,300
Distribution	492,200	+23,400
Hotels and restaurants	149,000	+5,800
Transport, communications	228,800	+1,300
Banking and insurance	110,200	+1,600
Public administration	476,000	-14,000
Education	124,300	+5,600
Business services	251,000	+73,400
Health and social services	147,900	+18,400
Other services	146,300	+11,400
Total	**3.064,500**	**+102,300**

Source: Synthesis Research

Whereas most Austrian employers are confronted with a general shortage of labour, some of them feel particularly hard hit. These employers argue that regardless of the measures they take to attract staff they cannot find any candidates on the labour market. It is this group which has initiated the skills gaps debate in Austria. In general such concerns relate to individuals with certified IT skills and the government is urged to take suitable measures to bridge the gap between supply and demand in this area.

Skills gaps and the pull factor in employment flows

The IT skills gaps debate has had a bad start in Austria. It took off with figures derived from surveys among employers. Here manpower projections of IT skills were added up to arrive at an estimate regarding the size of the gap. The resulting numbers looked shocking and indeed ultimately implausible. Such initial projects have since been revised downwards.

This experience suggests that it might be more appropriate to base estimates of labour shortages and skills gaps on a different method. Such a method has to correspond to empirical observations of actual labour market behaviour. It is behaviour (rather than opinion) which points to bottlenecks in the labour market.

As a starting point, one might look into employee flows between employers (see also Table 3). Such flows reflect the strength of the demand pull exerted by employers trying to find suitable candidates for vacant jobs. The more difficulties employers experience, the stronger their demand pull will grow. This should be reflected in an increase in employee flows between employers. One part of this flow will mirror the regular reshuffling between workers and jobs that occurs any time. The other part will be caused by the demand pull of employers facing recruitment difficulties and therefore offering wage premiums to attract suitable candidates. The tighter the conditions on a "skills market" are, the larger the share of inter-firm employee flows accompanied by wage rises (i.e. the share of "favourable flows").

Box 1: A note on sources

There are hardly any studies specifically forecasting skills gaps in Austria. So far only Synthesis Research and the Austrian Institute of Economic Research have undertaken such studies on the basis of a rigorous methodology.

The study by Synthesis Research has been commissioned by the Federal Ministry for Economy and Labour. This study is based on a microdata set (3.5 million employees and 350,000 employers) and bases its results on forecasts of inter-firm flows of employees. The criteria for "market pull" caused by labour shortage is the premium firms pay to attract suitable candidates. The study is very detailed an occupational profiles. This study serves as a source for the figures quotes above. (W. Alteneder, Monika Kalmár, Roland Löffler, Peter Pohl, Günter Kernbeiß, Michael Wagner-Pinter: Fachkräftemangel. Prognositsche Modellrechnungen zur Identifikation betrieblicher Personalengpässe für das Jahr 2002. Synthesis Research, Wien 2001).

The study of the Austrian Institute of Economic Research has been commissioned by the WAFF (an agency of the TEP Vienna). It covers only the IT sector. It is based on the survey conducted among employers active in the IT sector. (H. Leo: Arbeits- und Qualifikationsnachfrage im Telekom- und Mediensektor. Wifo 2001).

The Research Centre of the Chamber of Commerce and Industry has devoted a Newsletter (No1/2001) to the issue of IT skills gaps (ibw-Mittleilung 2001).

A forecast up to 2020 for the output of the Austrian university system is provided by the Demographic Research Centre of the Austrian Academy of Science (R. Dell'mour, F. Landler: Quantitative Entwicklungstendenzen der österreichischen Hochschulen 1973-2020. IFD 2000).

The Federation of Austrian Industry has set up a task force on IT skills which regularly publishes information on expected IT skills gaps and on proposals to improve the situation.

Table 3: Job to job mobility in Austria 1999

	Number of cases	Total employment
Agriculture	2,600	25,800
Mining and energy	2,300	44,400
Manufacturing	50,800	612,100
Construction	39,300	262,700
Distribution	57,500	485,700
Hotels and restaurants	25,000	147,500
Transport, communications	22,600	227,700
Banking and insurance	10,100	109,700
Public administration	10,700	478,500
Education	3,000	122,500
Business services	36,900	232,800
Health and social services	9,800	143,100
Other services	16,500	143,000
Total	**287,300**	**3.035,500**

Source: Synthesis Research

This mechanism offers a route for observing the size of skills gaps in a specific skills market. When the size of the "favourable flows" of employees with specific skills gaps grows, then the gap widens.

In Austria, 230,000 employees left their jobs to join a new employer in 1996; their numbers had grown to 287,000 by 1999. This is a sizeable increase in inter-firm employee mobility.

These employees were recruited to a large extent by firms facing bottlenecks. Their new employer was willing to pay them a premium on top of what they earned in their previous job. In 11,000 cases (1996) the wage on the new job exceeded the wage on the previous one by 15%. By 1999 no less than 17,000 employers recruited their new employees by offering a premium of more than 15%. About 66% of this job flow concerned employees with certified skills; 87% of them in white-collar occupations, 13% of them in blue-collar employment.

The case of the health service sector

The health service sector is one of the fast growing sectors in which the demand pull is clearly discernible. Though this industry hardly receives attention in public debate (at least compared to the IT sector which tends to dominate the skills gaps issue), it exhibits several signs of skills gaps.

Firstly, a large share of all recruitment, close to 10,000 cases annually, involves employees who are leaving their previous jobs to move directly into the new, generally higher paid jobs In 1999 there were 3,400 employees who received a wage increase of at least 15% when changing employers.

Secondly, employers in the private health system do more than their counterparts in the public sector to adjust working time to suit the wishes of their employees. In the private sector, employers are willing to let some of their workforce opt out of night and weekend duties. This makes work in the private sector more attractive to people who consider working in the health service sector not as a personal "mission" but rather as a regular job. And, indeed, it is not, as prejudice would have it, only women with child-care duties who see it this way. From a certain age on, male doctors and nurses also try to avoid working extra hours.

Both adjustments, in wages as in working conditions, do not suffice to overcome the skills gaps in the health care service. A more responsive education and training system is required to ensure a smooth adjustment to gaps. Education and training, is however provided by institutions which hardly react to market conditions for the skills they provide. The annual output of certified nurses, medical technicians and doctors is determined to a great extent by the number of courses offered. This number depends on the amount of the public grants the educational institutions re-

ceive. If these are not increased, the annual addition to qualified labour supply will stay constant, irrespective of the market pull. Thus excess demand results in substantial rises in earnings rather than in additional jobs.

The case of the federal province of Styria

The industrial renaissance of Styria has been in full swing since the nineties. After a protracted period of decline of its nationalised industries, Styria managed to make good use of a well-trained workforce and of firms whose specific competence made them internationally competitive despite the small scale of their operations. By systematically pursuing a strategy of building up an industrial "cluster", Styria was able to attract international investors. When multinational companies decide to downsize their overall operations, the Styrian plants usually evade job cuts.

Labour demand from these new and partly rapidly expanding plants makes itself felt in the region. The number of recruitments in the "manufacturing industries" has risen in Styria from 5,900 (1996) to 8,000 (1999). This market pull led to 600 job changes in which the employee received a wage increase of more than 15% (compared to the previous job).

In particular small car repair shops have been complaining about skills gaps. Though they provide to a great extent the apprenticeship training for the industry, they find their skilled employees leaving to join the larger companies operating in the field. These large companies prefer to pay a premium for skills than to invest in creating them through apprenticeship programmes.

Policy makers in Styria made a proposal to overcome this impasse. They aim at providing an incentive to multinational investors establishing (more) apprenticeship programmes. If a plant runs a regular apprenticeship programme, it will receive preferential treatment when applying for "green card" exemptions for migrant workers it might need to cope with rising output. This should help to achieve a greater regional balance on the labour market for skilled workers.

Do skills gaps limit the potential for employment growth in Austria?

Austrian labour markets are rather flexible. Thus labour shortages affect the relative wages of employees with scarce skills. Evidence on this mechanism has been presented in the previous section.

In principle such changes in the pay structure just reflect the market mechanism operating the way it is supposed to do. At the same time skills gaps are caused by the built-in failure of "spot" labour markets to signal "future" excess demand (or, for that matter, excess supply) for specific skills. These market failures can be the source of a loss of competitiveness in the Austrian economy.

The amount of job creation foregone due to skills gaps is of particular interest. Such a loss of opportunities naturally attracts much attention from the point of view of the European Employment Strategy.

One way to capture the size of the dynamic employment losses proceeds along the following lines: Skills gaps hurt those employers most who are set on a fast track of expansion; they would expand their workforce even faster if only they did not have to pay a premium to attract employees.

In fact, of a total of 17,000 job changes (with a pay increase of at least 15%), 12,500 changes are induced by employers who expand their workforce. By taking account of the number of changes in each case one can achieve at an estimate of the job creation foregone: Austrian employment could have expanded in 2000 by an additional of 0.33% if no shortages had been encountered by expanding employers. This would have reduced unemployment further by 5.1%.

Projections of skills gaps 2001–2005

The following section on the projection of skills gaps starts with a discussion of the demand side and the supply side. From this comparison a projection is derived.

Demand-side factors

Since skills gaps do limit employment growth, the Austrian PES takes a keen interest in projections of skills gaps in the medium term. To arrive at quantitative estimates, the PES can turn to two sources of information provided by various labour market research units in Austria.

The first source is survey based. It relies on estimates put forward by a sample of employers considered representative of the field. Such surveys are conducted in a more or less formal manner by the Chamber of Commerce and Industry and other employers' associations, by personnel consultancies, and by independent research centres. Such surveys usually arrive at inflated figures because there tends to be a bias among respondents in favour of those already facing skills gaps. This bias has been, as already mentioned, noticeable in the debate about the future labour demand of the IT sector.

The second source of information is input-output models of the Austrian economy. They arrive at more realistic (and stable) demand estimates of future labour demand.

The third source of information is based on a micro-data-based model of the Austrian economy. This model takes account of observed employment flows of about 3.5 million employees and about 300,000 employers.

Forecasting simulations with this model clearly show that in some industries there will be a substantial demand pull. This pull will result from the fact that employers with a growing workforce will face tight market conditions for the skills they need. Demand for employees with certified skills will rise in the following industries: in manufacturing industries by 31% (+2,600 jobs), in business services by 22% (+1,800 jobs), in banking and insurance by 10% (+850 jobs).

Supply-side factors

The trends on the labour supply side over the period 2001–2005 exhibit the following features.

The population of a working age (men 15–65, women 15–60) will increase by 8,000; the number of women (+7,000) and men (+1,000) will be larger by 2005.

Labour market participation rates will go up for women and for men, though the tendency will be more marked for

women. One reason for increased labour market participation is the policy measures implemented to push back the de-facto-retirement age, which is rather low by Community standards. Another reason is the demand pull of the labour market. It induces more people, in particular women, to participate in labour market activities. This pull effect is considerably, leading an additional 26,800 women to join the Austrian labour market in 2000.

The age composition of the labour force is also set to change between 2001 and 2005. The age group up to 29 years will decrease by 100,000; the group 30–49 will rise by 120,000; the group 50+ will rise by 21,000.

The changing age composition should not in itself create bottlenecks in skills; those age groups which retire have on average a much poorer skills composition than those which will join the labour force.

There is, however, one important exception to this observation. This relates to the apprenticeship system which is so important for the supply of highly skilled workers in many industries in Austria. Employers have, in the past few years, been less willing to take on apprentices. This has depressed the supply of skilled workers of young age in quite a few trades. This trend can, however, be reversed, if the need arises. If certain industries feel pressed hard to enlarge the supply of young workers with certified skilled labour force, they can just step up their apprenticeship programmes (in terms of working conditions and pay), with positive results arising from this within three years at the latest.

Occupations and industries

Comparing the demand and supply side projections, the following scenario evolves:

Employment will rise by 100,000 over the period 2001-2005. This additional employment will be matched by increased supply drawn from various pools. First, and most important, a reduction in unemployment will provide for an increase in 55,000-60,000 jobs. Second, the demographic base will broaden. The number of Austrians residents of working age is expected to rise by 8,000. Third, the demand pull will make people more inclined to join the labour force. This entails a rise in labour market participation rates. About 32,000-37,000 in additional labour supply will be due to this activation effect.

On balance, the available sources of extra labour supply should allow for non-inflationary employment growth. Bottlenecks, if any, are likely to arise from local and skills-related imbalances.

With respect to local imbalances, the Austrian labour market has a high degree of flexibility. Commuting, even for long distances, is common among employees. They seem to monitor closely how demand develops beyond their local labour market. This leaves us with skills gaps as an impediment to tapping the potential for employment growth.

Any projection about such skills gaps is, in fact, a forecast about the flexibility of employers and public decision-makers to act swiftly on perceived and expected skills shortages. Given the Austrian institutional background, it should be possible to avoid the emergence of such shortages in specific skills by deploying to a greater extent the rich variety of measures in the field of education and training that are already in place. The time lags between the implementation of measures and results obtained should be less than three years in most cases.

Nevertheless a projection of Synthesis Research expects skills gaps to emerge in particular in the following occupations by 2005: 1,000 in technical professions; 3,600 in IT-professions; 850 in commercial professions.

It seems worthwhile to note that skills gaps in terms of "full-time, year-round jobs" (i.e. stock of employment) should not be equated with the number of extra people needed. This cuts both ways. Some of the gaps could be filled with people who are already participating in the labour force but do not do so full time or year round; just by increasing their annual working hours some of the gap could be covered. At the same time not every new entrant with certified skills will start his or her career by doing a regular working year. Thus more than one new entrant might be needed in order to cover the workload of a full-time, year-round job.

Public debate about policy measures

In Austria public debate about tight labour market conditions is shaped to a large extent by past experiences.

Past experiences

The last time Austria was facing tight labour markets was in the late eighties. Then, a tight labour market meant labour shortage of workers with hardly any certified skills. The obvious answer, it seemed, was to issue more work permits to migrant workers. Thus the employment of migrant workers grew between 1989 and 1992 by 120,000.

A shortage of skills never used to be an issue of particular concern. Much trust has always been placed in the strong tradition of the apprenticeship system. Since it covers both white-collar and blue-collar occupations, it seemed to ensure that those industries which were pressed hard would always respond by training the supply of skills needed. This optimism has not been limited to apprenticeship programmes. In-house training has always provided a readily available route, if such was badly needed.

There is a prominent example of such extensive training for enhancing occupational skills. In the banking and insurance sector, which grew fast during the eighties and nineties; adding 2,000 jobs annually between 1980 and 1990, much effort was expended on making their workforce "computer literate" in an environment in which those skills were still thinly spread by the late eighties.

Against this background, Austrian policy makers had little reason to suspect that large skills gaps would evolve. Setting up regional Polytechnics in the nineties seemed to be a pragmatic answer to the demands of a knowledge-based economy. These Polytechnics were designed to provide further education with a clear and close view on the prerequisites of prospective jobs. Moreover the Polytechnics have attracted a large segment of those students whose primary aim is not general-self enhancement but getting prepared for a well-paid job.

Specific measures

When the IT skills gaps shock hit, it became clear that policy makers had to give more attention to and allocate more financial resources to the matter of occupational education and training. Most of the measures needed have already been in operation, albeit at too low levels of activity. This process has to be speeded up.

An important field is the apprenticeship system. It needs more active participation by employers who have run the number of apprenticeship slots down to a historical low. Stronger employer participation entails more vacancies offered to candidates, a more attractive curriculum, better pay and a greater willingness to take on young people even if they do not match employers' expectations at first sight.

The social partners contribute to this enhancement of the apprenticeship system by creating new occupational apprenticeship profiles to match the change of the occupational structure.

In some Austrian federal provinces policy makers have suggested that it might elicit more interest in apprenticeship programmes if employers who do participate get preferential treatment when green cards are issued.

In-house training and training in centres run by more or less formalised networks of employers operating in the industry is another approach to the skills issue. In this area the Austrian PES is a key player. It provides training facilities and supports training networks of firms. It also pays consultancy fees for firms who wish to learn how to implement training programmes for their employees and covers part of the training fees of employees who wish to further their occupational knowledge.

Although the Austrian government has not yet officially acknowledged the existence of major skills gaps apart from IT skills, it seems set to support a further growth in enrolment to Polytechnics which provide their students with up-to-date higher education. Internships are mandatory and students tend to be inclined to work hard to get jobs in expanding areas of the economy.

Since the Austrian system of occupational and professional training has a very successful tradition, there is little pressure to innovate the institutional framework. This is quite obvious with respect to the certification of skills. It is impossible for employees to get credit for what they have learned on the job. There are no coherent and credible means of recognising learning outside the formal education institutions. The partners involved have not taken up the idea of setting up standards for assessing and recognising skills that individual learners have accumulated outside formal education. Such a set up however, is badly needed in a knowledge-based economy. It should suffice for employees to demonstrate their skills against a standard qualification framework, in order to gain credit. Moreover it should be possible to pace the accumulation of credits according to individual circumstances and needs. It would greatly add to the incentives for life-long learning if the learner could receive at request an official statement of all standards and qualifications she or he has achieved. Such a National Qualification Framework would be a truly innovative approach within the Austrian setting.

Conclusions

Austria is approaching a position of full employment. As a result it is facing a tightening of labour market conditions, particularly as employment growth is expected to continue. It is anticipated that about 100,000 additional jobs will be created between 2001-2005. At the same time, unemployment is expected to fall by 55,000–60,000. It is expected that strong labour demand will allow between 45,000–50,000 individuals who are economically inactive to take up employment.

The available pool of unemployed individuals along with higher activation rates among people of working age should suffice to avoid inflationary excess demand. However, some occupations and industries face a significant risk of specific skills gaps which will be a barrier to realising their potential for expansion. It is anticipated that around 35,000 fewer jobs will be created during 2001-2005 than would have been possible in the absence of such skills gaps.

Among the industries most likely affected, the manufacturing and business services stand out - they will face shortages in the areas of IT skills and certified technical skills.

In principle, Austria is well equipped to avoid the emergence of skills gaps. There is a comprehensive infrastructure for vocational and professional training and education in place, ranging from a well-established apprenticeship system to higher education in Universities and Polytechnics. In the past, this has always ensured a sufficient flow of newly certified occupational skills. In fact, it has been precisely the abundance of highly skilled labour that has attracted foreign high-tech direct investment in Austria.

It is argued that what is required now is a swift deployment of additional resources. Some of those funds will have to be raised by employers through the increasing provision of in-house training. They will have to step up in-house training. Moreover they will have to show stronger participation in contributing to training centres that serve all the firms of their industries. Another important source for funding is provided by the Public Employment Service (PES). The PES has already earmarked funds for continuing training. These funds offer support to employers, employees and the unemployed. As a broad policy consensus, Austria takes the following position:

"A few more green cards and a lot more education and training."

Though the Federal Government subscribes to this view, it so far seems reluctant to commit itself to a great leap forward as far as financial resources are concerned.

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Belgium

Introduction and background

The Belgian context

Belgium is a federal state in which three large regional governments (Brussels, Flanders and Wallonia) operate alongside a central federal government. Both levels of government have a number of competencies with respect to the labour market. Employment services are a regional competence. There are three public employment services (PES) corresponding with the territorial division of the country: the 'Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding' (VDAB) serving the Flemish Region, the 'Brusselse Gewestelijke dienst voor Arbeidsbemiddeling' (BGDA) for the Brussels Capital Region and the 'Offiice régional wallon pour la Formation et l'Emploi' (FOREM) for the Walloon Region. In addition, a large number of specific actors are involved with the labour market in each of the three regions. The general labour market situation in the three regions also varies widely: for example, the ILO-unemployment rate in Flanders in 1999 was 5.4%, compared with 12.7% in Wallonia and 15.9% in Brussels (WAV, 2000).

Definitions and criteria for the identification of labour shortages

The term *Labour shortages* within the context of this paper is taken to mean that the number of available workers falls short of the corresponding number of vacancies within a given segment (e.g. subregion and/or occupation) of the labour market. Genuine shortages are hard to identify in absolute terms. Indicators of labour demand, such as the number of vacancies reported to the PES within a given period, tend to underestimate the overall demand because not all vacancies are actually reported. Similar problems occur on the supply side. Even when the available job seekers can be identified and counted,[1] other potential candidates for the same jobs may be 'hidden' because they are currently working in other jobs. Supposing that the ratio of the number of (registered) job seekers per (registered) vacancy is used as an indicator of shortage, a ratio below unity does not necessarily mean an absolute shortage. Hence, we will assume that the term 'labour shortage' is mostly *relative*, given that we are unable to measure the exact supply and demand for labour.

Labour shortages are often confused with *skills shortages*. Although shortages tend to occur more often in highly-skilled jobs, they are not necessarily related to the availability of skills. Other aspects of the job (such as language or physical requirements) may cause a mismatch between supply and demand. We will return to this issue later.

Hard-to-fill vacancies (or jobs) can be seen as the early symptoms of labour shortages. Here we draw a distinction between such vacancies and *hard-to-fill occupations*. Some labour shortages may be related to the geographic location of employment and affect the majority of the occupations in that sub-region, while elsewhere they may be concentrated in particular occupations. Conversely, hard-to-fill occupations in one region may not be problematic in another.

When it comes to operational definitions even for more precise notions such as 'labour shortage' or 'hard-to-fill vacancies', the agreement on common criteria is an essential condition for the comparability of studies. Nevertheless, in Belgium there is a clear lack of any such uniform definition and methodology. Various studies concerned with the problem all use their own research methods and differ in the criteria applied.

The PES in Belgium (VDAB[2] and BGDA[3])[4] use mainly objective criteria, which have been refined over time, for defining hard-to-fill jobs. These criteria include *vacancy-filling rate, average placement time and time lag in filling vacancies*. However, in the case of VDAB, for example, the list of hard-to-fill occupations is obtained by combining these criteria, subject to an assessment by a number of labour market spe-

1 According to Eurostat's Labour Force Survey, barely four fifths of all job seekers in the EU are registered at the public employment service. The corresponding ratio in Belgium is above 90%.

2 In practice, VDAB (Flanders) uses the following definition (VDAB-studiedienst, 1999):
- at least 10 vacancies for the occupation concerned;
- the VDAB vacancy filling rate must be lower than the mean percentage for all occupations together (in 1999 <74.2% filled via VDAB);
- the total vacancy filling rate must be lower than the mean percentage for all occupations together (in 1999 <84.6% filled);
- the mean lead time for filling a vacancy or the mean placement period must be greater than the mean for all occupations together (in 1999: mean lead time >49 days; mean placement period >42 days).

3 BGDA (Brussels) applies three criteria in classifying occupations (BGDA, 1999):
- the vacancy filling rate (number of successful job offers/number of job offers received) for the occupation is lower than the average for all occupations (in 1999 this was 61.2%);
- the lead time is longer than the average for all occupations (in 1999 this was 1.3 months);
- at least 10 job offers must have been received for the occupation in question during the course of the year

4 Note that FOREM, the public employment service of the Walloon region, does not study hard-to-fill vacancies.

cialists. In other words, there is a combination of objective and subjective criteria. The resulting list of hard-to-fill vacancies for 1999 covered no less than 33.8% of all registered vacancies in Flanders, and 23.7% in Brussels.[5] These figures obviously reflect relative rather than acute problems, given that the criteria compare filling rates and time lags in filling vacancies for particular occupations with overall averages.

Simpler, but at the same time stricter objective criteria have been used in other studies. Simoens et al. (1997 and 1998) and Denolf et al. (1996; 1999) used *vacancies open for at least three months* as a key criterion. In this way, the proportion of hard-to-fill vacancies in Belgium amounted to 8.8% in 1995 and 11.3% in 1998. Unfortunately, these figures underestimate the real picture because unfilled vacancies were not included in the analysis. A forthcoming replication of the study for the year 2000 (Delmotte et al., 2001) addresses this shortcoming. Even without correction, it indicates that the percentage of hard-to-fill vacancies in Belgium has approximately *doubled in two years.*

Steunpunt WAV (1999) calculated the ratio between the number of 'suitable candidates' (i.e. job seekers who have the required training and have declared their interest in a particular occupation) and the number of vacancies per occupation within a given period as an alternative criterion. For some occupational groups (analyst-programmer, electronic engineer) this ratio turns out much lower than one (0.5 and 0.7, respectively) compared with an overall ratio of 8 in 1998. The data for the calculation of these ratios are drawn from the official registers of vacancies and job seekers. As mentioned earlier, these statistics may be somewhat biased by the fact that neither all job seekers nor all vacancies are reported to the public employment service, particularly in highly specialised occupations.

Other studies rely essentially on a *subjective* assessment by employers, temporary employment consultants, sector representatives, etc. For example, employers or temporary employment consultants are asked to indicate the *occupations for which they experience* difficulties (e.g. CEVORA[6]-UPEDI, 1999). Quantitative indices of 'seriousness' of the shortages are subsequently calculated. Another 'subjective' method is the holding of round-table discussions,[7] where several *experts reach a common position* on their own perspective.

In seeking a uniform definition and methodology for studying labour shortages, it could be appropriate to define them using a combination of objective and subjective criteria. This guarantees an objective basis for defining shortages whilst allowing nuances to be applied to this definition.

Sources and material

Labour shortages can be recorded in various ways. Broadly speaking, three types of sources are used for measuring shortages (Muysken, 1994; Van Mechelen, 1999): the registration of vacancies in employment offices; newspaper advertisements; and company surveys. In Belgium, only administrative information sources are generally used (VDAB, BGDA, FOREM vacancy databases), together with a number of (smaller) surveys.[8] The increasing tightness of the labour market and the growth in the number of hard-to-fill vacancies has prompted a sharp increase in the number of studies in this field in recent years.

Surveys

A distinction can be drawn between employer surveys and surveys among temporary employment consultants. Research carried out by the Higher Institute for Labour Studies (HIVA) for the Federation of Temporary Employment Agencies UPEDI has examined the recruitment behaviour of Belgian companies in each year between 1995 and 1998, and every two years from then on. This series of studies (Simoens et al., 1997 and 1998; Denolf et al., 1996 and 1999) has several advantages: it covers the whole vacancy market (whereas others are confined to specific segments) and the whole country (most others being confined to one of the three regions). However, the samples used in this research are too small (approx. 3,200 net respondents) for detailed analyses of hard-to-fill vacancies.

In Wallonia a survey was carried out in 1999 by the 'Service d'Etudes et Statistiques' (SES)[9] with a view to charting *anticipated* recruitments and problematic vacancies in the context of the LAPIN project (Guyot et al., 2000). This prospective analysis of labour demand is currently unique for Belgium and gives some indication of potential shortages but does not produce any matched statistics on the supply side. Only rough comparisons of supply and demand by level and type of initial education have been produced thus far. The administration therefore decided to adjust its methodology and to conduct six-monthly retrospective surveys on vacancies (IDEE), similar to HIVA's approach, beginning in 2001.

A number of smaller, sector-specific surveys have also been carried out. Unfortunately, the results of all these studies are not mutually comparable due to differences in the research methodology. In addition, most surveys are relatively small in scale and are highly specific. In Flanders, the first steps have recently been taken towards the development of a large-scale panel survey on the demand side of the labour market.

Newspaper advertisements

Newspaper advertisements are a widely used recruitment channel. These advertisements can be used to estimate the number of vacancies, provided a number of corrections are applied. This method is hardly used in Belgium. To our knowl-

5 These figures are not strictly comparable, due to differences in definition.

6 CEVORA is the training centre for the Supplementary National Joint Committee for White-collar Workers

7 Round-table discussions have been set up in the past by organisations including the Social and Economic Council of Flanders (SERV), the Institut de Formation permanente pour les Classes moyennes et les petites et moyennes entreprises (IFPME), the Employers' Confederation for the Technology Industry (AGORIA), FOREM (Formation et Emploi), the food industry, etc.

8 Including CEVORA-UPEDI (1999, 2000), the National Bank of Belgium (2000, 2001), Service d'Etudes et Statistiques (1999), research commissioned by the Federation of Temporary Employment Agencies (UPEDI) (Simoens et al., 1997 and 1998; Denolf et al., 1996 and 1999)

edge, one Flemish newspaper (*De Standaard*) compiles a quarterly 'employment barometer' on the basis of the number of advertised vacancies (Van Mechelen, 1999). This method of working does not however permit the magnitude of the vacancy market to be determined with any precision. After all, employers may combine several advertising channels, while the use of these channels is also less extensive than that of the informal channels.

Public Employment Services

Employers are theo retically obliged to report their vacancies to the public employment services. As a result, the latter hold extensive vacancy databases. Each year, regional vacancy analyses are presented together with an inventory of hard-to-fill occupations and causes of shortages. The public employment services apply a number of objective criteria for this, which if necessary can be supplemented by expert opinions.

These databases offer a rich source of information. However, one limitation is the fact that not all companies - despite the obligation - register their vacancies with the public employment services. On the other hand, the tighter labour market means that companies are becoming more inclined to use the public employment services.

The academic and policy debate in Belgium

Labour shortages as a cause of unemployment

Although the terminology relating to labour shortages may have changed somewhat in recent years, the debate is not really new: in the midst of the huge unemployment crisis of the past 25 years, some economists have emphasised the 'skills mismatch' as a major *cause* of unemployment. The notion of (skills) mismatch refers to the simultaneous occurrence of unemployment in low-skilled segments of the labour market and shortages in high-skilled segments. The latter are thought to be responsible – at least partly - for the slow growth of the economy.

Paradoxically, the mismatch hypothesis has traditionally met greater support in the Walloon region, where macroeconomic unemployment is much higher than in Flanders. A priori, one might expect the opposite, given that Flanders has a tighter labour market. Sneessens (1997), a leading Walloon economist, observed a widening gap in Belgian unemployment rates by level of education between 1981 and 1995. He examined the relation between technological progress, economic growth, wage and price formation and unemployment by skill level in a simple macroeconomic equilibrium model and found some evidence in support of the mismatch hypothesis.

Skills mismatch or an over-educated workforce ?

A competing – or even opposite – explanation of the unemployment gap between high- and low-skilled workers has been upheld by Flemish labour market analysts. According to the well-known job competition theory and the related over-qualification theory (see Borghans and de Grip, eds. 2000) individuals compete on the labour market by maximising their human capital investments. Highly skilled job seekers threatened by unemployment can then accept jobs below their level of qualification, thus crowding out the less qualified job seekers. When this occurs on a large scale, it leads to a concentration of unemployment among the lowest-skilled, even though the excess labour supply a priori is equal at all levels of qualification. Denolf et al. (1996; 1997; 1998) analysed the vacancy market on the basis of large-scale employer surveys and consistently found that approximately one in every three vacancies in Belgium was filled by 'over-qualified' job seekers. On the other hand, 12 to 19% of all vacancies was filled by under-qualified candidates, which could be used as evidence in support of the mismatch hypothesis (see also Pollet e.a., 1999). In any event, over-qualification among newly recruited workers tends to contradict the hypothesis of a shortage of high-skilled workers.

The success of the job competition and over-qualification theory in Flanders may be explained by the fact that the Flemish active population is in general more highly skilled than its Walloon counterpart. Nevertheless, the debate is far from settled, partly due to a lack of detailed statistics and econometric models (see Van der Linden, 2001). Moreover, there is a growing awareness that levels of qualification and skill are just two variables in a set of characteristics that determine the (dis)equilibrium on the labour market.

Mismatch and labour shortages, a multidimensional phenomenon

The academic debate has, to some extent, been superseded by the recent economic upturn. This was accompanied by a drop in unemployment, and more and more companies experienced an increasing number of hard-to-fill vacancies. The declining number of job-seekers per vacancy (U/V ratio) gives a clear indication of the increasing tightness of the labour market. The simultaneous occurrence of a considerable number of vacancies on the one hand and of falling unemployment on the other have raised public interest in matching problems between supply and demand on the labour market. Closer analysis suggests that labour shortages are only partly related to education or skills. A number of other factors also appear to play a role, such as regional mismatch, language barriers, sectoral mismatch, working conditions, inability to reconcile working and family life, physically demanding jobs, and so on (see below). The causes of shortages can be found on both the supply side and the demand side. Generally, studies (e.g. Simoens et al., 1997 and 1998; Denolf et al., 1996 and 1999; VDAB-Studiedienst, 1999; Lamberts et al., 2000) have divided the causes of these shortages into three groups:

- Quantitative causes: there are insufficient job-seekers for a particular occupation, partly because of a shortage of trained workers;

9 In this study employers were asked about their open vacancies and the requirements set for those vacancies (training, experience, etc). They were also asked about the problems they experience in recruiting.

- Qualitative causes: there are enough potential workers, but they do not have the necessary skills needed for the occupation, or lack additional skills that are required;
- Causes relating to unfavourable working conditions: the occupations are characterised by difficult working conditions.

Labour shortages – the evidence

Recent trends

While the active population in Belgium is stagnating (+1% over period 1995-2000), employment has been rising by 7%, which indicates that the unemployment surplus is gradually shrinking (-21%). The year 1995 has been the turning point in this regard. The unemployment / vacancy ratio has also been declining since that year (Van Mechelen, 1999).

Firstly, these aggregate figures hide strong *regional* differences: during the same period, total unemployment decreased by 37% in Flanders, 9% in Wallonia and 8% in Brussels. As was mentioned in the introduction, the unemployment rate in the two latter regions is currently almost 2 ½ times higher than in Flanders, and the gap appears to continue to grow. The U/V ratio also started to decline earlier in Flanders (1993). The *language barrier* explains to a large extent why this regional imbalance persists in such a small and densely populated country. Indeed, the province of Flemish Brabant, close to Brussels, has very low unemployment and is facing shortages in some branches. An agreement has been concluded between the provincial government and the authorities in Brussels, to promote Dutch language courses for job seekers from Brussels – an initiative which has had moderate success thus far.

Needless to say, the slight increase in overall employment in the period 1995-1999 is the result of diverging trends by *activity branch* (see table 1): employment growth in the tradable services (mainly health care, business-related services and domestic services) has outweighed the losses in industry (mainly the consumer goods industry), but also in the hotel and catering sector. These shifts have also meant an increase in the demand for highly qualified labour and the loss of jobs at lower qualification levels. Interestingly, however, the *educational mix* on the demand and supply side of the labour market appears to have moved roughly parallel over the last five years, so that the composition of unemployment by level of education has hardly changed (table 2).

The figures presented in table 2 are probably too aggregated to conclude that education plays no part in emerging labour shortages. Yet, they help putting the debate about hard-to-fill vacancies into perspective.

The most convincing data about rising shortages are the yearly publications of the Flemish employment service VDAB on this subject, published since 1990 (BGDA does provide similar data for Brussels, but not for such a long period). The share of hard-to-fill vacancies in the overall number of registered vacancies doubled over the past 10 years, from 16.1% in 1990 to 33.8% in 1999, even though the criteria to measure hard-to-fill vacancies have been defined in a 'relative' way and have in fact narrowed in recent years. The forthcoming study by Delmotte et al. (2001) also points to a serious upsurge in the proportion of hard-to-fill vacancies in the period 1998-2000.

Some detailed evidence of hard-to-fill vacancies

An overall statistical picture of the current situation

As mentioned above, the only studies that are representative for the whole country and vacancy market are those carried out by Simoens et al. (1997 and 1998) and Denolf et al. (1996; 1999). Table 3 gives an overview of the share of hard-to-fill vacancies among all vacancies per region, size of enterprise, activity branch and group of occupations.

Table 1. Changes in employment by activity branch, 1995-1999 (x 1,000 jobs)

Agriculture	-6.6
Energy	-1.3
Industry	-22.7
Intermediate goods	-9.8
durable equipment	4.4
consumer goods	-17.2
Construction	-3.2
Transport and communications	8.2
Distribution, hotel and catering	-10.3
Banking and insurance	-2.2
Health care	22.0
Other tradable services	92.9
Domestic services	21.0
TOTAL	**97.9**

Source: FPB (2000: 134)

Table 2. Changes in the composition of unemployment by level of education, 1995-2000 (column %)

	1995	2000	shift 95-00
Primary	32.0	28.7	-3.3
Lower secondary	27.4	28.1	+0.7
Upper secondary	23.9	25.6	+1.7
Tertiary	8.3	7.9	-0.4
Other	8.4	9.6	+1.2
TOTAL	**100.0**	**100.0**	**0.0**

Source: Ministerie van Tewerkstelling en Arbeid (1995; 2000)

The rather even distribution of shortages is the most striking general feature of table 3:

- first of all, the fact that Flanders is facing relatively less difficulties in filling vacancies than the two other regions, despite its much lower unemployment rate, suggests that either its supply of adequately skilled labour is less scarce, or its matching process occurs more smoothly. As suggested above, a number of overeducated workers were at work in occupations below their level of aspirations in the past; these workers may now have seized the opportunity to move to newly created job openings. Note however that the 'regional ranking' found by Denolf et al. is not confirmed by more recent studies (CEVORA/UPEDI, 2000; Delmotte et al., forthcoming);
- secondly, shortages are present in industrial as well as service sectors;
- thirdly, larger enterprises experience more difficulties in filling vacancies, which is probably due to the fact that they hire more specialised staff; and finally;
- shortages are somewhat more acute among managerial and highly specialised technical functions. However, they are also biting in other occupations such as bricklaying, truck driving, warehouse work etc. In terms of *shares* of all hard-to-fill vacancies, blue-collar jobs account for roughly one in three hard-to-fill vacancies, whereas specialised functions make up for hardly one in five of these jobs. This suggests that problems tend to be related to other job characteristics than the mere level of initial education required.

Admittedly, these statistics reflect only the overall situation and not necessarily the problems in any (sub)region or (sub)sector. For example, the reports of the Flemish and Brussels employment services (VDAB, BGDA) mention shortages of nurses and teachers, butchers and welders, which were not mentioned by Denolf et al. (1989).[10] However, the other main findings of this study are confirmed and supplemented with more details in the regional reports. For example, Denolf et al. (1989) do not provide statistics of hard-to-fill vacancies by level of education: both the Brussels and the Flemish report show that the proportion of hard-to-fill vacancies is higher at upper secondary technical and vocational (and higher polytechnic) than at the university level. In other words, it is the *type* rather than the *level* of qualification that matters in studying labour shortages.

Language problems appear to play an important part in the matching process in *Brussels*, where the two major linguistic communities (Flemish and French-speaking) cohabit, and where the European Commission has its seat, increasing the demand for linguistic competencies. The BGDA (2000) found that 52.6% of the hard-to-fill vacancies were attributable at least in part to a lack of bilingual candidates. Hardly 10% of the relevant labour reserve for these occupations had a good knowledge of the second language, and another 36% had a 'moderate' knowledge.

As regards the *Walloon region*, the absence of any specific study of hard-to-fill vacancies can itself be seen as part of the problem. The first condition for tackling the problem of labour shortages effectively is data collection. As mentioned earlier, this gap will be filled in the future by means of the six-monthly IDEE employer surveys.

Table 3. Share of hard-to-fill vacancies in all vacancies by... in 1998 (Denolf et al., 1999)

Region		**Occupational group**	
Brussels	13.5	blue-collar workers (construction workers, roofers, warehousemen, drivers...)	10.9
Wallonia	10.3	specialised functions (executives and managers, pharmacists, engineers and technicians...)	17.7
Flanders	9.6	administrative staff (executive secretaries, bookkeepers, other adm. staff)	9.9
Activity branch		service workers (hair stylists...)	9.4
industry	12.1	commercial functions (salesmen, sales representatives...)	8.9
construction	9.8		
distribution, hotel and catering	10.5	**Overall average 1998**	**11.3**
other tradable services	12.7		
public and non-profit sector	10.9		
Size of enterprise			
- 10 workers	10.5		
10 – 100 workers	11.6		
+ 100 workers	13.9		

Case studies

Whereas most case studies that are available for Belgium deal with strategies to solve labour shortages (see below) the recent publication by the Flemish employers' federation Vlaams Economisch Verbond (VEV, 2000) is focussed on the perceived causes of *structural* labour shortages. Nine occupations that have appeared (almost) every year in the VDAB's list of hard-to-fill vacancies over the past 10 years are discussed with representatives of the employers. The study shows that one in every three hard-to-fill occupations have presented problems for at least 7 out of the past ten years: in other words, the problems are not really new, although they may have exacerbated.

The report looks at the following occupations in detail: electrotechnician, engineer, construction supervisor, welder, hospital nurse, carpenter, bricklayer, butcher, chef-cook. We confine our summary to three cases which can be considered typical for the three different types of causes listed above:

10 As Denolf et al. (1989) do not provide separate lists of hard-to-fill vacancies by region, we cannot know whether these differences mean that the labour supply for these occupations is relatively abundant in Wallonia.

quantitative, qualitative and causes related to working conditions.

Electrotechnicians are a typical example where a quantitative shortage has been persisting despite repeated campaigns to boost the public interest for this occupation. Although sometimes other job characteristics (shift work, additional requirements such as autonomy) may eliminate candidates, the main problem seems to be the undervaluation of technical qualification. In the Belgian education system, general education is seen as the first option and students are referred to technical or vocational routes when they fail in general education (the so-called 'waterfall effect'). A more positive motivation for technical studies could be generated if introductory courses in these subjects were available for all students at the earliest possible stage (within a comprehensive curriculum). Student counselling services could also play a more proactive role in orienting young people in this direction. .

A shortage in some *specialised welder occupations* (pipe welders, tig-welders) contrasts strongly with the large number of registered unemployed welders. The problem here is mainly qualitative: schools not only deliver fewer welders, but their education is also inadequate in view of the fast development in techniques: many teachers lag behind and do not get opportunities to upgrade their skills, while the equipment in schools becomes obsolete. The employment services and sectoral funds try to fill the gaps by providing up-to-date training courses and by attracting women in this traditionally male occupation.

The rising demand for *nurses* is explained by the combined effect of the ageing population and the explosive development of medical technologies. On the other hand, number of graduates has risen steadily until recently, but the working conditions (heavy physical work, shift work, irregular schedules) have incited many qualified nurses to change their occupation or to reduce their labour supply. In other words, the potential labour supply of qualified nurses is not insufficient, but many are being deterred by demanding working conditions. Recent efforts to counter the shortage of labour have therefore included, somewhat paradoxically, a reduction of working hours for older nurses. Another strategy is 'task splitting' with some less qualified tasks being transferred to 'logistic assistants' (see section 3). Short advancement courses are also being organised to upgrade nursing aides to qualified nurses.

Projections and forecasts

Projections and forecasts focusing on the medium term have the great advantage that they allow scope for anticipation of potential problems. A distinction can be made between projections for specific occupations or training programmes and the macro-economic projections made by the Federal Planning Office. In addition, the Higher Institute for Labour Studies (HIVA) is currently carrying out research into the development of an 'early warning system' for labour shortages.

Macro-economic projection of the Federal Planning Office (2000-2005)

The 'Economic Outlook 2000-2005' published by the Federal Planning Office contains a projection of the macroeconomic accounts of Belgium (FPB, 2000). In formulating this projection, the most recent economic indicators have been taken into account. Between 2000 and 2005 a further increase in employment is forecast, prompted by an increase in the level of economic activity. The unemployment rate in a broad sense is expected to fall from 10.9% in 1999 to 7.3% in 2005. The growth in employment and the fall in unemployment will result in a tightening of the labour market. For some segments of the labour market a clear shortage of skilled labour is predicted, e.g. in the IT sector, engineering, economics, education and the paramedical sector. Nevertheless, the Federal Planning Office claims that the tension on the labour market can be limited by increasing the activity rate (particularly in the 50-64 age group), by policy measures in the field of education, training and retraining, employment incentives.

Projections for specific occupational groups

More or less accurate projections have also been made for a number of specific occupations/training programmes. These mainly relate to hard-to-fill occupations such as IT specialists, engineers and occupations in the care sector.

Engineers and IT specialists

Engineers and IT specialists are becoming increasingly scarce on the labour market. A study carried out by Agoria Vlaanderen[11] (2001) shows that the Agoria-sectors in Flanders make frequent use of engineers. The number of graduating engineers is currently too small to meet demand. Moreover, projections suggest that, in companies in the Agoria-sectors in Flanders alone, the demand for industrial and civil engineers could increase by a further one third and one quarter, respectively, by 2005.

Surveys by Fabrimetal[12] in 1997 and 1998 showed that no less than 10,000 ICT specialists and engineers were recruited each year in Belgium. Belgium already faced a structural shortage of 5-10,000 IT specialists. In the future, SMEs[13] alone are expected to need around 3,000 ICT specialists per year.

The caring professions

De Man et al., (1998) and Deschamps & Pacolet (1999)[14] charted labour market trends in the caring professions. The study looked at the prospects for the future based among other things on the level of interest in training for these professions, the influx into the professions from the education system and the careers of people active in the sector. It was predicted that the growth in de-

11 Agoria is the employers' federation for the technology industry.
12 Agoria was formerly known as Fabrimetal: www.fabrimetal.be
13 SME= Small and Medium Enterprise
14 The forecasts are based on figures from 1995

mand for 'carers' (childcare workers, care assistants for the elderly, family helpers, personal care assistants, logistic aides, etc.) would outstrip the supply. For nurses, by contrast, a reverse scenario was predicted, with the supply exceeding demand in the future. The supply of physiotherapists and paramedics was also forecast to increase. Up to 2010 a considerable expansion was predicted in the supply in the overall care sector, with only a limited increase in demand. The researchers point out that these scenarios are no more than baseline scenarios, which could undergo major changes in a short period of time.

An early warning system

Early detection of labour shortages has the indisputable advantage that it opens opportunities for action and remedies. The onset of shortages can thus be avoided or at the very least their severity kept to a minimum. The Higher Institute for Labour Studies (HIVA) is currently studying the possibilities and limitations of early warning systems for the Flemish labour market context.

Measures to tackle labour shortages

Macro-level

Four main tracks are currently being followed in trying to address emerging bottlenecks: improving the effectiveness of placement services, (re)training of job seekers, restrictions on early retirement, and more flexible approaches to immigration.

- In parallel with the suppression of public monopolies in *labour market mediation*, the public employment services are involved in a drastic *modernisation* process. Information about job seekers and employment opportunities is now available on-line and on the internet in a very user-friendly format, with terminals in public buildings, warehouses etc. Local 'job shops' are being developed, with the aim of co-ordinating the supply of information and services and bringing it within arm's reach of users. Computer-assisted self-evaluation and orientation tools are also put at every job seeker's disposal, while personal advice is provided mainly to those who are less familiar with modern information technologies.
- *Training and work experience* programmes for job seekers have been strongly extended in recent years. In response to specific needs for which the public employment services have no suitable equipment, individual training formulas in enterprises are being subsidised. In Flanders, more than half of the training places in 2000 were geared towards hard-to-fill vacancies. Sectoral training institutions, co-administered by the social partners and funded by a specific payroll levy, are also making serious efforts to match the demand within their activity branch.
- Belgium currently has one of the lowest activity rates in the *50 + age group*. Due to the massive unemployment among older, low-skilled workers and the strong shifts in demand by level of education in the past, early retirement was encouraged in the past as an alternative to unemployment. More recently, legal restrictions have been imposed, but 'extra-legal' schemes were agreed upon by the social partners which are now seen as overly generous. Rather than cutting back these schemes – which are to some extent funded by employers – the current option is to encourage older workers to stay on by means of other incentives.
- *Immigration* policies are of course co-ordinated with other EU Member States. Mobility within Europe is encouraged, not only by the mutual accreditation of diplomas, but also through the Eures-network which is aimed at exchanging vacancies across national borders. As regards immigration from outside the EU, the official immigration stop is subject to increasing pressure. Work permits are already being attributed without restrictions to owners of higher education diplomas who can obtain a work contract above a given wage threshold, and some companies (e.g. in the telecommunications branch) make systematic use of this 'exception rule' in recruiting highly qualified workers abroad. For lower-qualified jobs, employers can use appeal procedures to by-pass the immigration stop, with regional employment services advising the Minister about the (un)availability of local candidates. Asylum seekers whose case is pending are also allowed to participate in training courses and even to work provisionally, although the legal ground for these measures is questionable. Employers now openly advocate the negotiation of recruitment quotas for particular occupations such as truck drivers or construction workers.

Meso-level

The three regional governments (Flemish, Walloon and Brussels) have adopted very similar procedures for consultation about labour shortages at the sectoral level. Round-table discussions are being held by sector, resulting in qualitative analyses of hard-to-fill occupations and sectoral plans to solve the problems. The Flemish government funds 'sector advisers' to co-ordinate the implementation of these plans. Such plans may include the elaboration of new occupational profiles, the development of training programmes, measures to promote lifelong learning, the management of diversity, collaboration between industry and the education system, the training of trainers or mentors etc.

One of the remits of the sector advisers seems to be to influence HRM strategies in the sense of 'management of diversity'. Indeed, some shortages may be due to (statistical) discrimination against potential candidates from minority groups (women, foreigners, public assistance recipients etc.). Suc-

cessful pilot projects have been conducted, e.g. in training women for some specialised welding or butcher occupations or long-term unemployed low-skilled workers for specific jobs in the care sector (Lamberts et al., 2000).

Micro-level

Lamberts et al. (2000) provide an interesting overview of strategies used by firms to solve labour shortage problems. These strategies range from overtime work to recruitment abroad and job rotation plans for personnel retraining. On the basis of a survey among 326 enterprises faced with recruitment problems, 20 different strategies were identified; these were classified into 4 categories by distinguishing between (a) short-term and long-term approaches, and (b) internal and external solutions.

The average enterprises used 6 different strategies in trying to address labour shortages. The most popular strategies include the diversification of recruitment channels, on-the-job training and collaboration with schools, each time applied by more than 50% of the firms. The adjustment of recruitment requirements, the overtime work and temporary work were also frequently reported. Some of the solutions adopted are presented here:

- *short-term, external* solutions are used most often – for obvious reasons - with almost 40% of all measures. These include the diversification of recruitment channels, buying-out of workers from other enterprises, recruitment abroad, on-the-job training, subcontracting, temporary work etc.;
- the second most frequent type of solution is *short-term, internal*: relaxing recruitment requirements, overtime work, promoting internal mobility of personnel (e.g. by retraining or upgrading), reducing turn-over;
- one in five measures belong to the *long-term, internal* type of strategy: developing specific training programmes within the firm, improving the working conditions, re-arranging the organisation of work within the firm; adjusting working times etc.;
- *external long-term strategies* come last, including arrangements with schools and investments in communication to improve the image of the company.

The study also analyses 10 cases into depth. One of the most innovative projects was probably the 'task splitting' of nursing functions in hospitals in order to cope with the shortage of nurses. In collaboration between the VDAB, a hospital and a private non-profit organisation, long-term unemployed persons from disadvantaged groups were trained as 'logistic aides' to take over a number of simple tasks that were previously assigned to nurses. Apart from these tasks, the logistic aides also devote part of their time to social contacts with patients, thus compensating for the heavier time pressure among qualified nurses. The function of logistic aide are now officially recognised as an occupation with a specific profile; and training programmes are being set up in various cities. At the same time, the project contributes to easing the shortage of nurses.

Conclusion

Labour shortages are undeniably becoming a problem in Belgium, at least in relative terms. The number of hard-to-fill vacancies has risen sharply in the past decade, and unpublished data even suggest a doubling in the last two years. This is an obvious correlate of the rise in employment. Apart from this observation, the review of available evidence contradicts some popular interpretations and may also inform policy makers and employers in addressing the problem.

- It might be tempting to associate the phenomenon with structural imbalances between educational categories on the demand and supply side. Yet the analysis suggests that reality is much more complex. First of all, it is the *type* rather than the *level* of qualification that matters: shortages of technical and vocational skills are more acute than shortages of highly qualified labour. Secondly, one in three hard-to-fill vacancies relates to relatively low-skilled occupations (construction workers, roofers, drivers, warehousemen). Many shortages have to do with other job characteristics than the mere skill requirements: physical requirements, working languages, working conditions, social prestige or image etc.
- The correlation between (un)employment rates and the proportion of hard-to-fill vacancies is far from straightforward. Denolf et al. (1999) found less shortages in Flanders than in the other regions, despite the fact that the Flemish rate of unemployment was less than half of the corresponding figures in Brussels and Wallonia. Even though the relative situation may have changed in the mean time, this contrast is interesting as it suggests that the starting position of the regions was very different. It seems plausible that Wallonia was already facing a genuine (skills) mismatch, with a shortage of highly educated labour, amidst the unemployment crisis of the past 25 years, whereas Flanders may have been facing over-qualification until recently. This may explain why the problem of shortages has not been more severe in Flanders until now.
- Social and cultural barriers (ethnic discrimination, language barriers, gender segregation...) are at least partly responsible for mismatch and shortages. Such barriers need to be pulled down by interventions on the demand as well as the supply side.
- Belgium has no tradition of prospective labour market studies. Such research has always been met with great scepticism in the past. Yet, the case of the caring professions illustrates that such research can shed a different light on popular views of labour market trends and help in taking more informed decisions.

- The scope for preventive action is extremely broad. Individual firms can address shortages in flexible ways; the social partners can take joint action on the industry level, and the government can use various macro-economic strategies.

To conclude, it may useful to note that labour shortages are a blessing for workers, as long as they increase the value of work (not only in terms of wages, but also in terms of working conditions, social protection and prestige). Shortages will also spur public authorities to invest in job seekers until full employment is reached. Hence, measures such as immigration campaigns or delaying retirement ages should not be taken too early if we want to seize the opportunity to put an end to exclusion from the labour market.

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Denmark

Introduction and background

The Danish labour market has changed dramatically during the last decade. From a maximum of 12.4% in 1993, the official number of registered unemployed dropped to 5.7% in 1999 and 5.4 in 2000 - the lowest level since 1976. Unemployment measured by the EU-harmonised labour force surveys is even lower – down to an average of 4.8% in the first three quarters of 2000.

Overall employment grew by almost 6% from 2,530,700 in 1993 to 2,678,700 individuals in 1999. 75% of the increase took place in the private sector. This has been accomplished without deficits on the external balance (except for 1998), with rising surpluses on the public budgets and, maybe most surprisingly, without any outburst of wage inflation. At the same time, besides open unemployment, a large share of the adult population receives some form of public transfer income like invalidity pension, early retirement pension, sickness benefit etc. The share of the adult population aged 15-66 supported by the public sector (including unemployed and persons in active labour market programmes) was 24% in 2000.

The change from a situation of massive open unemployment to near full employment, combined with the large number of economically inactive adults, has of course put the question of labour shortages and skill gaps high on the political agenda. The Danish debate has a number of, often interrelated, dimensions:

- the traditional concerns for mismatches between the supply of individuals with different formal skills and the changing demand for workers with different educational backgrounds;
- the increased focus on the importance of broader basic skills like IT-competence and language skills as a result of new technologies and globalisation;
- the growing importance of personal and social qualifications originating from new forms of work organisation, such as the ability to communicate and take personal initiatives and responsibilities;
- the role which lack of formal or informal qualifications may have in explaining long-term unemployment and exclusion from the labour market;
- the risk that acute labour shortages (bottle-necks) will sooner or later lead to an outburst of wage inflation; and
- the demographic changes in the coming decades which may lead to a more structural and fundamental mismatch between the demand and the supply of labour as the workforce grows older and large generations leave the labour market.

All these issues have been high on both the academic and political agendas in recent years. Probably, the most characteristic general feature has been the influence on the debate by the rapid move from a situation with mass unemployment to one where open unemployment is reaching the floor created by various forms of frictional unemployment.

One recent example is the report from the Nordic Council of Ministers (2000) initiated by the Danish Government during its presidency of the Council in 2000. The report takes the demographic challenges as its starting point and discusses the ageing workforce, inactive adults, the importance of the inflow of the younger generations and the integration of ethnic minorities – all in the light of the expected shortage of labour in the coming decades. A number of other inputs to this debate are mentioned in the list of references and discussed in more detail on the following sections.

Labour shortages and skills gaps – the evidence

This section presents the available evidence concerning labour shortages and skills gaps in Denmark. Firstly, an overview is given of the actual situation with regards to employment and unemployment for different educational groups. Then some projections for the coming decade are presented. Finally, some more qualitative aspects of the demand for labour are discussed.

Education, employment and unemployment

The formal educational background of the unemployed and the employed in 1999 is shown in figure 1.

As indicated in figure 1, only 36% of the employed, but 53% of the unemployed have no vocational education. On the other hand only 13% of the unemployed have some form of higher education, while those with higher education count for 23% of total employment. This observation of a strong skills component in the processes leading to a higher risk of unemployment is supported by several studies of marginalisation and exclusion from the labour market (Det Økonomiske Råd, 2000, chapter III; Finansministeriet, 2000, chapter 4 and 5).

In figure 2 a closer look is taken at the changes in unemployment for different skills groups from 1995 to 2000. The data are taken from the unemployment insurance funds which are mainly, though not completely, divided by the formal educational background of their members. In the figure only data for the major insurance funds are included. The unemployment insurance funds are ranked by the rate of unemployment of their members in 2000.

A number of observations can be made:

- The general pattern of unemployment across insurance funds is very similar in 1995 and 2000. There

is a strong correlation between the educational level of the members and the unemployment rate of the unemployment insurance funds. By far the highest unemployment rates are found for the unskilled workers.
- The dramatic reduction in unemployment since 1995 has benefited all groups on the Danish labour market. Also among the unskilled workers one can observe that unemployment has been cut by half.
- Especially for some groups of public employees (nurses, school teachers), an extremely low level of unemployment has been persistent for a number of years.
- New groups with indications of risks of labour shortages (measured by unemployment rates below 5% in 2000) are managers, academics, engineers and child and youth educationists.

Regional unemployment rates

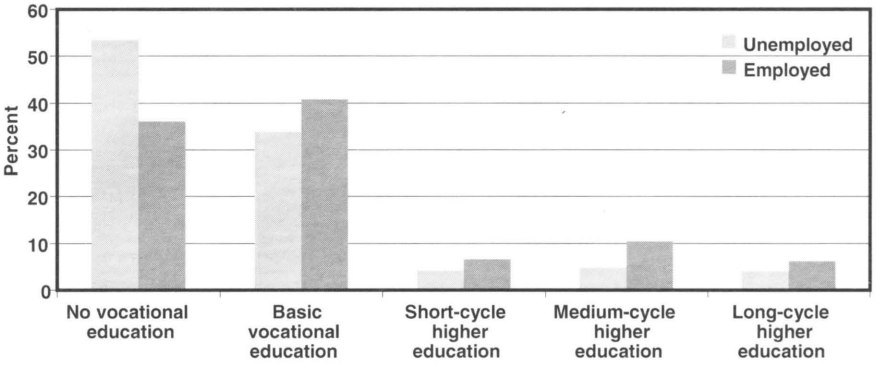
The data in figure 2 presents national averages. As shown in figure 3, unemployment also has a rather strong regional dimension meaning that labour shortages and bottle-necks may arise in some parts of the country sooner than in others. The regions are ranked by the unemployment rate in 2000.

With regards to regional unemployment, the main observations are:
- In 2000, the regions with below-average unemployment are mainly found in Jutland, but the Greater Copenhagen area has also shown a remarkable development in its unemployment from 1995 to 2000. These are the regions where unemployment for some groups is practically zero.
- Even the regions with very high levels of unemployment in 1995 have improved considerably. Only one region, the island of Bornholm, has an unemployment rate, which is still above 8% in 2000.

Projections of future labour shortages

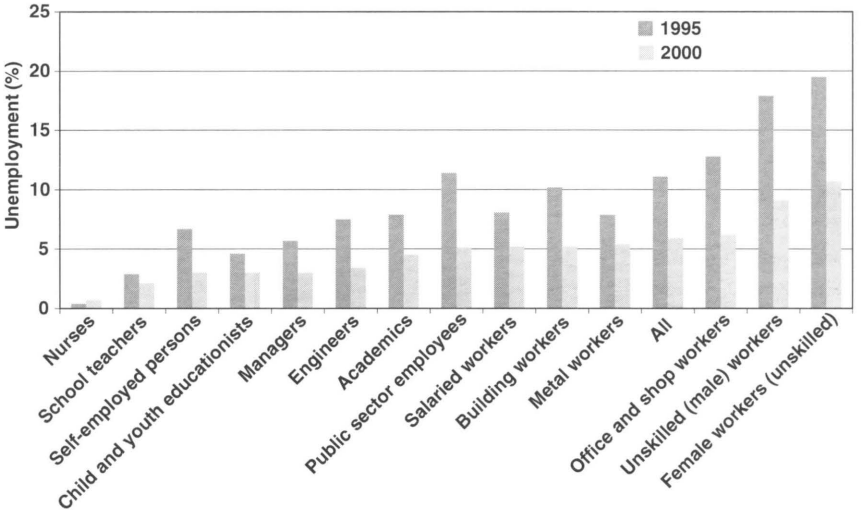
Returning to the question of skills shortages, new projections are available de-

Figure 1: Formal educational background of the employed and the unemployed, 1999,%.



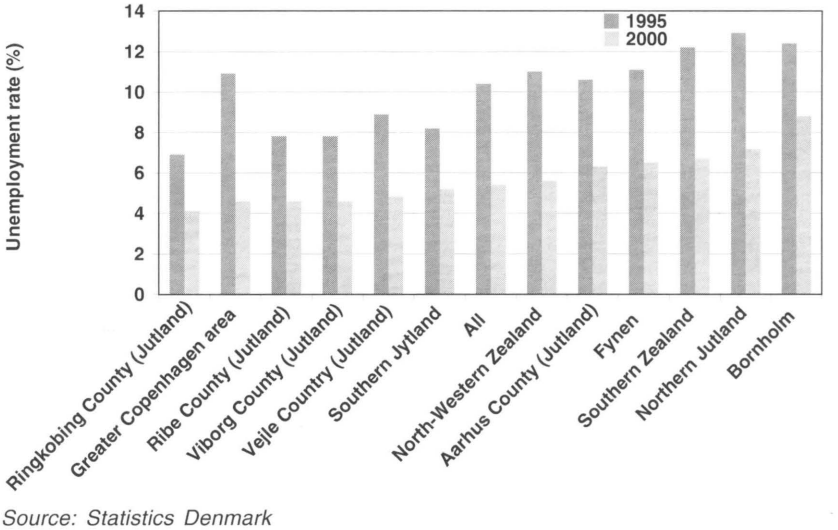
Source: Statistics Denmark

Figure 2: Unemployment rates for major unemployment insurance funds, 1995 and 2000



Source: Statistics Denmark

Figure 3: Regional unemployment rates, 2000



Source: Statistics Denmark

scribing the unemployment rates for different educational groups over the coming decade. Figure 4 gives this information for major educational groups for 2000, 2005 and 2010. The projections are taken from Holm, Olsen and Groes (2000).

As shown in figure 4, in 2000, the unemployment rate was dramatically higher for those without vocational training compared to those with basic vocational education or some form of higher education. This confirms the picture of a strong educational factor in the determination of unemployment already noted in above.

In the projections for 2005 and 2010 those differences are expected to increase somewhat, due to a rather stable unemployment for the unskilled and an expected reduction in the rate of unemployment for most of the groups with some form of basic vocational or higher education. Especially for those with a medium-cycle higher education, severe labour shortages are expected to develop in just a few years as indicated by the forecast of *negative* unemployment rates in both 2005 and 2010.

The projections presented in figure 4 are based on a traditional macro-econometric model developed by Statistics Denmark, combined with information about the formal educational background of the workforce in different sectors and the expected development of the labour supply divided by educational background. Therefore, the exact profiles of the unemployment forecasts are of course dependent on the specific assumptions made by the forecasters.

However, the general picture showing a relative improvement in the employment prospects for the higher educated and persistent problems for the unskilled groups is common to most observers.

Explaining the rising demand for qualified labour

In the debate, several causes are put forward to explain the relative rise in the demand for skilled workers, as in Det Økonomiske Råd (2000). Firstly, one may note that the changes in the demand for labour have meant increasing disadvantages for the unskilled groups in all industrialised countries. In Denmark the share of employees with a vocational or higher education has increased from 46% in 1981 to 61% in 1999. Secondly, this development can be observed within all sectors of the economy including the service sector, not only in the sectors subject to foreign competition. This indicates that the main cause of these changes is the rapid diffusion of new technology (especially IT-based technologies), which may lower the skills content for some jobs, but in general raises the demand for people with a higher educational background and basic IT-competences.

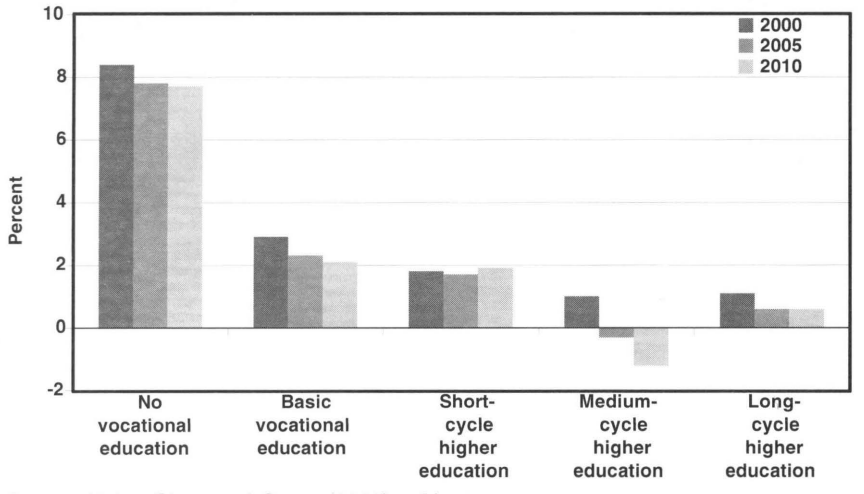
However, among skilled workers, some subgroups have a much dimmer outlook than average. Those groups include the workers in areas, where new technology replacing skilled labour is progressing rapidly (the printing industry), or where competition from foreign labour is very high (maritime transportation). On the other hand shortages (indicated by negative unemployment rates) are expected among workers in the building and construction sector. The general picture for skilled workers is that unemployment will remain at the level of 2-3% in the coming years, if the Danish economy does not experience a sharp economic downturn.

For the groups with some form of higher education the picture is very clear. Shortages of labour will persist or increase among those groups, which are already today in short supply: teachers, nurses, medical doctors, dentist, pharmacists and similar groups employed the health or educational services of the public sector. Also, people with some form of technical education will experience a tight labour market. People with advanced IT-skills in particular are already in short supply.

As for the skilled groups, the forecasted unemployment rates are to some degree sensitive to the specific assumptions concerning the business cycle of the Danish economy. One should however note that in the case of the groups mainly occupied within the public sector, a strong cohort effect is at work. This is caused by the high growth rates of the Danish public sector during the 1960s and early 1970s. As a consequence, the age composition of those employed within the public sector differs strongly from the private sector as shown in figure 5.

As shown in figure 5, more than 50% of those employed in the public sector are between 40 and 59 years of age, while only 38% of the employees in the private sector are middle aged by this definition. The typical (median) public employee is an individual in his/her mid-fifties. Since the average retirement age in Denmark is now around 62 years, this implies the existence of a strong "demo-

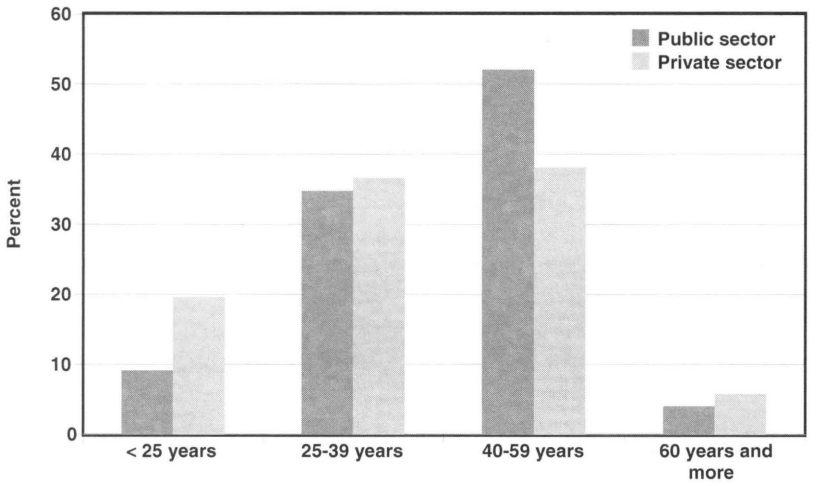
Figure 4: Projection for unemployment by educational groups, 2005 and 2010



Source: Holm, Olsen and Groes (2000), table 4.1

Note: The unemployment rates are calculated as percentages of the workforce and therefore not directly comparable to the rates in figure 2, which are calculated on the basis of the membership of the unemployment insurance funds.

Figure 5: Age composition of the employees in the public and the private sector, 1999



Source: Statistics Denmark

graphic bomb" in public sector employment. The forecasted negative unemployment rates discussed above are the manifestation of this situation. The point is furthermore that due to the strong demographic component of the problem and to the fact that mainly the public sector is involved as an employer, this development will be independent of minor shift in the business cycle or even in the growth rates of the public sector itself.

Thus, the imbalance between the supply and demand for employees with some form of higher education within health care and education, is probably the most serious problem of educational skills shortages facing Denmark in the next decades.

Qualitative aspects of labour demand and skill shortages

The debate on labour demand and skills shortages is often cast in terms of formal educational qualifications. There is evidence however, that some of the imbalances on the labour market are related not only to formal skills, but also to a general change in labour demand. Along with the introduction of new forms of technology and work-organisation, employers focus less on traditional vocational skills related to technical competences and craftsmanship. More emphasis is put on the ability of the employees to learn and adapt to new tasks (functional flexibility) and on more social competences, such as the ability to cooperate and work in a team rather than individually (Lundvall, 1999;Thaulow and Friche, 2000). One consequence is that basic IT-competences and language skills are given high priority when recruiting or training employees.

There are several indicators of the importance of such "softer" skills in the demand for labour:

- the employment barriers experienced by persons with weak basic competences in reading or writing;
- the emphasis put on informal skills, which is identified in many studies of the recruitment behaviour of firms;
- the recruitment barriers experienced by persons with longer unemployment spells due to statistical discrimination, and the modest success of active labour market programmes solely providing the participants with formal vocational education and training;
- the employment problems of well educated members of ethnic minorities who are considered less qualified due to their lack of "cultural skills"; and
- the problems often encountered by older persons when they are put in a situation where they have to look for new work and are met with the suspicion that they are less flexible than younger applicants.

Therefore, tackling skill shortages is often perceived not only as a question of changing the formal educational competences of the workforce – and especially of those with employment problems. Emphasis should also be put of instruments and programmes which improve the softer and more informal skills and which aim at overcoming the recruitment barriers raised by the behaviour of employers focusing of such skills.

Policies to tackle skill shortages

As mentioned earlier, Denmark has experienced a dramatic turn in the macroeconomic situation and in the labour market since the mid-1990s. With the reduction in open unemployment to around 5%, one of the most astonishing features of the Danish situation has been the absence of the strong wage-inflation, which was the one of the by-effects of the previous upswing in mid-1980s.

A number of explanations can be put forward for this development. Possible candidates are the general lowering of inflation seen internationally and an increase in the priority given to stable employment vis-à-vis to nominal wage increases by trade unions. However a number of studies has also pointed to the possible role of significant policy changes in 1993-94.

The reform of Danish labour market policy in 1994

During the years from 1979 to 1993, the main pillar of Danish active labour market policy was a programme of job-offers, training and support to unemployed starting as self-employed. This programme showed rather poor results, enabling only a minority of the participants to become employed at the open labour market. This - together with a sharp increase in unemployment from 1990-93 - increased the political pressure for finding new measures to break the vicious circle of long-term unemployment. The result was a general labour-market reform being put into force on January 1, 1994, which had as its main characteristics:

- the introduction of a two-period benefit system, with an initial *passive period* of four years and a subsequent *activation period* of three years; during the passive

period an unemployed would receive benefits and also be eligible for 12 months of activation;
- a change in the assistance to the individual long-term unemployed from a rule-based system to a system based on an assessment of the needs of the individual unemployed (introducing the *individual action plan* as an important instrument);
- decentralising policy implementation to regional labour-market authorities, which were empowered to adjust programme design to fit local needs with a system of management-by-targets;
- cutting off the connection between job-training and the unemployment benefit system implying that any employment with a wage-subsidy no longer would increase the duration of the period, where an unemployed person was eligible for unemployment benefits;
- introducing three paid-leave arrangements for child-minding, education and sabbatical to encourage job rotation by allowing employed (and in some cases also unemployed) persons to take leave while receiving a benefit paid by the state and defined as a fraction of unemployment benefit.

Since 1994, Danish labour market policy has undergone a number of further reforms mainly involving the shortening of the maximum period that an unemployed person can receive benefits. As mentioned above, in 1994 this period was four years (with an option for activation for 12 months during this period). In 1996 this passive period was reduced to two years. In 1996, the period was reduced to only 6 months for young unskilled unemployed people (Jensen et al, 1999). In 1999 it was decided to further reduce the passive period for adult unemployed to one year. Thus by the end of 2000, Denmark had fully implemented the part of the European Unions Employment Guidelines, which calls for early activation of both young and adult unemployed.

At the end of the passive period, the activation period begins, which can last for an additional three years. If full-time activation during this time does not result in an ordinary job, the unemployed looses the right to receive unemployment benefits, but may still be eligible for means tested social security.

The labour market reform of 1994 has undergone a number of evaluations[1]. The coincidence of the implementation of the labour market reform and the dramatic fall in unemployment has of course stimulated the discussions as to whether the inflation-free macro-economic upswing and the absence of serious bottlenecks can be attributed to the shift in labour market policy in the 1990s. The structural problems on the labour market are often measured by the so-called Philips-curve, which shows the relationship between unemployment and wage inflation. A lowering of the level of wage inflation for a given size of unemployment is taken as an indicator of a more flexible functioning of the labour market. Since 1994 the Danish Phillips-curve has taken almost a horizontal shape, indicating a steep fall in structural unemployment (Madsen, 1999).

A study from the Danish National Institute of Social Research has summed up the evidence concerning the macro-effects of the labour market reform of 1994 (Larsen & Langager, 1998). The general question asked was whether the labour market reform and the subsequent adjustments in labour market policy have had a positive impact in the functioning of the labour market. Not surprisingly, such a question must be answered with considerable care. However, the evaluators summed up their investigation in the following points. Concerning the importance of the activation strategy, the analysis showed that:
- The employment goals specified in the individual action plans indicated that there was a *considerable planned mobility* among the unemployed.
- The active labour market policy seemed to function effectively in the sense that the planned mobility among the unemployed was *larger* in the regions, where the need for mobility was the highest (due to threats of bottlenecks).
- There were *significant positive employment effects* of both job-training and education for unemployed.
- The *effective supply of labour among the insured unemployed seemed to have increased* probably due to the stricter demands made on the unemployed during the second phase of the reform (for instance in relation to the increased demands on the young unemployed).

Concerning the activities directed at the firms, there were indications that the reform had contributed to the absence of bottlenecks since 1994:
- There were some indications that *the quality of the services of the Labour Office to the firms has improved* since the reform when looking at the ability to fulfil the needs for qualified labour (though there are also examples of labour shortages in the short term).
- The introduction of new forms of placement services (in the form of "open" self-service placements) had - together with the surveillance activities and regular contacts with employers - lead to *an increase in the transparency of the labour market* and thus improved its function as a system to match demand for and supply of labour.

Whether these effects of the reform had lead to an improvement in the general functioning of the labour market measured by its ability to adapt to external shocks and to allocate labour efficiently was harder to evaluate. The lack of significant shortages of labour since 1994 - in spite of the fall in unemployment and strong growth in employment - could indicate that the functioning of the labour market had been improved. Whether this is solely due to the reform or also to other factors (including changes in wage-setting behaviour) cannot be definitively decided on the basis of the available evidence.

1 A survey can be found in Madsen (1998) and Ministry of Labour (1999). The most recent study is Ministry of Labour (2000a).

Other policies to tackle skill shortages

Labour market policy has been the main policy responsible for reducing the risk of bottlenecks on the Danish labour market during the upswing since 1994. However, a number of other policies have also been activated in order to tackle the short and long term risks of labour shortages presented above. The overall strategy has been to increase the supply of qualified labour in order to allow for a sustainable growth of both the private and the public sector in the coming years (Regeringen, 1999; Ministry of Labour, 2000c).

Thus, attention has been given to the educational system and to assuring that a high percentage of young people get a vocational education, which is in line with labour demand (Det tværministerielle Ungdomsudvalg, 2000). Among the specific initiatives taken have been campaigns in order to motivate young people to choose more technical educations and the creation of new educations within IT and related areas.

Also, a number of initiatives have been targeted at older workers in order to redress the tendency of the past decades to earlier retirement from the labour market (Herbertsson et al, 2000). These initiatives include stricter rules for qualifying for early retirement and campaigns to motivate both the firms and the older workers to consider various forms of flexible employment as an alternative to full retirement (Dansk Arbejdsgiverforening 1997; Det Seniorpolitiske Intitiativudvalg, 1999; Ministry of Labour, 2000b).

A third area of new initiatives has been a number of programmes to strengthen the integration of ethnic minorities on the Danish labour market (Arbejdsministeriet, 1999ab, 2000b). For a number of reasons even immigrants and political refugees with higher education have difficulties in getting stable and relevant employment. This, of course, poses a problem from a social point of view, but is also seen as a factor increasing the risk of labour shortages in Denmark. Among the initiatives is a programme of wage subsidies targeted at highly educated immigrants and the creation of a centre focused on the recognition of foreign educational qualifications.

Finally, one may see the general political emphasis on the creation of a more open or encompassing labour market as a strategy, which also takes its motivation from the risks of skills and labour shortages. Measured as a share of the adult population in the same age group (15-64 years), the group of transfer income recipients grew from about 15% in the late 1970s to about 25% in the late 1990s - the trend being slightly downwards from 1994 and onwards due to the effects of the economic upswing (Finansministeriet, 2000). In a longer perspective the rise is even more dramatic. In 1960 the share was down to about 6%. As with the situation of the ethnic minorities this situation can be seen as socially and politically problematic on its own right. But from the perspective of the labour market, one may also see these large groups as representing a potential for future employment, if only the present barriers to employing some of these marginalised groups are reduced (Regeringen, 2000).

Conclusion

The present Danish debate on labour shortages and skills gaps has both a short and a long term perspective.

In the short term, emphasis is being placed on the potential risk of acute bottle-necks caused by the present economic upswing. Here the main focus has been on the results achieved by active labour market policy in recent years, which seems to have contributed to the experience of a low rate of wage-inflation in spite of the steep decline in unemployment.

In the longer term, the perspective is dominated by the demographic changes, where the rising share of older employees and retired persons increases the risks of severe structural labour shortages in the coming decades. As a response, a wide range of policies is proposed ranging from changing the educational system to policies targeted at increasing the retirement age.

Also focus is on improving the integration of ethnic minorities on the labour market and on opening the Danish labour market to a number of those who have been marginalised or are in risk of becoming so. At present, the concept of the open and encompassing labour market thus combines important elements of the agendas of social policy and labour market policy. Realising the goal of a more open labour market is therefore one of the key items on the Danish policy agenda in the coming years.

Per Kongshøj Madsen

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SF Finland

Introduction and background

Definitions of skills gaps and labour shortages

Finland does not have a clear or nationally accepted definition for skills gaps and labour shortage. The meaning usually given to these two terms depends on the particular situation and context. It is sometimes impossible to distinguish the two terms. In general, skills gaps are usually referred to in the context of the emerging new information society and the information and communication technology sector. 'Skills gaps' is used to describe the qualitative mismatch between the supply or availability of human resources and the requirements of the labour market. For example, the skills of the existing labour force or employees may not match new job requirements, or new job vacancies prove difficult to fill because potential job seekers do not possess the required skills. In contrast, 'labour shortages' usually refers to a quantitative lack of labour. Labour shortages occur in more sectors than skills gaps, and are more geographically specific.

Alternatively, definitions of skills gaps and labour shortages may be drawn from policy measures aimed at alleviating the phenomenon. Policy measures aimed at reducing skills gaps focus on education and training, including in-service training and adult training. Skills gaps are not, however, alleviated by geographical mobility in the way labour shortages can be. Employers may be able

to reduce skills gaps by improving training opportunities, whilst labour shortages are more a problem at the macro level, and cannot be solved by individual employers. Therefore, national policies are required to alleviate labour shortages, compared to skills gaps which can be reduced through employers action.

At a micro level, skills gaps can be defined as the gap between the level of existing skills and aspired skills (Raivola & Vuorensyrjä, 1998). At this level skills gaps can also be defined in terms of organisational strategy. There are two levels of skills gaps; relating to present tasks and labour market employment in general.

Hence it can be asserted that skills gaps often precede labour shortage. The causal relation between the two is not clear. Skills gaps do not necessarily result in labour shortage, and labour shortage may exist or emerge without being preceded by skills gaps. However, Finland is experiencing skills gaps in certain sectors that will lead to labour shortage in the future.

To summarise, Finland's Minister of Labour, Ms Tarja Filatov, outlined the skills gaps and labour shortages problem as "good labour policy training is of utmost importance. This is due to certain mismatch (i.e. skills gaps) in the Finnish labour market which is related to the gap between the skills of the available labour force and the jobs yet not born." (http://www.mol.fi/tiedotteet/2000112201.html).

Emphasis on skills gaps and labour shortages in Finnish debate to date

In a country with considerable structural unemployment, the debate on labour shortages and skills gaps is a relatively new phenomenon. The labour shortages and skills gaps debate in Finland evolved against a backdrop of rapid economic recovery and growth in the latter half of the 1990s. It was initiated by leaders of growing businesses, that were experiencing recruitment problems. Support for the debate came from other labour market problems, such as structural unemployment and an ageing labour force.

Labour shortages were discussed in the Labour Force 2017 report (Ministry of Labour 1999). The report presented mid term (five years) and long term (25 years) projections of the labour force supply and demand in Finland. This formed the basis of Finland's employment policy strategy and actions. Annual Labour Force surveys conducted by the Finnish Confederation of Industry and Employers, (1997), reported skills gaps and labour shortages evident in certain sectors of industry over the past four years. Skills gaps and labour shortages are now viewed as widely accepted challenges and are discussed in strategic policy papers prepared by different ministries e.g. Labour, Education, Trade and Industry, Health and Social Affairs. The issue is discussed in the Labour Market report by the Council of the State (Prime Minister's Office 1998). The report concludes that organisations study, analyse and project skills gaps and especially labour shortages, utilising different methodologies, leading to a lack of a clear, unified picture of the size and severity of the issue. Despite this difficulty, there does appear to be unanimous agreement that the emergence of an information society increases the skills gaps and polarisation in the labour market.

The Director of the Labour Institute of Economic Research, Dr Jukka Pekkarinen, commented on labour shortages: "Currently labour bottlenecks are usually local and very sector specific so there is no need for general alert. However, the current situation of unemployment and simultaneous labour shortage is an unbearable equation and more efforts are needed to employ the unemployed". Pekkarinen describes the paradox situation in the Finnish labour market succinctly: on the one hand there are certain skill and labour shortages, whilst on the other hand there are around 320 000 unemployed Finns.

Background data and material

In general, the availability and quality of labour statistics and other background data is good. There are, however, several difficulties worth noting. Firstly, the figures presented by the Statistics Finland and Ministry of Labour are not compatible. Statistics Finland follows the ILO and Eurostat standards and these figures feature in this report. The second difficulty relates to disparity in the classification of labour sectors by Statistics Finland and Ministry of Labour. Thirdly, data concerning the information sector is out of date, being based on 1997 figures.

Labour shortages and skills gaps – the evidence

Emergence of skills gaps and labour shortages over the last 5 years in Finland

General employment statistics produced by the eight main industry sectors provide little or no proof of a skills gap or labour shortages, although some information may be drawn from this source.

Public and other services are important because of the size of this sector, which employs one third of the total labour force, and recorded the largest increase in employment terms, compared to figures for 1990 and 1995. Public and other services, and financial, insurance and business services were the only sectors to have expanded in employment terms in 2000 (compared to figures for 1990). However, the unemployment rate in public and other services did not drop between 1999 and 2000, because there was a high labour supply in the sector.

In 2000 the overall unemployment rate in Finland was 9.8%. The only sector with a higher unemployment rate was construction, whose employees accounted for only 6% of the total labour force. The employment history of a significant number of people working in the construction industry is not known, (this applied to 86 000 unemployed people in 2000). Most of these people fit into the "no previous employment" category, i.e. new graduates. If this group was removed from the unemployment statistics, the unemployment rate would be around 6.5%.

Sector, occupational and regional case studies

Skills gaps and labour shortages are evidenced through recruitment problems. This chapter focuses on recruitment issues manifested in skills gaps and labour shortages from three different view-

points: The Ministry of Labour, The Confederation of Finnish Industry and Employers (TT) and Central Organisation of Finnish Trade Unions (SAK).

Case I - Ministry of Labour - Regional Employment Offices filling 20% of new jobs

Statistics of the Ministry of Labour record a decline in the number of jobseekers, by almost 105 000 between 1988 and 1994. The largest decrease was in manufacturing (23 358) and construction (20 164). Manufacturing remains the sector with the highest unemployed rates (81 000 in 1998). In contrast, the Health and social services sector only recorded a 1 665 decrease in unemployment.

At the same time, 55 000 vacancies were advertised by the employment offices. This represents 50% of the official decrease in unemployment. Manufacturing recorded the greatest number of vacancies (total 10 777), compared to agriculture and forestry (9 028) and commercial work (8 389). However, these vacancies only represent a small proportion of the number of unemployed jobseekers.

According to the Ministry of Labour, more than 90% of vacancies were filled by the closure date (Prime Minister's Office 1998). However, only one third of the new vacancies are advertised through the employment offices. The monthly Employment Bulletins reports that approximately two thirds of these vacancies have been filled. This equates to the regional employment offices filling around 20% of new jobs.

There have been difficulties in some sectors, especially manufacturing and commercial sectors. For example, sales representatives and cleaners positions have proved particularly difficult to fill. There has been an expansion in some occupations, such as mechanics, welders and child minders. The employment office reports recruitment problems to be on the increase, and in rare instances labour shortages have occurred even in low employment areas. According to the study 34% of the recruitment problems were attributed to work or training experience, and 32% to the requirement for specialised skills. Around 26% of the recruitment difficulties arose because of a lack of qualifications and 15% of recruitment problems were attributed to high unemployment benefits, which lowered people's motivation to find work.

Case II - The Confederation of Finnish Industry and Employers (TT)

The Confederation of Finnish Industry and Employers (TT) has conducted Labour force surveys since 1995. The survey gathers information on labour force demand, workforce availability, established recruitment channels, and projected labour force need. The most recent survey was published in December 2000, and drew on responses from 3 950 businesses.

The survey concluded that difficulties in recruiting a skilled labour force increased most significantly in the manufacturing, construction and services sectors represented in the TT. Around 28.4% of manufacturing companies, 40.4 of construction and 34.4 of services sector companies reported difficulties. This demonstrates how recruitment difficulties emerging in new sectors, such as the ITC sector, are also evident in more traditional occupations.

Difficulties in recruiting a skilled labour force are most apparent in the electronic industry and construction, with 45% of companies recording problems. However, the machine and metal industry and metal refinement companies reported the greatest lack of skilled labour. The recruitment issues experienced by the traditional sectors demonstrates the increasing lack of basic skills and qualifications required in these sectors. The larger manufacturing companies appear to have the greatest recruitment problems. (For example, 18% of companies sized 0-20 employees, compared to 64% of the companies with 1001 or more employees recorded recruitment difficul-

Table 1. Unemployment by sectors 1994-2000.

Unemployment rate by industry (%)	1990	1995	1996	1997	1998	1999	2000
All industries	3.2	15.4	14.6	12.7	11.4	10.2	9.8
Agriculture and forestry	1.8	7.9	8.0	7.1	6.5	6.0	5.0
Manufacturing	2.1	10.3	9.8	7.3	6.3	5.8	5
Construction	5.1	27.8	23.9	18.9	14.9	12.3	11.9
Trade, hotels and restaurants	2.0	13.9	11.6	9.2	7.8	6.3	6.8
Transport and communications	1.8	9.1	8.3	6.2	5.1	4.6	4.1
Financial mediation, insurance and business services	1.7	11.0	10.7	8.6	7.2	6.6	5.5
Public and other services	2.1	11.8	11.6	10.3	9.7	8.1	8.2
Unemployed by industry (1000 people)	**1990**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
All industries	82	382	363	314	285	261	253
Agriculture and forestry	4	15	14	12	10	9	8
Manufacturing	12	53	50	36	32	29	24
Construction	11	44	37	30	24	21	20
Trade, hotels and restaurants	8	49	41	33	28	24	27
Transport and communications	3	16	15	11	9	8	7
Financial mediation, insurance and business services	5	28	29	23	19	19	17
Public and other services	15	88	87	79	75	63	66
No previous employment or industry unknown	24	89	90	92	88	86	86

Source: Statistics Finland

ties). The same phenomenon is evident in the service sector. However, in the construction sector companies with 20-50 employees experience the greatest recruitment problems.

ITC specialists, engineering and ADP experts are in particular demand, although traditional skills are also sought after. There was a particular lack of IT engineers (470 vacancies in 25 companies), electronic engineers (286 vacancies in 36 companies) and machine engineers (216 engineers in 48 companies). ADP staff were most in demand, with 441 vacancies in 63 companies. Traditional occupations such as plumbers, welders, carpenters and heating and ventilation engineers also require more staff. The majority of recruitment problems can be attributed to a mismatch between vacancies and available skills. Companies report difficulties in finding job seekers with the specific skills, qualifications and experience required by the vacancies.

Lack of relevant work experience was the single most common reason for recruitment problems in most sectors. Lack of basic vocational education and training was also referred to by many sectors.

Direct contact between employer and job seeker was viewed as the most efficient form of recruitment. This was the most common recruitment channel in all the main sectors, and most sub-sectors. For example, 78% of the construction companies used direct contacts, 70% of manufacturing companies and 64% in TT-services.[1] Employment services provided by the regional employment offices were used by 54% of companies overall. By sector, 58% of manufacturing, 50% of construction and 43% of the service sector utilised this resource. This represents an increased use of the employment service by manufacturing and construction companies, but a decreased utilisation by the service sector.

Case III – Central Organisation of Finnish Trade Unions (SAK)

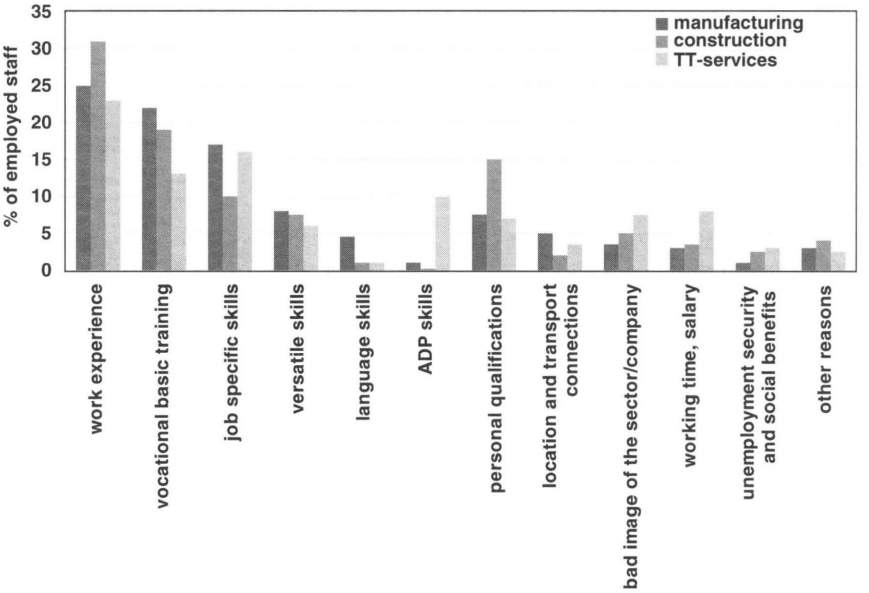
A survey of elected employee representatives undertaken by the Central Organisation of Finnish Trade Unions (2000), revealed discrepancies in the emerging labour shortage debate. It argued that labour shortages are still fairly minor, and therefore discussion has focused on recruitment issues, common amongst sectors. The majority of vacancies experiencing recruiting difficulties are filled within a reasonable time.

However, 50% of the companies surveyed experienced recruitment problems. The most common recruitment issues were cited in the communication companies (61%), municipal (58%), and the electricity sector (56%). The survey found that many companies have tried to overcome the need for additional labour within the existing labour force.[2]

There is some disagreement between experts as to whether labour shortages exist in particular for highly skilled experts (the TT point of view), or whether recruitment problems are more focused on the general workforce.

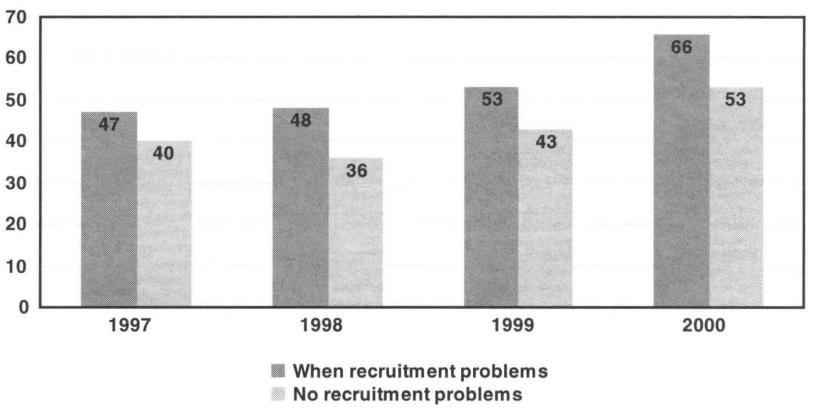
Recruitment problems have "forced" companies to develop their in-service training. Figure 2 demonstrates the level of in-service training between 1997-2000. The diagram provides evidence that training has become an essential aspect of the work place, irrespective of recruitment problems.

Figure 1. Reasons for recruitment problems.



Source: The Confederation of Finnish Industry and Employers 2000.

Figure 2. In-service training in accordance with recruitment problems,% of companies.



Source: Central Organisation of Finnish Trade Unions 2000.

1 TT-services refer to business services including technical-, ADP-, R & D-, security- and other services offered to businesses by other companies.

2 Recent Work place Barometer by Ministry of Labour (http://www.mol.fi/ammatit/tyoolobarometri00.html) supports this finding by elected official of employees. 52 percent of employees worked overtime at the end of 2000. Asked employees argued that there were too few workers compared to work activities.

Future projections

In 1997 the Ministry of Labour of Finland established a cross sectoral working group called 'Labour Force 2017'. The aim of the working group was to prepare mid term (five years) and long term (25 years) estimates on the development of labour force supply and demand. This would form the basis of Finland's employment policy strategy and actions. The final report was published in 1999.The changes regarding labour force needs in different professions are indicated in Tables 2 and 3.

Labour force expansion usually follows an increase in productivity. However, staff increases are only implemented after alternative means of increasing productivity have been explored, and the long term future of the company is assured. In the late 90s difficulties in recruiting skilled labour were eased by high unemployment and the corresponding availability of skilled labour and new graduates. However, certain sectors and geographical areas have experienced increasing difficulty in recruiting those with the appropriate skills as a result of increased demand for labour. This situation will be intensified by overall economic development. The remaining labour intensive markets, construction and services, demonstrate less potential to increase productivity than in industry. The demand for labour in the service sector may increase rapidly.

In addition to increased demand, bottlenecks in the labour market may be caused by continuous changes to the composition of unemployment. The number of long term unemployed and older unemployed people, who are viewed as less productive, is increasing. This results in bottlenecks, despite high unemployment rates. Increasing mobility is a central component in tackling these bottlenecks. There is a clear need to motivate and encourage the unemployed, and those threatened with unemployment, to change professions and skills. Employers must be encouraged to contribute to staff training.

Labour shortages in the near future may be anticipated by analysing changes in employment rates and natural losses. Trend barometers are good sources of information, which projects and assesses labour force demand through a number of methods. In addition to social partners, the Ministry of Labour monitors how quickly and to what extent the vacancies advertised in the labour offices are filled and interviews employers to gain information on recruitment difficulties. However, these sources do not provide clear explanations of the extent of the labour shortage.

Table 2. Labour force need in different professions 1995-2010 (first classification).

Profession	Labour force in 1995	Anticipated change in labour force	Loss	Total	Share of 1995 labour force %
Agriculture and forestry	123100	-45500	65200	19700	16
Industrial work	356100	26300	157600	183900	52
Construction work	64300	7100	51700	58800	91
Transport work	76000	6600	35800	42400	56
Post and telecommunications	25500	-1800	12800	11000	43
Supervisory and expert functions in transport and production	165400	48000	58200	106200	64
Service work	312400	44500	135200	179700	58
Office work	207100	-12700	72100	59400	29
Supervisory and expert functions in economy and administration	149700	52200	53100	105300	70
Care work	253200	86600	93000	179600	71
Education and culture	136700	23800	47400	71200	52
Protection/surveillance	35500	-200	13900	13700	39
Unknown	27800	-1500	22900	21400	77
Total	**1932800**	**233500**	**818900**	**1052300**	**54**

Source: Labour force 2017.

Table 3. Labour force need in different professions 1995-2010 (second classification).

Profession	Labour force in 1995	Anticipated change in labour force	Loss	Total	Share of 1995 labour force %
Knowledge based work	684400	109500	243600	353100	52
Services	601100	130900	242100	373000	62
Production work	619500	-5500	310300	304800	49
Total	**1932800**	**233500**	**818900**	**1052300**	**54**

Source: Labour force 2017.

Policies to tackle skills gaps

Existing policies aimed at addressing skills gaps

According to projections outlined in the 'Labour 2017' study (Ministry of Labour 1999), the successful functioning of the Finnish labour market in the future depends on:

- the dynamics of the labour market;
- solving the skills gaps;
- developing flexible jobs;
- encouraging wage formation;
- sufficient geographical and professional mobility of the labour force; and
- adaptation of action to the human resources.

These factors are interdependent. For instance, solving the skills gaps depends on sufficient geographical and professional mobility within the workforce, as the supply of labour does not geographically coincide with labour demand. Labour shortages are often caused by lack of labour, reinforced by a lack of

moderate-priced housing. (For example, this is currently evident in the Helsinki region). This is a complex and fragmented issue. In some areas, such as Eastern and Northern Finland, higher than average unemployment and high emigration rates are recorded. These area lack key skills, such as medical doctors and teachers. In contrast, areas with high immigration rates lack skilled workers in the construction and IT fields. The main policies addressing skills gaps and aimed at achieving the national objective of 70% employment rate by 2003 are briefly described below.

Skills gaps are mainly addressed by labour and education policies. In the Action and Economic Plan (http://www.minedu.fi/julkaisut/toim/tts.html) of the Ministry of Education for 2001-2004 policies to avoid skills gaps are strongly emphasised. This is a key issue in policies around vocational and adult education and training. The Plan emphasises improving the preconditions, quality and effectiveness of training. The key issue focuses on the compatibility of training and work requirements. This is achieved through close co-operation between education and employment providers. The duration of basic vocational examination has been extended from 2 to 3 years. This includes a minimum 20 week compulsory practical training course. IT-competencies are being given a higher status in the education curriculum (Nord 2000).

The objective of revising vocational training is to ensure graduates posses the necessary capacities for life-long learning. In-service adult education is also focused on the promotion of life-long learning. Training is needed to meet the challenges of changing work, life and society, particularly promoting high education levels, learning capabilities, motivation and preconditions for life-long learning. Adult education providers must be aware of the skills required in the labour market in the future.

Training is the most important policy measure to tackle skills gaps. The Finnish development plan for education and research for 1999-2004, (The Ministry of Education 2000), argues that the future of Finland is dependent upon the skills, creativity, innovation and practical ability of the workforce. Finland will become a society in which knowledge and skills constitute the essential means of production.

The Action and Economic Plan of the Ministry of Labour (2001) for the period 2002-2005 identifies policies to ensure labour force developments will meet labour market demand. Whilst the Ministry of Education emphasised the working life connections in education, the Ministry of Labour Plan, based on the Labour Force 2017 anticipation study, stresses the importance of education/training to improve employability[3], thereby ultimately increasing the labour supply.

The Ministry of Labour Plan also identifies alternative options to tackle skills gaps (and threatening labour shortages). These are: a good-quality employment exchange service, active immigration policy, utilisation of free labour mobility within the EU area, reducing gender segregation in the workplace, strengthening and matching labour policies, and increasing work and training links. Skills gaps can be seen as a key issue in Finland's national policies. Lifelong learning is viewed as fundamental to reducing the skills gap and labour shortages.

Evaluating these policies – the outcomes

As discussed earlier, definitions and evidence of skills gaps in Finland are quite speculative. The basic policy guidelines for life-long learning to tackle these gaps are, however, established. Few Lifelong learning evaluations have taken place so far, as it is a relatively new concept. The strategy for life-long learning "From education policy to promoting life-long learning policy" was introduced by the Ministry of Labour at the end of 1998. Since then the distinction between labour and education policy has become increasingly indistinct. Despite the lack of evidence of the success of Lifelong Learning, the consensus around the appropriateness of lifelong learning policy to tackle these issues is unanimous.

Developments over the past tree or four years include:

- In 1998, 781 000 wage-earners (42 percent of the population) participated in some form of continuing training paid for or financially subsidised by their employer (Source: Statistics Finland).
- Rahikainen (1999) refers to adult education (i.e. continuing education) evaluations as yielding divergent opinions about targets[4] and the profitability of supplementary measures for participants, enterprises and society.
- The majority of people participating in adult or continuing training are already well-educated. In-service training does not necessary reach the aged and those under greatest threat of unemployment (Rahikainen 1999; Hietala 2000; Välimäki & Immonen 2000).
- Labour training targeted at the unemployed is effective when carried out in conjunction with enterprises requiring labour (Arnkil et al 2000).
- The scope for older unemployed people, (those over 45 years), to find employment remains very low, despite qualifications, their ability to work, active job seeking and labour market participation. The main hindrance to their employment prospects is low demand for this age group amongst employers. (National Research and Development Centre for Welfare and Health STAKES 2001).
- The National Board of Education (1999) views the results from the piloting phase (1997-1998) of basic vocational examination to be promising.

3 One labour policy mean to improve employability of aged labour in-service is the National Programme of the Aged carried out 1998-2002. This comprehensive political programme is being implemented for purpose of encouraging people to remain on the labour market.

4 Adjustment to the knowledge economy and to rapid technological changes, redistribution of education over life-cycle, promotion of active policies, and social cohesion.

Analysis and conclusion

Why does a country with a considerable labour reserve display evidence of labour shortages and skills gaps? The list of 'success' factors identified by the Labour Ministry above indicates labour shortages are due to failure in solving the skills gaps, and insufficient geographical and professional mobility within the labour force. Maybe the most important indicator of failure to solve the skill gaps is persistent structural unemployment. The simple fact is that after the recession years labour demand in certain sectors and professions, especially the low-skilled sectors, decreased fatally. The level of high-skilled jobs remained more stable and since 1994 this has accounted for the majority of labour market demand.

It can be concluded that in Finland labour shortages and skills gaps are increasing in some sectors and professions. However, this remains a relatively small issue, as it is mainly confined to specific geographical regions. Although there is no need for general alert at the moment, skills gaps and labour shortages are increasing. Shortages in labour supply can be expected for the next couple of years. Owing to significant numbers entering retirement in the next decade, Finland may face serious labour shortages, in the IT and service sectors, at various skill levels, if preventative measures are not implemented to secure skilled labour.

To summarise, currently the Finnish recruitment problem relates to qualitative requirements of the labour force, which do not meet skills needs. Meeting the emerging challenges is dependent upon securing a skilled labour supply (i.e. a 70 percent employment rate objective). Labour and education policies must be carefully targeted in order to meet this objective. Due to rapidly changing labour market qualifications, the importance of anticipating future skills requirements cannot be underestimated.

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France

Introduction

The reader will be aware that several different terminologies are used in France to speak of labour shortages: companies or professionals tend to speak of recruitment difficulties, whereas demographers and sociologists prefer the term labour shortage. The Ministry of Labour and those in the public employment service are more likely to speak of "labour market tensions".

The definition which seems best fitted to describe the reality of the current French context is "recruitment difficulties within particular occupations". To borrow the expression used by Arnaud du Crest in his article on labour shortages in the journal *Futuribles*[1], "What we are currently seeing in France is not an absolute shortage of labour, but a difficulty specific to the person reporting the shortage and to the occupation in which they are attempting to recruit". Similarly, in a study entitled "Métiers pénuriques ou pénuries dans les métiers?" [Occupations in short supply or shortages within occupations?], Lab'Ho[2] writes "Logically, a shortage ought to meet at least two criteria: a real disequilibrium, in terms of stocks and/or flows, between the supply and demand of skills, and a relatively high tension over pay: but, in France, with the exception of the IT sector, there has been no wages explosion".

There are some ambiguities in the way the term "shortage" is used in France, since it suggests that the difficulties relate in the main to skills deficits, this impression being reinforced by the fact that there are still, in February 2001, some 2.1 million jobseekers. Though there are such deficits within certain occupations, requiring appropriate responses to be rapidly implemented, these deficits also reveal dysfunctions in the processes of matching supply to demand in the labour market.

The studies carried out into the causes of these labour market dysfunctions both in the early 1990s and today[3] show that they often have multiple causes:

- **Working conditions in certain occupations or sectors**: some service activities (e.g. industrial cleaning, hotels and catering sector, road transport) are particularly affected by such factors as wage level, lack of prospects for career advancement, specific constraints of the post (unsocial hours, unpleasant working conditions).
- **Image of occupations**: this can be seen from the reluctance on the part of young entrants or jobseekers to take up training which has a bad image, particularly in some industrial occupations. This has been an underlying problem for many years. It came to the fore in 1991 after industrial firms met with recruitment difficulties in 1990-91.
- **Inadequate training flows**: in technical occupations this may in part be explained by the conception young people (and jobseekers) have of certain occupations – a conception often conveyed by the education system, where the idea is still prevalent that general education is the "royal road to success", whereas apprenticeships or technical and vocational training are paths to failure or to dead-end jobs. This has been measured in the Pays de La Loire region by establishing the ratio of annual numbers leaving initial vocational and technological training or apprenticeships to numbers of jobs on offer.[4] In that region, the average ratio is one person leaving initial training for every 36 jobs. However, in some sectors, such as clothing/leather, the figure rises to one person leaving training for every 134 jobs, whereas in transport and handling it reaches one person for 242 jobs.

At other levels, it is not necessarily a matter of the image of the profession which explains these inadequacies in the flow of trainees, but structural shortages. For example, among the 26,000 who qualify as "engineers" of all kinds in France each year, 7,000 currently hold qualifications in the technological field. However, some experts estimate that the annual demand for engineers with technological qualifications stands at 20,000.[5]

- **Poor communication** between employers and the employment services (ANPE etc.) regarding the characteristics of the post offered, particularly in cases where job content is constantly changing, places further obstacles between the supply of, and demand for, labour.
- **Specific patterns of behaviour**: firms have often become set in their ways over many years. In periods of high unemployment, companies look for, and find, the "ideal" candidate with all the requisite qualities and skills, if not indeed skills higher than those required to fill the post. Consequently, they develop a reluctance to recruit

1 *Futuribles* 254, June 2000.
2 Research Institutes of the ADECCO group (temporary work).
3 Vincent Merle, "Difficultés de recrutement et gestion locale de l'emploi" (Bernard Bruhnes, Consultants 1991). Study carried out for the Ministry of Employment.
4 A. du Crest, *Futuribles*.
5 "Penurie d'informaticies ou mauvaise gestion?" *Le Monde*, 6 December 2000.

people who do not have the ideal profile for the job. On the other side, jobseekers become increasingly demanding with the gradual improvement in the employment situation, finding themselves in a position of strength and able to afford to hold out for good pay and conditions.

Lastly, two factors may contribute to increasing recruitment difficulties in France: on the one hand, the geographical concentration of some industrial sectors, combined with **a lack of mobility among the population - particularly those with low or medium-range skills.** Though it is true that the French (like other Europeans) are attached to their regions, it is also the case that "mobility is made less easy by the fact that a number of services (social housing, childcare, education) are not provided by the market, but by the public services and are often characterised by qualitative or quantitative rationing. In these conditions, moving house involves engaging for a second time in a set of complex administrative procedures."[6]. It is the low-paid who suffer most in this situation. On the other, **the demographic decline seen in some sectors** - a decline characterised by a reduction at the bottom of the age pyramid and an increase at the top. In five years' time, the public sector will be particularly badly affected by this decline.

All these factors probably explain why France has a paradoxical state of unemployment (characterised in given occupations or sectors by unemployment co-existing with a shortage of labour).

Several studies of this problem have been published recently[7] and indicators of labour market tensions, worked out by the Ministry of Employment and Solidarity in collaboration with ANPE, are now available every three months.[8]

The high growth in employment (570,000 jobs created in 2000 - the highest progression ever seen in France) is currently fuelling the debate on these questions. So far as the representatives of the MEDEF[9] are concerned, it is clear that public policy – particularly the 35-hour week - has contributed to aggravating the recruitment difficulties experienced by firms. This is one of the arguments the employers' organisation has been advancing over the last six months as part of its call for amendments to this law.

Assessment of Labour Shortages and Skills Deficits

There is available in France a national survey carried out every month by INSEE [the national statistical office], which questions industrial employers on their recruitment difficulties: in spite of the subjective nature of this indicator, it has nonetheless shown quite significant developmental trends over a long period. Over the last 25 years, it emerges that difficulties appeared initially in 1976, then again in 1990-91 when 50% of industrial employers were experiencing problems, as against 10% two years later. Since 1997 this indicator has risen steadily. By 2000, it was back at the 1991 level.

Recruitment difficulties in France currently affect very diverse sectors and varied occupations, requiring many different kinds of skills.

Similarly, recruitment difficulties vary from one area to another, even though, according to the most recent indicators published by the Banque de France, all the French regions are profiting from economic growth (in particular the border regions, from Alsace to the Rhône-Alpes region). We know some employment catchment areas are running close to full employment,[10] whilst others still have available labour resources (if only by the number of jobseekers still registered). However, these latter are not necessarily the least dynamic areas, as a higher than average unemployment rate may express the great attractiveness of the area, particularly where those seeking work are concerned. Conversely, a low unemployment rate may reflect the fact that a particular area is not very attractive, and the population of working age is in fact declining there. The level of unemployment is not necessarily a relevant indicator for assessing recruitment difficulties in the different regions and territories.[11]

To assess recruitment difficulties, one has to observe several indicators simultaneously. In order to interpret these indicators, DARES[12] has adopted an approach by occupational field, which is more meaningful than a sector-by-sector approach, particularly when it comes to evaluating skills deficits. This approach is based on the national occupational classification[13] created by DARES.

Employment trends since March 1998, classified by broad occupational categories (see Table 1), show contrasting developments:

- Several occupational fields are showing very marked advances in employment, relating largely to the tertiary sector (information technology; communications-information-entertainment; research; health and social, cultural and sporting activities). The progression is less marked in industry, with the exception of the process industries, which have recorded a high growth in employment, doing so particularly in 2000.
- By contrast, in the banking and insurance sector, we find an appreciable fall in employment over the last two years (-4% and –3%), and the same is true of the electrical and electronics industries (+1% and –3.8%), while light industry has seen a stabilisation of employment levels.

6 Pisani-Ferry Report on Full Employment. See Bibliography.
7 See Bibliography.
8 In the collection "Premières informations et premières synthèses" - DARES.
9 The French employers' organization (the equivalent to the British CBI; formerly known as the CNPF).
10 Currently set at a rate of unemployment of 5% for France.
11 However, at the moment, there are no published indicators by which to assess the level of difficulty region by region.
12 Direction de l'animation, de la recherche et des études statistiques du ministère de l'emploi et de la solidarité [the employment ministry's statistical bureau].
13 This is an "intermediate" system of classification, bridging between the approach of the PCS (professions and socio-professional categories) of the INSEE employment survey and the approach by occupations of the ROME (operational classification of occupations and employment), which is used by ANPE to enable it to classify supply and demand on the labour market.

Table 1: Employment trends by broad occupational field between January 1999 and June 2000

Main occupational fields (18 categories)[14]	Jobs in January 1999 according to the Jan 1999 employment survey (thousands)	Jobs in March 2000 according to the March 2000 employment survey (thousands)	Change between Jan 1999 and March 2000 (%)	Change between March 1998 and Jan 1999 (%)
Agriculture, merchant navy, fisheries	394	410	+ 4.1%	-2.0%
Construction and civil engineering	1536	1610	+ 4.8%	1.0%
Electrical industry and electronics	313	301	-3.8%	1.0%
Mechanical engineering, metalworking	1259	1280	+1.7%	3.0%
Process industries	1032	1107	+7.3%	2.0%
Light industries (timber, printing industries)	484	485	+0%	-1.0%
Maintenance	610	615	+0.8%	0%
Technical and managerial staff in industry	133	129	-3%	6.0%
Tourism and transport	1683	1780	+5.8%	0.0%
Management and administration	2296	2428	+5.8%	1.0%
Information technology	357	372	+4.2%	20.0%
Research	243	253	+4.1%	8.0%
Banking and insurance	567	550	-3%	-4.0%
Commerce	2211	2259	+2.2%	2.0%
Hotels, catering and food industries	798	810	+1.5%	3.0%
Personal Services	2464	2497	+1.3%	0%
Communications, information, entertainment	340	358	+5.3%	10.0%
Health ; social, cultural and sporting activity	1493	1565	+4.8%	3.0%
TOTAL	18213	18808	+3.3%	3.1%

(Source : employment surveys)

In order to arrive at a more detailed interpretation of recruitment difficulties, one has to compare the figures for employment creation with the **labour market tension indicators** produced by the DARES (Ministry of Employment) and ANPE. Six indicators have been developed on this basis:

- rate of jobseeker registration, by which we can evaluate the level of unemployment;
- rate of jobseeker registration over time, which measures the movement over 12 months in the number of month-end jobseekers in a particular occupation;
- rate of placement of jobseekers, which measures the proportion of jobseekers on the register 12 months previously or moving on to the register during the year who have now been taken off the books of ANPE (a high value indicates a large proportion removed);
- rate of vacancies over time, which measures the flow of vacancies recorded by ANPE in the last 6 months and compares this to the vacancies recorded in the same period of the previous year;
- proportion of indeterminate contracts and fixed-term contracts of more then 6 months in the vacancies recorded, which enables the quality of vacancies to be assessed; and, lastly,
- ratio of vacancies over the number of registered jobseekers, which measures the flow of vacancies recorded over the last six months by comparison with the flow of jobseekers registered in the same period (a ratio of 1 indicates that for one vacancy, there is one jobseeker).[15]

This last indicator, which best enables us to evaluate labour market tensions, has the advantage of being a monthly indicator. As a result, it is responsive to current trends. It is particularly relevant when seeking up-to-date information, though ANPE covers on average only 40% of job offers at national level, and a considerably lower percentage where technical and managerial staff are concerned.[16]

According to the latest published data (see table 2), the ratio of recorded vacancies to prospective applicants is highest in the fields of information technology and hotels, catering and food. This situation seems to have persisted since 1997. However, whereas the labour market seems to have been particularly tight in the hotel, catering and food sector (particularly where cooks are concerned, though there is still a relatively high level of demand for work among them – see table 3), it seems to have become less tight in information technology since 1999 (there has been a much

14 4 categories are not covered here, which relate mainly to civil service employment, the professions and self-employment. This is why the total employment figure is appreciably different from the actual figure for the working population, which stood at 23.5 million in March 2000.

15 It should be noted, however, that ANPE takes the view that, on average, in order to fill a vacancy, 2 registered jobseekers are needed.

16 Where such employees are concerned, companies prefer to go through APEC [the government placement agency for technical or managerial staff], or to use recruitment agencies, head-hunters, the Internet etc.

Table 2: Results by broad occupational category[17]

Main occupational fields (apart from those relating to the public service, the professions and the self-employed)	Rate of notified unemployment in June 2000 (in %)	Movement in level of notified unemployment (cats. 1,2 and 3) between Sept 99 and Sept 2000 (in %)	Placement rate (over one year) in Sept. 2000 (in %)	Change in vacancies registered between April 2000 and Sept 2000 (in %) (1)	Proportion of indeterminate and +6-month fixed-term contracts in job vacancies notified from April 2000to Sept. 2000 (in %)	Registered vacancies over number of registered jobseekers	
						April 1999 to Sept 99	April 2000 to Sept 2000
Agriculture, merchant navy, fisheries	14	- 7	61	3	8	2.8	2.9
Construction and civil engineering	10	- 21	67	- 7	43	0.9	0.9
Electrical industry, electronics	7	-18	66	13	35	0.9	1.1
Mechanical engineering, metal-working	8	-20	67	4	43	0.8	0.9
Process industries	6	-7	61	15	29	0.9	1.0
Light industries (timber, printing industries)	15	-13	58	9	49	0.5	0.6
Maintenance	7	-16	67	-4	57	0.7	0.8
Engineers, technical and managerial staff (2)	9	-10	62	9	78	0.4	0.5
Tourism and transport	11	-14	63	9	41	0.9	1.0
Management, administration	15	-12	59	7	50	0.4	0.5
Information technology	4	5	62	-7	83	1.3	1.2
Research	4	-16	65	19	87	0.2	0.3
Banking and insurance	3	-11	61	18	68	0.7	0.9
Commerce	15	-10	60	7	58	0.6	0.7
Hotels, catering and food	15	-15	69	1	49	1.4	1.6
Personal Services	18	-9	55	4	52	0.5	0.6
Communications, information, entertainment	30	2	49	-8	16	0.8	0.7
Health ; social, cultural and sporting activities	6	-10	64	11	53	0.7	0.8
Total	**12**	**-11**	**61**	**4**	**44**	**0.8**	**0.8**

(1) By comparison with the figures for the same period in the previous year (as a percentage)
(2) These results must be treated with caution, as many vacancies for managerial and technical staff are not advertised with ANPE.

(Source: DARES, Ministry of Employment)

slower increase in employment in that sector since 1999, after record growth in 1998). However, that profession has been complaining for two years about a shortage of IT specialists in France, which it puts at around 35,000.

The rise in the ratio of vacancies to jobseekers is most marked in the fields of tourism and transport, and in the banking/insurance sector. In this latter field, however, we are seeing a fall in employment levels. A more subtle analysis, by occupations, shows that the tensions relate mainly to clerical staff and technicians in the insurance industry, and that the phenomenon accelerated between the first quarter of 1999 and 2000 (see table 3). The recruitment difficulties here have to do in part with the age pyramid. In tourism and transport, tensions exist mainly among the occupations of drivers and unskilled handling workers, even though we note that the rate of registered unemployment remains high among unskilled handling workers and that the jobs offered are relatively precarious. In transport, recruitment difficulties can in part be explained by the high level of turnover as a result of working conditions (see table 3).

In industry, it is the electrical/electronics and process industries which are affected. Whereas the former has been losing jobs for two years (- 2.8%), the latter is gaining a large number (+ 9%). In the process industries, it is among unskilled and – more especially – skilled workers that the problem is worst (see table 3). In the electrical/electronics industry, the problems are found at various skill levels, (workers, technicians and supervisory staff; see table 3).

Labour markets are relatively tight in France where other occupations are concerned– particularly among **nurses**.[18] It would seem that in the health field, there have also recently been difficulties recruiting nursing auxiliaries. There are said to be between 15,000 and 20,000 nursing appointments vacant (private and public sector combined), one of the causes being the lack of trained personnel coming on to the job market. For their 2000 intake, nursing schools which fall under the aegis of the Ministry of Health increased their admission quotas very considerably (+ 40%), after a long pe-

17 At the moment, these indicators are not all available for the regions. However, the ministry's statistical services are currently working to remedy this.
18 The ratio of vacancies over number of jobseekers stands at 1.9 in an occupation in which the unemployment rate is very low.

Table 3 – Indicators of employment and tensions in certain occupations

	Employment in June 2000 (thousands)	Notified unemployed available for work in June 2000 (in %)	Proportion of indeterminate and +6-month fixed-term contracts in job vacancies notified from April 2000to Sept. 2000 (in %)	Registered vacancies over number of registered jobseekers	
				April 1999 to Sept 1999	April 2000 to Sept 2000
Occupational category: hotels, catering and food					
Butchers, pork-butchers, bakers	245	6	67	1.2	1.5
Cooks	221	13	47	1.5	1.7
Hotel staff, clerical and supervisory	349	21	46	1.5	1.5
Occupational category: banking and insurance					
Banking, clerical and technical staff	233	3	60	0.5	0.7
Insurance, clerical and technical staff	164	3	77	1.1	1.3
Occupational category: transport and tourism					
Unskilled handling workers	407	16	21	0.8	1.0
Skilled handling workers	388	13	37	0.7	0.8
Material moving equipment operators	38	5	37	0.8	0.7
Drivers	724	9	54	1.1	1.2
Other transport operatives	82	5	71	0.7	0.8
Administrative and commercial staff in tourism and transport	111	11	65	0.5	0.5
Occupational category: process industries					
Unskilled workers	366	11	22	1.1	1.2
Skilled workers	459	3	38	1.0	1.2
Technical and supervisory staff	287	3	63	0.3	0.3
Occupational category: electrical and electronics industries					
Unskilled workers	63	8	28	1.1	1.1
Skilled workers	92	14	30	0.8	1.1
Technical and supervisory staff	147	3	50	0.8	1.1

(Source: DARES)

riod in which admission figures had been falling.[19]

Among the sectors suffering structural recruitment difficulties in some occupations, the case of the **construction industry** is quite revealing.[20] There are recruitment problems throughout France, and according to the INSEE survey of employers in this sector, 67% said they were experiencing such difficulties at the end of 1999 (the figure was 50% in 1998). These difficulties mainly concern skilled workers, but there have, of late, been increased problems recruiting unskilled labour (see table 4). This can be partly explained by the relative unattractiveness of the sector for young people and jobseekers. This is why considerable efforts are being made to enhance the image of these occupations.[21]

The case of metallurgy and metalworking: though the recruitment difficulties mentioned by the employers in this sector are not so much structural as effects of the business cycle, they have nonetheless increased in recent times, particularly where skilled personnel are concerned. It is clear that employment has been increasing for several years in this occupational field, that demand for jobs is low and that the reserves of jobseekers has fallen greatly in the last two years (by 23% between June 1999 and June 2000). According to the IUMM,[22] two firms out of three are suffering shortages and the sector needs 50,000 new apprentices each year. According to François Michaux, head of planning and forecasting in the human resources division of Renault, "There is a danger of a problem of a shortage of skilled labour showing up quite soon in

19 Just as the forward management of employment in companies is seldom highly developed, the State too is not equipped to anticipate its own needs.

20 For further information, see the article by Gabriel David (Regional Delegate for Training, CAPEB Pays de la Loire) in *Futuribles*, 254, June 2000.

21 We may highlight here the experimental efforts of the CAPEB (Confédération de l'Artisanat et des Petites Entreprises du Bâtiment) to appeal to potential female workers.

22 Union des Industries Métallurgiques et Minières (the employers' organization in the metallurgy and mining industry).

Table 4 – Indicators of employment and tensions in the building and civil engineering sector

Occupational category : construction and civil engineering	Employment in June 2000 (thousands)	Rate of registered availability for work in June 2000 (in %)	Proportion of indeterminate and +6-month fixed-term contracts in vacancies registered from April 2000to Sept. 2000 (in %)	Registered vacancies over number of registered jobseekers	
				April 1999 to Sept 1999	April 2000 to Sept 2000
Unskilled building workers, carcass work	197	16	37	1.0	1.1
Skilled workers, civil engineering	110	5	41	1.3	1.0
Skilled building workers, carcass work	309	8	48	1.2	1.1
Unskilled building workers, finishing	130	18	48	0.7	0.7
Skilled building workers, finishing	514	10	40	0.9	1.0
Machine and vehicle operators, building and civil engineering	51	8	41	1.4	1.4
Technical staff, construction and civil engineering	137	8	58	0.6	0.7

(Source: DARES)

the car industry."[23]. All these factors seem to be confirmed by the tension indicators (see Table 5), with currently a particularly high ratio of vacancies over jobseekers among skilled workers (metal cutting, metal formatting, mechanical engineering).

In this context, are there grounds to fear a structural shortage of labour? In the short term in France, this risk, particularly at the level of technical and managerial staff has to be seen as relatively unlikely.[24]. First, because the unemployment among these categories of worker has not yet been absorbed and, secondly, because the over-qualification of some employees provides opportunities for regrading and substitution.[25]. However, there is a not insignificant factor which is likely to impact on the demand for skilled labour in France – the

Table 5– Indicators of employment and tensions in the metallurgy and metal-working sectors

Occupational category : metallurgy and metal-working	Employment in June 2000 (thousands)	Rate of registered availability for work in June 2000 (in %)	Proportion of indeterminate and +6-month fixed-term contracts in vacancies registered from April 2000to Sept. 2000 (in %)	Registered vacancies over number of registered jobseekers	
				April 1999 to Sept 1999	April 2000 to Sept 2000
Unskilled workers in metal cutting	60	28	34	0.4	0.6
Skilled workers in metal cutting	171	7	42	0.8	1.0
Skilled workers in metal formatting	144	5	33	1.3	1.3
Unskilled workers, mechanical engineering	215	5	36	0.9	0.8
Skilled workers, mechanical engineering	233	8	32	1.1	1.3
Automobile repair workers	230	10	63	0.6	0.7
Technical and supervisory staffs, mechanical engineering	235	2	56	0.8	0.9

(Source: DARES)

23 See F. Michaux, "Vers une pénurie de main d'œuvre qualifié", *Futuribles*, 254, June 2000.

24 See the Pisani-Ferry report on full employment (details in bibliography).

25 This over-qualification in companies and in the public service is an effect of approaches adopted in a period of high unemployment, on the one hand by employers in their recruitment policies, and on the other, by graduates, who were attracted in large numbers by the security offered in the public sector.

accelerated retirement of public sector workers,[26] particularly of public service employees. Projections indicate that the recruitment of young qualified personnel by the state at the Bac+2 level and above (which represents 80% of recruitment) should rise from 38,000 in 2000 to 55,000 by 2007, whereas the flow of young qualified individuals coming out of the education system will be stable (at around 270,000). The labour market for posts requiring higher qualifications could, as a result, become tighter. On the other hand, the problem at other levels of qualification should not be underestimated either, particularly in the general area of skilled labour (in other words, in those areas where the difficulties are probably already greatest today).[27]

Policies implemented in response

The authorities have shown concern at the prospects which are developing and have attempted to gain a better grasp of the paradoxical employment situation in France. A working group formed within the office of the General Planning Commission has been tasked with undertaking **an analysis of the quantitative development of employment in each of the broad occupational categories,** so as to be able to assess the foreseeable impact on the education system and on vocational training[28].

Nevertheless, the tightness of the labour market has not yet brought specific responses from the authorities. The state's right to intervene directly in these matters is still questioned, even though, quite clearly, it is generally accepted that the state and the regional authorities should undertake initiatives in the field of vocational training and employment at the local level or through the public employment service.[29]

More naturally, it is mainly the *branches professionnelles* which are acting directly, with or without the support of the public authorities. A good example of this is the signing of a plan of action between the State, the UPA (Union Professionnelle Artisanale – the Craftworkers' Association) and the CGAD (General Confederation of Workers in Food Retailing), which is aimed at facilitating the recruitment of skilled labour into the food industry – a plan developed in partnership with the education system. There is to be a parallel campaign improving the image of the occupations concerned (one of the main problems of this sector). Other *branches* are increasingly showing concern with their image among the young (metallurgy, construction and civil engineering etc.).

So far as the authorities are concerned, public policies are still very heavily preoccupied, on the one hand, with the pursuit of more job-rich growth (the 35 hours question is still near the top of the agenda, as is the *"emplois jeunes"* scheme[30]) and, on the other, with fighting unemployment (and exclusion in particular), even though these policies are now more qualitative than quantitative (with the "New Start" programme for job seekers and the "Trace" programme for youth etc.). The question of vulnerable groups is still a burning issue, in spite of the numbers of long-term unemployed having fallen considerably. This fall does, however, mask the fact that those who are still unemployed are, in most cases, a long way from being able to enter/re-enter the labour market. The question of young people also merits discussion. In spite of appreciable advances in recent years, the French education system has not wholly eliminated a hard core of educational failure in which young people, often from deprived social backgrounds, leave school without any qualifications, often in a state of near-illiteracy. This issue should give pause for thought within the education system, especially as the approach in terms of levels of training and qualification, as defined by the Education Ministry – and by the public authorities in general - is increasingly being questioned: "What companies want first and foremost today are skills." The education and vocational training systems have not fully come to terms with these developments. Companies, however, are already updating their methods of recruitment. The evaluation of skills[31] or the so-called *"habiletés"* [competencies] method[32] is coming to take precedence over levels of qualification or training. In this connection, proposals have recently been formulated by the Paris Chamber of Commerce and Industry for a reorganisation of the education system by occupation rather than by levels of qualification.[33]

Similarly, no satisfactory response has been produced by the public authorities as yet on the question of women and the growing numbers of women among the unemployed. The same is true of the very low impact of the fall in unemployment on jobseekers aged 50 or over. If companies' recruitment difficulties ought to favour new approaches (e.g. becoming more open to women and older employees), public policy does not always set the example, particularly where the management of older employees is concerned (early retirement systems still operate, and regulations forbidding the supplementing of pension income with earnings from work are still in force).

Nevertheless, various public schemes currently being trialled should promote the improvement of skills. The Basic Law on Combating Exclusion, for example, opened up the Skills Contract for a trial period to jobseekers aged 26 and over. This experiment, which was initially to run until 31 December 2000, has been extended to 31 December 2002. Even if it has not yet enjoyed the success it deserves – largely on account of the difficulty of bringing individuals who have

26 See *Le Rapport Pisani-Ferry : "le plein emploi"* , December 2000,

27 The study published in March 2001 by ANPE confirms this trend. (See Observatoire de l'ANPE, "Les difficultés de recrutement, tensions et réajustements sur le marché du travail", *Cahiers de l'observatoire*, March 2001).

28 The findings of the working group have not yet been published. They will, however, necessarily inform the choices the authorities will have to address in this area.

29 The national plan of the AFPA focuses on those occupations which are said to be experiencing recruitment problems.

30 This scheme, established in October 1997, aims to create 350,000 jobs for young people by the end of 2001. Contracts are for a minimum of five years [Trans.].

31 ANPE long ago introduced "on-the-job evaluation" into its procedures.

32 This method has been introduced by ANPE on an experimental basis.

33 Chambre de Commerce et d'Industrie de Paris, *Difficultés de recrutement : Quelles réalités ? Quels remèdes ? - rapport présenté par jean-Paul Vermès (Paris :* Commission du travail et des questions sociales, December 2000).

been out of the job market for a lengthy period into such schemes – it is an appropriate instrument for developing skills among adult jobseekers, though there is need of more initiatives to train people back up to requisite basic skill levels than are currently provided. In addition to training schemes, the Personalised Action Plan (which came out of the Return to Work Assistance scheme negotiated by the social partners), which ANPE are to implement, offers various personalised schemes for directing the unemployed into jobs (individual interviews and back-up, right to assessment of professional skills, skills review, access to training etc.).

Similarly, experiments instigated by the Ministry of Employment and Solidarity are being undertaken, as part of an effort to adapt the training system to the life-long learning objective.[34] These measures should make it possible for training to become more individualised, by virtue of the accreditation of prior learning. These experiments are being made within the framework of the Social Modernisation bill which is currently under discussion and will probably come before parliament in Autumn 2001.

Conclusions

If the public authorities are concerned, while maintaining more job-rich growth, to improve the effectiveness of the training systems (as envisaged in the Social Modernisation bill), then the sudden upturn in the economy after a long period of mass unemployment and the recruitment difficulties which are emerging pose questions for employment policy and labour market management right across the board.

In the longer term, what must be questioned, among other things, is the way the effects of public policy have largely reduced the employable working population in France to those in the 25-50 age group. The natural ageing process means that this group will decline considerably in the coming years, while the 50-64 age-group in the labour market – which is currently particularly small - will increase very substantially. There are, similarly, questions to be asked about the 15-24 age group, among which very low levels of employment currently prevail.[35] Lastly, and generally, the working population as a proportion of the overall population of working age – i.e. aged 15-64 – has fallen in France from 63.8% in 1972 to 60.4% in 1999, whereas in the UK for example, it rose from 68.8% to 70.4%. In these conditions, France has available to it a reserve of population which can be brought into the work force: "More than 7 million people, or enough to fuel a 20 year boom with no increase in productivity."[36]. Given this state of affairs, immigration and the introduction of foreign workers, an issue raised by MEDEF only a few months ago, does not really seem to be needed today. The fact remains, however, that the proper skills match will not be achieved without appropriate policies, for if we are already seeing skills deficits which the established schemes are even now attempting to mitigate, a gap is opening up between the available vacancies and the jobs to which the French aspire. Here, too, there is need for concrete action.

Sandrine Gineste

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34 The so-called PERY experiments, which are a product of the White Paper on vocational training.

35 For comparative purposes, 26.5% of this group are in work in France, as against 54.9% in Germany.

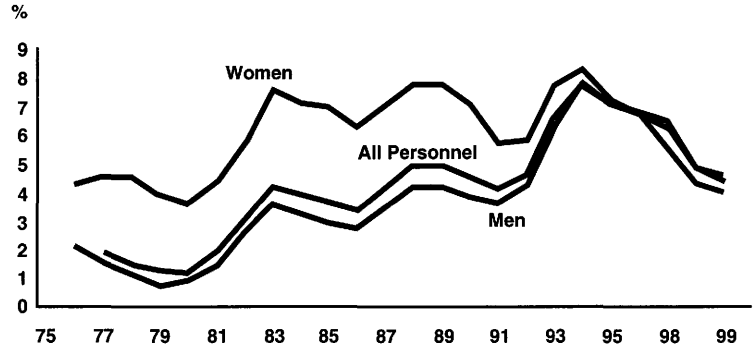
36 This calculation was made by *Futuribles*

D Germany

Introduction and background

Shortages of labour and specialist skills can occur nationally or regionally, and can affect particular industries or professions. During the sixties, the whole of the German economy suffered from labour shortages. Two remedies were adopted: more intensive use was made of the domestic labour force (existing agreements on shorter working hours were deferred and working hours extended); and foreign labour was recruited (mainly unskilled labour, but in some cases trained staff such as nurses from South Korea).

Figure 1: Unemployment rates for computer personnel (former Federal States)



Source: Dostal 2000, p. 4654

General labour shortages have not been observed in Germany since the period of mass unemployment resulting from the 1973 oil crisis. Recruitment of foreign workers was halted. Nevertheless, owing to differing growth dynamics between the *Länder*, regional shortages continued to be just as common a feature of daily life as shortages of labour in specific growth sectors (despite high national unemployment levels during the late seventies, engineers remained in short supply)[1]. As a consequence, salaries rose, career prospects improved, and the number of engineering students increased. A few years later, it was noted that there was a substantial surplus of engineers[2]. During the first three decades following the war, practically every skilled worker found employment. Since the beginning of the eighties, however, „hog cycles" have become a feature of many labour market sectors. Figure 1, for example, illustrates the unemployment trend for computer personnel.

The dominant theme of political debate in the sixties was the general shortage of labour, yet in the eighties it was the shortage of specialist skills. It is nevertheless surprising that discussion centred less on reducing hog cycles, or on greater consistency in the approach to training, than on welfare payments to the unemployed, placement work by the Federal Employment Service, and the impact of shorter working hours. The question of skill shortages was used to justify reductions in unemployment benefit, the authorisation of private employment services, and to question reductions in working hours. In consequence, skill shortages were inadequately diagnosed and frequently exaggerated (Bosch 1986, Heimann 1985). More significant than this political debate on skill shortages (in the course of which every conceivable subject was raised bar the main one) were agreements amongst the State, industrial federations, and trade unions to guarantee training posts under the Dual Vocational Training System to every single young person born during the years of the post-war baby boom[3]. Meanwhile, the number of further training schemes (retraining and supplementary training) for the unemployed was substantially increased as part of the so-called" Further Training Campaign "of the Federal Employment Service. Many politicians and academics expressed concern that these measures could actually lead to overqualification. As a result of rapid economic growth and the simultaneous implementation of shorter working hours (from 40 hours per week in 1983 to some 37 hours in 1990), the labour market was able to absorb the additional trained personnel. For the very first time in the post-war period, overtime working did not increase during an economic upturn. The drawbacks which might have resulted from shorter working hours were averted thanks to an active policy on training (Bosch/Lehndorff 2001). Only a handful of businesses claimed that their output was being impaired by staff shortages (Figure 2).

The political instrumentalisation of the subject of skill shortages was not echoed in the academic debate, where experts discussed the modernisation of vocational training, i.e. measures to prevent future shortages. In important sectors (e.g. metalworking and electrical industries), old trades were modernised and integrated, whilst training was adapted to modern technologies and work patterns (Bosch 2000).

This highlights a distinctive feature of the German labour market: it was and remains vocationally structured. On average, just under two thirds of young people pass through the Dual System of vocational training. The occurrence of

1 At the end of December 1979 in Germany, for example, there were only 4,226 applicants for the 6,044 advertised vacancies for engineers (Gleiser 1996:20)
2 In 1983, no less than 26,438 registered applicants applied for the 4,694 available vacancies (Gleiser 1996:20).
3 The number of those entering the Dual system subsequently rose from 569,000 in 1977 to over 705,000 in 1984 (Bosch 2000)

skilled labour shortages is determined to a very great extent by trainee numbers and the modernity of the training system.

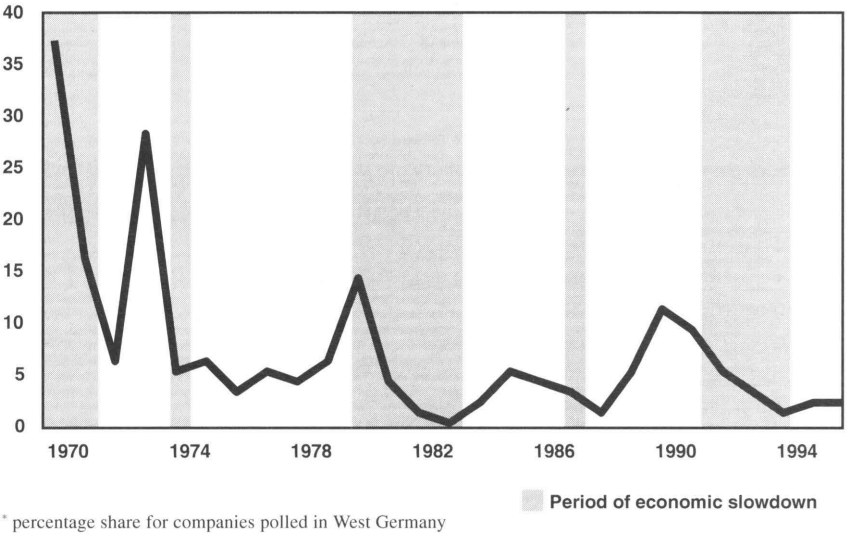
Widespread economic turmoil following the reunification boom in West Germany, combined with the structural collapse in East Germany, totally removed the subject of skilled labour shortages from the agenda for several years. The problem was now mass unemployment. Yet the seeds for the new version of the "skilled labour shortage" issue were being planted in the late nineties:

- Companies were cutting back on training (Parmentier, Schade 1994).
- Manufacturing industries in particular practically halted new recruitment. This was paralleled in important growth sectors like engineering and information technology. The slow-down in recruitment was more abrupt than in previous crises, because the 1993/4 economic crisis impacted mainly on industry, where it caused the most serious slump since the War.
- Government recruitment cutbacks intended to achieve compliance with the Maastricht Treaty (especially in the case of teachers) had an increasingly "pro-cyclical" effect.
- The modernisation of vocational training was neglected after the eighties.

The consequences of this home-made skill shortage became apparent a few years later. The number of trainees starting courses in the critical disciplines fell sharply during the first half of the nineties (Figure 3), and many applicants withdrew in view of the shortage of training vacancies. When the economy recovered in recent years, there was a shortage of skilled personnel in key areas of German exporting industry, such as mechanical engineering, and cross-industry technologies like IT (information and telecommunications technology), and also in teaching. A (temporary) shortage arose.

This study seeks to analyse the manifestations and dimensions of these skill shortages more closely. A very wide variety of sources are available for this purpose (see box below), yet only when they are placed in context does the full picture emerge.

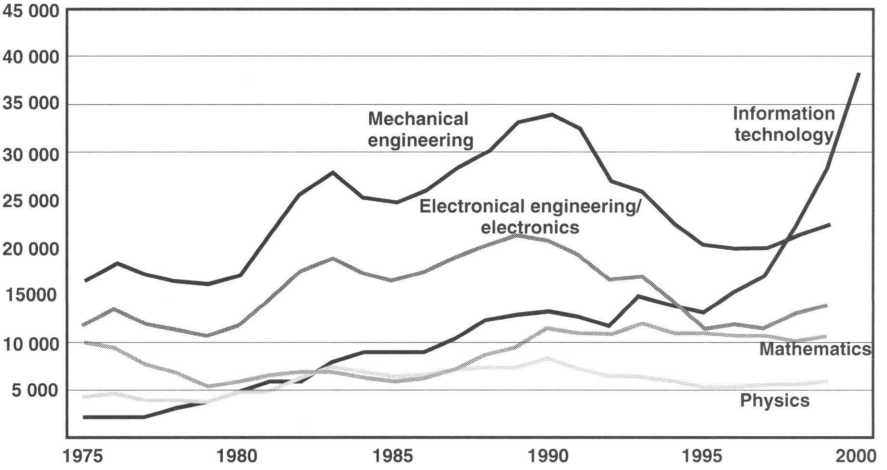
Figure 2: Production losses due to labour shortages* (Manufacturing industries)



* percentage share for companies polled in West Germany

Source: Stille,F./Zwiener,R., 1997:29

Figure 3: Take-up of courses in selected subjects at universities and polytechnics from 1975 to 2000.



Source: Initiative D21

The principal sources of information are:

- Federal Employment Service statistics: these contain data on the unemployed and vacant posts, subdivided into professions and regions, enabling both skill-specific and regional shortages to be identified.
- Various statistical records from the training system which provide information about numbers entering the Dual System vocational training, university education, and course completion rates.
- Various polls on employment providing information on the structure of employment (by region, job status, qualifications, age, salary, etc.) and according to utilisation (e.g. working hours, employment quotas). These consist primarily of the Microcensus, the sample survey of all employees liable to pay social insurance contributions, the European sample survey of employees, and panel investiga-

tions (such as the Socio-economic Inquiry Panel).
- One-off surveys on staffing situations and on skilled staff shortages in the economy as a whole or in specific industries (surveys on job vacancies in the economy as a whole and The Industry Panel of the Institute for Employment Research (IAB)c; regional and sector-related or profession-related surveys by trade federations etc.).

The opportunity provided by these statistical records to shed light on the present subject remained long underutilised, a fact due in part to a conceptually deficient approach. In recent years, a propitious broadening of that conceptual approach has occurred:
- Firstly, the distinction between general manpower shortages and skilled labour shortages has been made clearer.
- Secondly, it has become more widely acknowledged that labour markets have a significant potential for the kind of flexibility which can reduce skilled labour shortages. This includes changes in salary, the movement of labour between regions, and also changes to working hours and activity rates.
- Thirdly, increasing attempts are being made to identify impending shortages by the use of early indicators. It is not sufficient in this context to refer to general forecasts about trends in training structure (Weidig, Hofer, Wolff 1999). What matters is to identify possible shortages and training changes within specific disciplines and regions.

Skilled labour shortages and training bottlenecks - some facts about the status quo

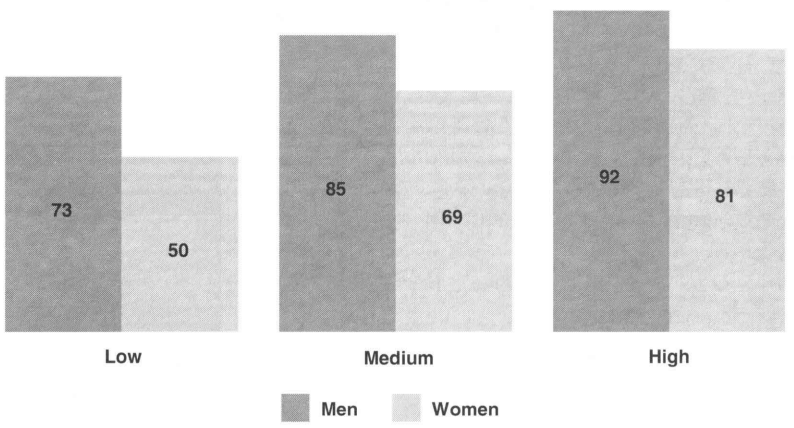
Given that the average number of unemployed persons in Germany during the year 2000 was some 3.9 million (to which a substantial pool of unregistered labour may be added), there is no sense in which one can speak of a general labour shortage. Shortages are confined to specific professions and particular regions. Before we identify them and glance at the future, we should like to emphasise the considerable extent to which such shortages were reduced by the labour market's flexible responses.

Labour market flexibility reduces skill shortages

Skill shortages can be reduced by labour market adaptation. Little information is available on the effects of salary changes. Yet we know (Neugart 2000) that the sharp decline in engineers' starting salary and the high rate of unemployment amongst entrants to the profession were factors which contributed to the decline in applications for courses and the subsequent shortage of engineers. Similarly, it is undisputed that salary differences are one of the principal motives for changing jobs and geographical mobility (Hecker 2000).

Three indicators illustrate a more intensive utilisation of trained personnel, and inter-regional mobility:
- The rate of unemployment for unqualified employees rose faster than that for qualified staff. In 1997, 24.2% of unskilled and semi-skilled workers were unemployed, compared with 4.1% of university graduates and a mere 2.8% of polytechnic graduates (Rauch, Reinberg 1998).
- Employment rates improve as the level of training rises. The employment rate for highly qualified males between 25 and 54 years of age is almost 20 per cent above that for poorly qualified males. In the case of females, the differences are even more pronounced. Whereas 81% of women between 25 and 54 years with a higher qualification were employed, the employment rate for women with a lower training qualification was just under 50% (Figure 4).
- Whereas in 1984 unskilled and semi-skilled employees worked on average 7.5 hours less per week than more highly qualified employees, this difference had risen by 1997 to 13.3 hours per week. The difference in working hours between unskilled/semi-skilled employees and qualified/trained employees almost doubled from 3.3 hours per week in 1984 to 5.9 hours per week (Figure 5).
- Without the rise in working hours and employment rates amongst qualified personnel, today's skill shortages would undoubtedly be higher. Regional labour shortages were reduced by labour mobility. The most dramatic example of this is immigration from East Germany (net losses due to migration between 1989 and 1999 were some 1.2 million persons; unknown author, 2001a). Those leaving East Germany were mainly younger, better-trained workers. Regional mobility also increased significantly, especially in West Germany

Figure 4: Employment rates for males and females (25-54 years) by level of training 1997



Source: European Commission, 1998

(Haas 2000). Internal mobility within Germany was a greater factor in recent years than immigration from abroad, which declined in recent years (Figure 6). The impact upon the skilled labour market of future growth in the foreign population is proving to be insignificant, in view of the hitherto low take-up of employment by females, with their higher fertility yet lower skill levels. In this context, however, one should not overlook trends towards upward mobility which are of significance for the future. Indeed, the eastward expansion of the EU will, in stages, deliver a useful resource of unskilled and skilled labour which may well prove more significant than the take-up of employment by women.

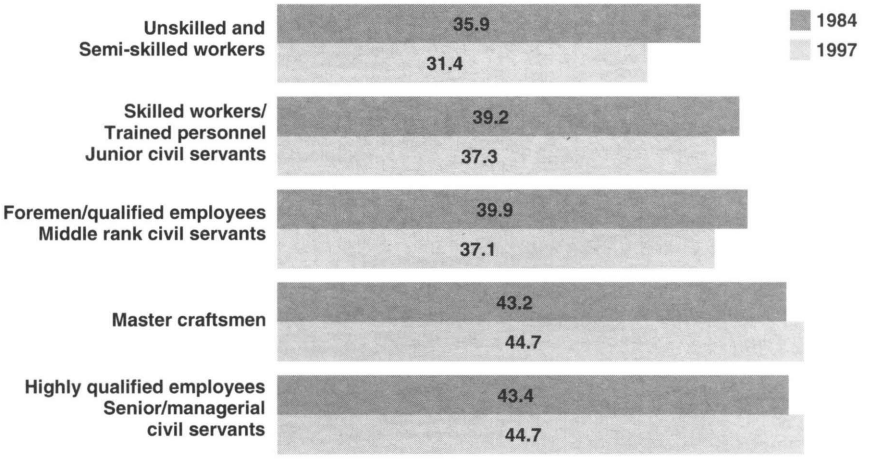
Demand for unskilled and skilled labour in the economy as a whole

Figures on demand for unskilled and skilled labour within the economy as a whole are available from numerous surveys of companies. It is immediately apparent that only around 10% of all businesses complained of a shortage of suitable applicants between 1989 and 1999, and that this shortage was more pronounced during the reunification boom than at the end of the nineties (Figure 7). In East Germany, the equivalent figures are substantially lower throughout.

These surveys also asked all businesses whether they would have taken on additional staff during the 12 months preceding the survey if the latter had been suitably qualified and available in adequate numbers. In 1999, around 15% of businesses in the West and 8% of businesses in the East said "yes". The scope for additional employment (of which at least a quarter was for fixed-term employment contracts) was calculated to be 384,000 and 54,000 jobs respectively, equivalent to 1.2% of all jobs in 1999.

The wide-scale survey conducted by the IAB Industry Panel for the 1st half of the year 2000 yields a larger but comparable figure for total unfilled vacancies. It states (Figure 8) that there were a total of 570,000 vacant posts in Germany

Figure 5: Average actual weekly working hours 1984-1997, West Germany



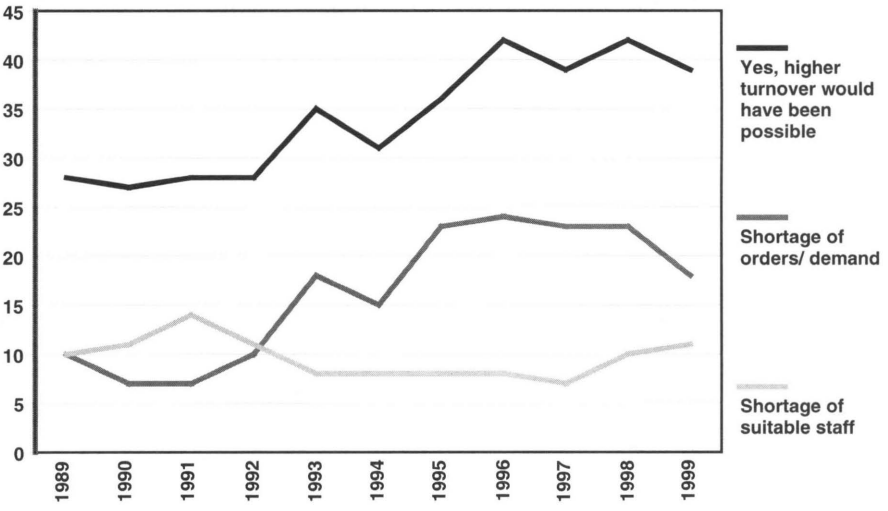
Source: Socio-economic Panel, special evaluation

Figure 6: Migration effects on and net mobility within the German labour market 1995-2001

	1995	1996	1997	1998	1999	2000	2001 Forecast
Migration effects West	+ 207	+ 164	+ 99	+ 7	+ 58	+ 95	+ 131
and net mobility East	+ 8	+ 26	- 7	- 20	- 48	- 47	- 30
Total	**+ 215**	**+ 190**	**+ 92**	**- 13**	**+ 10**	**+ 48**	**+ 101**

Source: Autorengemeinschaft 2000

Figure 7: Businesses in West Germany which were prevented from achieving higher turnover, and the impact of labour shortages as a contributory factor (expressed as a % of all factors)



Source: Magvas, Spitznagel 2000, p.4

as a whole, of which 506,000 were in the old *Länder*. Most of the unfilled jobs called for skilled workers and trained salaried staff, yet there were also more than 100,000 vacancies for unskilled and semi-skilled workers. Demand for staff with professional and university degree qualifications during the period amounted to 55,000 in the West and 8,000 in the East. Demand for engineers, information technologists and mathematicians (categories of key importance for the highly-trained IT professions) amounted to 37,000. "Although the figures for these categories are relatively modest in absolute terms, it appears to be much harder to fill these positions. Whereas no suitable applicant could be found for one vacancy in five, the figure for engineers, information technologists and mathematicians was over 37% of available vacancies" (Kölling 2001:22). At the same time, the impact of the skilled labour shortage varied very widely between different sectors and between businesses of different sizes.

In the year 2000, difficulties with the recruitment of skilled personnel over the two subsequent years were anticipated by around one third of West Germany's manufacturing businesses and construction companies, by one quarter of West Germany's commercial businesses and maintenance firms, and by one quarter of East Germany's manufacturing companies. Around 22% of West German service companies anticipated difficulties.

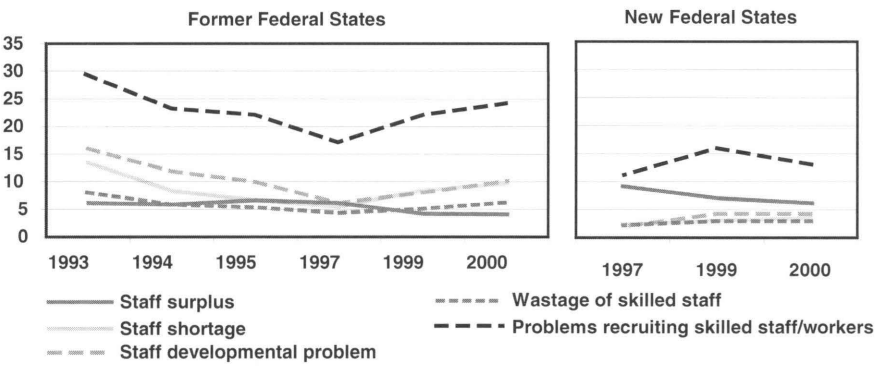
In the year 2000, 24% of West German and 13% of East German businesses feared that it would be impossible in future to find suitable staff on the labour market. The figures for West Germany remained below those of 1993 (cf. Figure 9).

Figure 8: Unfilled vacancies in the 1st half of 2000 (in thousands)

	West	East
Unskilled/semi-skilled workers / salaried staff	101	8
Skilled personnel, including	334	43
- *skilled workers*	217	29
- *clerical staff*	116	14
Master craftsmen, technicians	16	3
Staff with (technical) degrees, including	55	9
- *scientists*	0	1
- *engineers, information technologists, mathematicians*	33	4
Total	**506**	**64**

Source: IAB-Betriebspanel 2000

Figure 9: Anticipation of recruitment problems for two subsequent years



Source: IAB-Betriebspanel

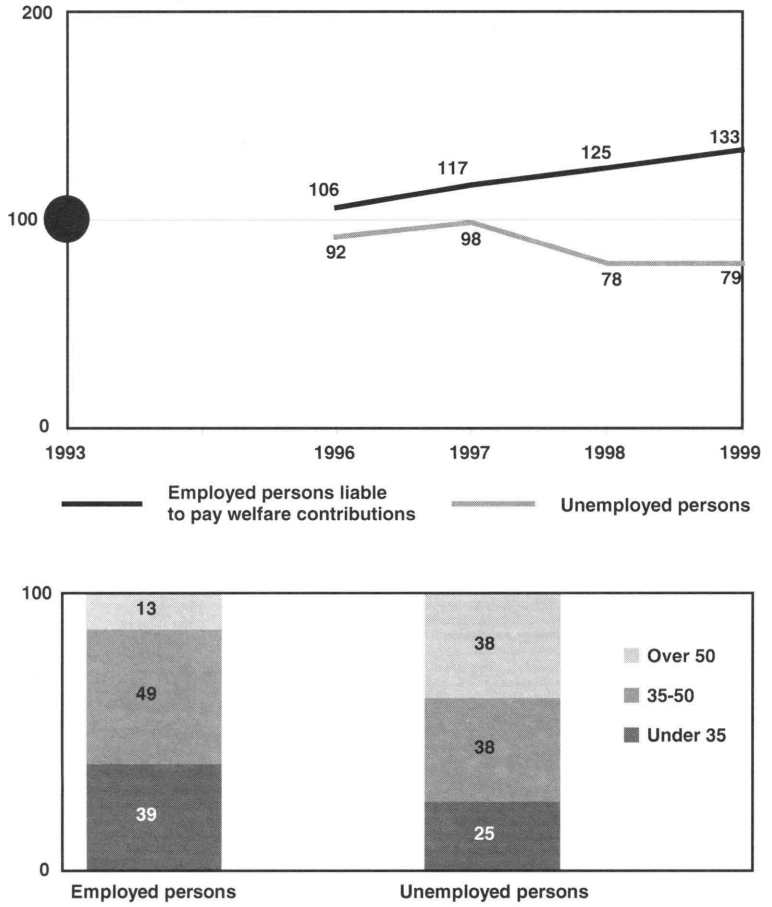
Two case-studies of current and future skilled staff shortages

Shortage of skilled staff in information/telecommunications technology

Everyone agrees that there is a shortage of skilled IT personnel. Nobody predicted the growth of demand in this area so evident from the divergence between employment and unemployment rates shown in Figure 10. In fact, there are still many unemployed data-processing professionals who are not recruited on age grounds. Statistics about the structure and scale of demand for skilled staff vary extremely widely. This is due to methodology, differing statistical definitions of the IT sector, the selection of different time-periods, and the client for which the estimate of demand was prepared. Some of the most significant findings are:

- Between October 1999 and April 2000, companies notified Job Centres of 28,300 vacancies for trained IT personnel (ibv 2000). The period during which vacancies remained unfilled, for categories such as accounts personnel/data processing staff, the vacancies have both increased in number and remained unfulfilled for a longer period in the recent years. The same is true of notified vacancies for engineers, chemists, physical scientists and mathematicians.
- According to surveys within a representative panel of businesses in Germany, conducted by the ZEW Zentrum für Empirische Wirtschaftsforschung [Centre for Empirical Economic Research], more than 6% of all private-sector businesses in Germany failed to fill IT vacancies during the 1st half of 2000. Extrapolated to the economy as a whole, this represents some 93,000 jobs, of which 34,000 are in the IT sector itself, where some 90% of posts (80% within the private sector) are intended for graduates (BMBF 2001). 80% of the posts which remained unfilled during the first half-year are reported to be genuinely new vacancies and not existing posts falling vacant. The requirement for replacement staff up to the end of the year 2002, calculated by reference to the ZEW figures for all private-sector businesses, is for some 340,000 trained personnel, of whom at least 200,000 need to be IT graduates (ibid).

Figure 10: Rates of employment and unemployment for computer personnel (1993 = 100)



Source: Biersack, Parmentier, Schreyer 2000, p. 390.

- According to economic research by the ifo Institute for Data-Processing Services (cf. Gürtler 2001), the commercially restricting shortage of trained staff amongst data-processing service companies, which had risen dramatically since 1996, reached its peak in autumn 1998, and then decreased slightly. Since the beginning of 1999, this indicator has hovered around 50 per cent, i.e. half of all EDP service providers complain that they cannot increase sales owing to shortages of trained staff.
- Compared to the equivalent period in the previous year (January to October), the Adecco employment agency recorded growth of 12% in West Germany and 26% in East Germany with 87,810 verified vacancies for computer specialists. A slight decline is evident when January/February 2001 is compared with the same period in 2000.
- Demand is also estimated in a number of regional surveys. According to a survey by the Cologne Chamber of Industry and Commerce (IHK) in the year 2000, there was a shortage of 3,487 trained personnel in the Chamber's district. In a similar study in the Frankfurt area, businesses reported 16,000 unfilled vacancies. The Chamber of Industry and Commerce in Stuttgart states that, in its local region, some 20% of businesses are unable to fill vacancies for IT personnel. These regional studies point to a total shortage of 130,000 to 150,000 trained staff (Kölling 2000, Initiative D21).

The spectrum of statistics ranges from 30,000 (unfilled vacancies at Job Centres) to estimates of 150,000 based on surveys. Job Centre statistics reflect only part of the market, since many vacancies in this field are not advertised via Job Centres. We regard the data of the IAB and ZEW as the most accurate, since these were calculated using reproducible methods. Job advertisements provide a momentary snapshot, but are not a true indicator: "Analyses of advertisements reflect the marketplace but do not reflect demand" (Dostal 2000, p.4662).

All agree that demand extends across a very wide range of functions and levels of training. Around 30% are attributable to skilled IT personnel with Dual System training, 20% to those with a professional qualification, 30% to technical college graduates, and 20% to university graduates (Initiative D21 2001: 23). Initiative D21 assumes that it will be possible to satisfy demand within the area of the Dual Training Scheme and additional training. The greatest shortage is thought to lie among those with university degrees. Admittedly, the number of students embarking on ICT related courses has since risen sharply once again. But: "The rise in new course entrants can only help to remedy the shortage of trained computer staff in the medium term, since it takes university computer students an average of nearly 13 semesters to graduate, whilst the actual course duration at technical colleges averages 9.7 semesters" (Initiative D21 2001: 28).

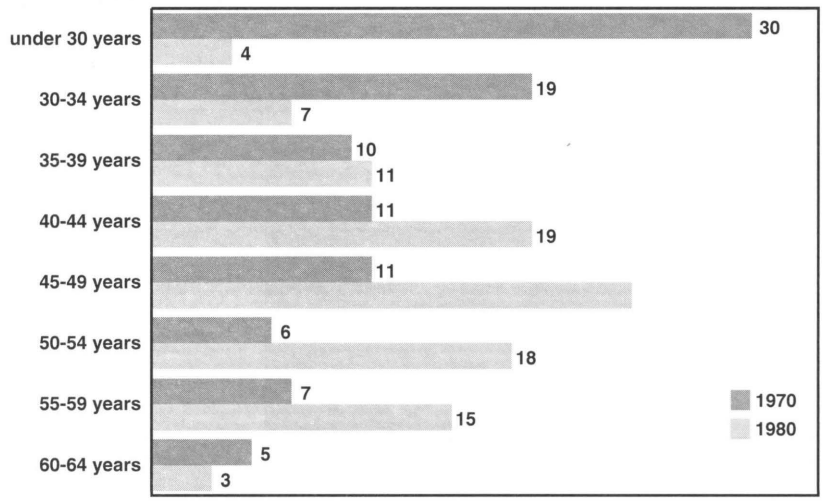
In the IT personnel field, it is undisputed that current demand for qualified staff is inadequately satisfied. Nevertheless, both past experience (cf. Konrad 1999) and contemporary studies (cf. Selhofer 2000) raise serious concerns about exaggerating the effect of this upon the labour market.

Shortage of teachers

The shortage of teachers results from the government's restrictive recruitment policy and from the fall in the number of students and graduates in recent years training to become teachers. Student numbers declined as a result of high unemployment rates amongst teachers, the award of only part-time or short-term contracts to many newly appointed staff, and low starting salaries. The earnings of probationary teachers lie between DM 1,400 and 1,800 per month. The result has been a sharp rise in the

average age of teaching staff (Figure 11). In addition, changes in pension provision which facilitated early retirement caused the shortage of teachers to occur earlier. According to the GEW trade union (Gewerkschaft Erziehung und Wissenschaft [Education and Science Trade Union]), there is a shortage of some 50,000 teachers (author unknown, 2001). This is confirmed by large class sizes and frequent cancellation of lessons. Vocational and secondary schools are particularly affected, especially in the subjects of mathematics, science, and languages. In vocational schools, a shortage of teachers in the field of new technologies is causing a particular problem: the anticipated further shift from workplace-based to school-based vocational training requires more staff. Some forecasts state that, up to the year 2005, around 20,000 people need to be appointed annually merely to replace retiring staff. The need for replacement staff will then rise to 27,000 per annum. Thereafter, the 35,000 to 40,000 students starting courses will be inadequate to cover this requirement, because too high a proportion abandon their courses and a further proportion are recruited by the private sector. By contrast, in East Germany there are redundancies because of falling class numbers. The job market for teachers is suffering from "drought and flooding" simultaneously.

Figure 11: Age-structure of teachers in non-vocational schools (%)



Source: Institut der Deutschen Wirtschaft [German Economic Institute]

Political measures to reduce shortages of skilled labour

It would not be possible at this juncture to fully describe all the many political initiatives aimed at reducing shortages of skilled labour. The most crucial are, without a doubt, those measures which prevent skilled manpower shortages from occurring in the first place. Modernising vocational training should be regarded as a priority. Following a period without reforms, the social partners agreed in the mid-nineties to accelerate the modernisation of existing training institutions and to establish new ones more rapidly. The pace of modernisation increased, and the number of those needing training in the new IT professions has risen dramatically (cf. Figure 12). In the year 2000 alone, 18,024 new vocational training appointments were made in these new IT occupations.

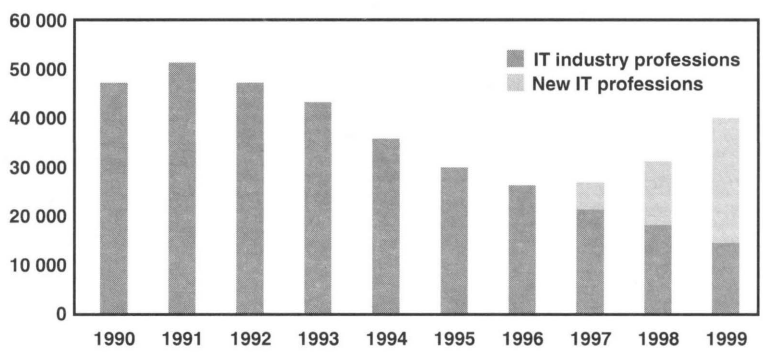
As part of the "Partnership for Employment", agreement was reached about training, to the effect that additional training posts would be created for the present large number of entrants, thereby ensuring the future supply of skilled staff. This is being supplemented by an emergency programme to reduce youth unemployment which has placed some 200,000 young people in training or work by the year 2000. To mitigate bottlenecks at vocational training colleges, and shortages of teachers, a series of new appointments and special measures are being introduced.

Special efforts are being undertaken for the IT sector, including the modernisation of tertiary education (universities, vocational colleges), the introduction of a modular course structure, the establishment of a further education system dedicated to IT and the media, an expansion of the Federal Employment Service's range of further education courses to 35,000 places for the next three years, a public-private training fund involving IT businesses, and yet more measures. By 2005, the number of skilled staff should have risen by 250,000.

To eliminate particularly acute shortages in the IT field, the procedure for foreign skilled workers taking up short-term contracts was considerably simplified ("Green Card Initiative"). So far (5.1.2001), almost 36,000 inquiries have been recorded from applicants, and 4,441 work permits issued over a five-month period.

For its part, the public employment service is improving the efficiency of its career guidance and job placement services. Vocational training institutions are making special efforts to establish an early-warning system for future training requirements, enabling them to respond to ever shorter innovation cycles and their effect upon demand. In a number of areas, additional assistance is being granted to encourage job mobility.

Figure 12: Trainees employed within the IT industry



Source: Petersen, Wehmeyer 2000

Analysis and conclusions

The figures indicate that there is no general shortage of skilled labour in Germany, although there are serious bottlenecks in specific professional categories and in the regions. The shortages of skilled personnel have several causes:

- Where training periods are lengthy (i.e. in distinct professional training systems and in university courses with an academic rather than practical emphasis), "hog cycles" become protracted and more pronounced.
- As a consequence of the post-war baby-boom years, the labour market in certain professions (e.g. teaching) became blocked for the ensuing generation.
- The 1993/94 economic crisis was the sharpest recession since the war. Company recruitment declined, with dramatic effects upon training rates.
- The State exacerbated demographic effects through pro-cyclical recruitment measures.

The fact that the shortage of skilled labour did not have a more serious impact was due to the following factors:

- The labour market responded with great flexibility: working hours and employee numbers of highly qualified staff rose.
- Regional mobility is substantial and is rising (not only between East and West).
- Following a period of stagnation during the eighties & nineties, the training system is being modernised.
- Current shortages can be mitigated by immigrant skilled labour ("Greencard").

In our view, several labour market buffers have been exhausted. It will scarcely be possible to extend the working hours of highly qualified staff any further. The emphasis of future policy must therefore fall upon improving training and development.

In addition to the shortage of trained staff in the IT and teaching professions, labour shortages in low-wage sectors such as hotels and catering are also the subject of discussion. These problems result more from the poor working conditions in these sectors than from training bottlenecks. Unless working conditions are improved, these shortages will probably persist.

Past trends and all forecasts point towards a general rise in demand for training (Schüssler et.al. 1999; Rauch, Reinberg 1998). Although unskilled work will not disappear altogether, the opportunities for poorly qualified people will remain bleak; not least because it cannot be assumed that, despite demographic changes, the structure of the labour market will be reversed across a broad front in the long term (Kistler, Schönwälder 2001; Pack et.al. 2000). Even in the medium term, the threat is unlikely to be of a general shortage of labour, but "merely" of a growing mismatch in specific industries, professions and regions - despite higher mobility.

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Greece

Introduction and background

It would be difficult to maintain that the notion of "skills gap", as such, occupies a prominent place in the political and academic discussions on employment and unemployment in Greece. Various studies and research findings however, indicate that skills gaps do exist and that they are even pronounced in certain areas. One such area is Information and Communication Technologies (ICT), evidence on which will be presented later on.

The Greek labour market reflects several characteristics[1] which hinder the identification of training needs and the demand for skills: A large segment of the labour force is still employed in agriculture, organised in small family holdings with self-employment being the dominant form of employment. Self-employment is also very pronounced in urban areas. Of those in salaried employment, a large part work in the public sector, protected from the realities of the labour market with the remainder working in private firms, the vast majority of which are very small family-owned businesses. Finally, training for a number of middle-level technical occupations associated with industrial activities does not correspond well to labour market requirements.

Set against this background, employment growth in the 1990s has been very modest, in spite of real advances in GDP growth. Under the pressure of rising female participation rates and a growing labour force, unemployment escalated to record levels, exceeding the EU average for the first time in 1998. Hence, the Greek experience deviates from the European norm, where decreasing unemployment trends have given rise to concerns about future labour shortages. Short-term developments in the Greek labour market, have resulted in an unprecedented stock of long-term unemployed, many of whom are recent university graduates and for whom the prospects of finding a job are likely to diminish even further in the coming years.

Data availability

The main tool for analysing current trends in the labour market is the Labour Force Survey (LFS), but while the LFS data are useful for analysing the demographic, educational, sectoral and occupational structure of employment and unemployment in Greece[2], they are less useful for providing direct evidence on skills gaps or for predicting the occupational structure of employment.

Data on registered unemployment and vacancies are provided by the Manpower Employment Organisation (OAED), the main employment agency in Greece, but ought to be treated with caution because: firstly, the majority of job seekers in Greece rely on traditional, informal channels of information resulting in efficiency losses in the process of matching demand and supply of labour; secondly, job placement by Greek public employment offices is extremely low and probably the lowest in Europe; and thirdly, OAED attracts the so-called "hard to fill vacancies", i.e. manual jobs for semi-skilled or unskilled workers in sectors exhibiting high worker mobility rates, such as the textile and catering sectors. Hence, data limitations preclude the estimation of the so-called Beveridge curve (unemployment rates compared with vacancy rates)[3].

Another area where data can be said to be grossly inadequate is income data in general, and information on earnings in particular. Job turnover data are also not readily available in Greece. Although employers are obliged by law to declare all engagements and separations to employment offices, available data are in raw form and outdated. The same applies, more or less, to establishment data (business start –ups). Finally, employment projections are not available since the quality of available information, precludes the development of "safe" projections. The development of a monitoring system of the labour market in general, and the establishment of a permanent observatory for forecasting the occupational structure of employment in particular, merits high priority.

To compensate for these data limitations, a number of employer surveys have been conducted during the second half of the 90's. Some of these surveys have combined research findings with secondary statistical material. These surveys and studies are reviewed further below.

The evidence on skills gaps

This section makes use of Eurostat data on the structure of employment and unemployment as well as on labour market trends, in an attempt to identity current and future tendencies in the demand and supply of skills.

Demographic and labour market trends

The small natural growth of the population, the influx of migrants, the rapid increase of the labour force and the ageing phenomenon, constitute the main demographic developments of the Greek labour market.

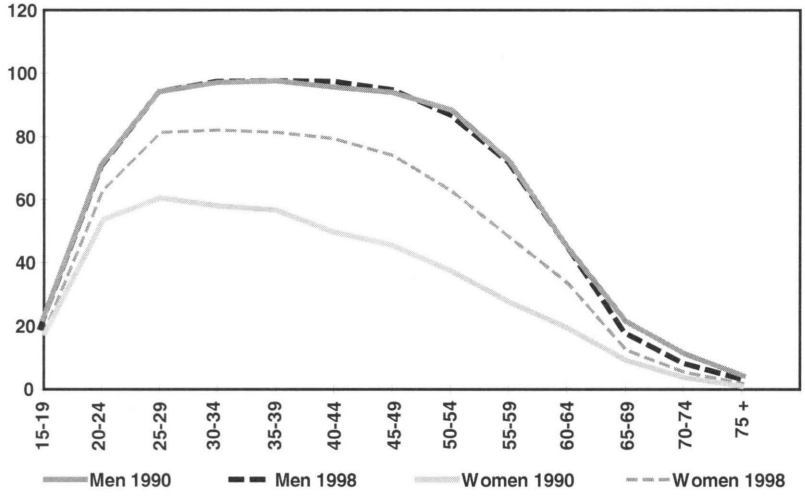
During the period 1990-1999, the population of working-age, increased by

1 For a comprehensive description of the Greek labour market see: European Commission (1996), Labour Market Studies: Greece, Employment and Social Affairs, December 1996.

2 In this respect they are utilized for example by the National Employment Observatory (EPA) in its reports on the Greek labour market. See National Employment Observatory (2000), Structural Aspects and Developments in the Labour Market, Athens (in Greek).

3 Nevertheless, construction of the Beveridge curve has been attempted at least twice in recent years. See, OECD (1996), Economic Surveys: Greece, and also Labour Market Studies: Greece, op.ct. In both studies, the curve was found to have shifted outwards, indicating a greater degree of inflexibility and mismatching of labour demand and supply.

Chart 1: Labour force participation rates by sex and age group, 1990 and 1998



351,000 while the total population in employment increased by only 251,000, resulting in an impressive increase in unemployment. The total activity rate is estimated at 64.4% of the working-age population, or almost five percentage points lower than the European average (69.2%). However, the relative gap appears to be closing fast. During the current decade (1990-1999), the average European activity rate went up by one percentage point. In contrast, the Greek activity rate increased by more than four percentage points (from 60.0% to 64.4%).

Total activity rates hide the fact that men exhibit high activity rates, close to the EU average while female activity rates are low compared to the EU average (48.9% for Greece and 59.6% for EU15 in 1999). However female activity rates have been rising fast in Greece, being fuelled primarily by younger women (25-34 years of age), the majority highly educated and married with children. The development of childcare facilities, improvements in legislation and higher educational levels are often cited as the main reasons behind these trends. To sum up, recent demographic developments reflect the rising presence of women in the labour market and a compositional shift in favour of the middle age brackets and away from the two ends of the age spectrum.

Another, less predictable factor affecting the general demographic picture is migration. During the 1990s, Greece became a destination country for large numbers of illegal immigrants for whom it is difficult to obtain reliable estimates. It is thought that the immigrant population actually represents more than 10% of the total working-age population. In the majority, immigrants constitute a low education, unskilled or semi-skilled workforce engaged in agriculture, home services and construction.

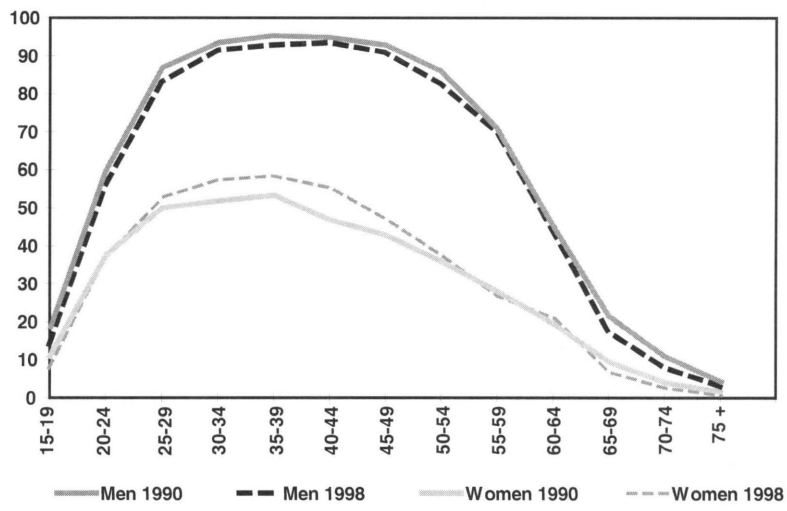
Employment and unemployment

During 1999, employment grew by 1.2%, in spite of strong output growth (GDP went up by 3.5%). During the previous year, employment increased by 3.4% while GDP increased by 3.7%[4]. In general, during the current decade employment has grown modestly, failing to reflect the accelerated growth in output.

The full-time equivalent employment rate is practically the same as the employment rate (54.8% in relation to 55.0%), reflecting low numbers in part-time employment, with the majority of the part timers having chosen this type of employment because they could not find full-time employment (involuntary part-time work).

With respect to short-term changes in the unemployment rate, Greece appears to follow a different pattern to most other member states. Throughout the EU, unemployment appears to be declining, for both sexes. In Greece, on the contrary, unemployment is on the increase, exhibiting higher youth unemployment rates (12.4% in relation to 8.4% for EU15) and higher long-term unemployment rate (6.5% in relation to 4.3% for EU15). Relative differences are more pronounced in the case of women. A disturbing feature revealed by the data is that long-term unemployment is in-

Chart 2: Employment rates by sex and age group, 1990 and 1998.



4 These are estimates made by Eurostat. National estimates differ substantially. According to official figures, employment in fact declined during 1999, by 0,5%, having increased during 1998, by 2,6%. See, National Employment Observatory, op.ct.

5 See, Ministry of National Economy (2000), Current developments and Prospects of the Greek economy, Vol. 32 (in Greek).

6 European Commission, Employment and Social Affairs (1997), The European Labour Market in the light of demographic change. Projections are based on the Eurostat 1997 demographic projections (baseline scenario) and on annual employment growth rate assumptions developed by DG II.

7 See, Ministry of Labour and Social Insurance (2000), National Action Plan for Employment for the year 2000.

creasing fast. During the last five years, the rate picked up two percentage points, rising from 4.5% in 1994 to 6.5% in 1999.

Employment projections

Employment projections based on labour market information are non-existent in Greece. The Ministry of National Economy publishes regularly projections of the main macroeconomic variables, including employment and unemployment, but these are based on National Accounts figures (ESA 95). The latest projections for the period 2000-2004 involve an accelerated rate of employment growth (from 1.2% in 2000 to 2.0% in 2004) and a drop of the unemployment rate (from 11.3% in 2000 to 7.5% in 2004)[5].

Some indications on the interaction between demographic trends, employment and growth in the member states for the period 1997-2005 can be found in a useful study published by DG Employment and Social Affairs[6]. The objective of the study was to evaluate the national and regional situation with respect to employment change in the face of demographic decline, for the whole population, broken down by sex and broad age group. In this frame, the study has concluded that Greece is unlikely to face tight labour market conditions, except in the case of men, aged 50-64 years of age.

This finding appears to be consistent with the description of labour market trends in this section. The young and the women currently exhibit low employment rates. Thus they constitute an "unused labour reserve", that is unlikely to diminish completely in the face of modest or moderate employment growth. Older men on the other hand, currently exhibit high employment rates and low unemployment rates. Demographic ageing could change this situation a little, but this effect is expected to be cancelled out by employment growth.

It will be vital for Greece to strengthen the employability of the younger generation and of women, so as to be able to benefit from the favourable macroeconomic environment and the strong output growth, that is expected to occur in the coming years.

Current views on unemployment

The decline of employment in agriculture, the rising female labour force participation rates and the presence of immigrants are the main factors thought to be associated with the recent rise in unemployment[7]. Moreover, the rates of both inflow to and outflow from the ranks of the unemployed are very low in Greece. The probability of a person having lost his/her job over the last twelve months was estimated at 0.0231 (i.e. 2.3 persons out of 100 during 1997-98) and it was much less for prime-age males, while the probability of finding a job was estimated at just 0.2452 (i.e., less than a quarter of those who were unemployed last year were likely to find employment within next year). Although comparable data are not available, it is probable that Greece exhibits the lowest mobility rates in Europe.

On the supply-side, a large part of unemployment is considered to be structural, in the sense that the unemployed lack the skills in demand by employers and that action should be taken to better adjust the educational and training systems to the needs of the labour market[8]. The high share of long-term unemployment recorded and especially the long-term unemployment rate among new entrants in the labour market is consistent with the presence of structural unemployment. Moreover, and partly for historical reasons, the Greek educational system never developed strong links with the labour market. Vocational education at the secondary level is perceived to be associated with low social status and is badly organised. Initial and

Chart 3: Unemployment rates by sex and age group, 1990 and 1998

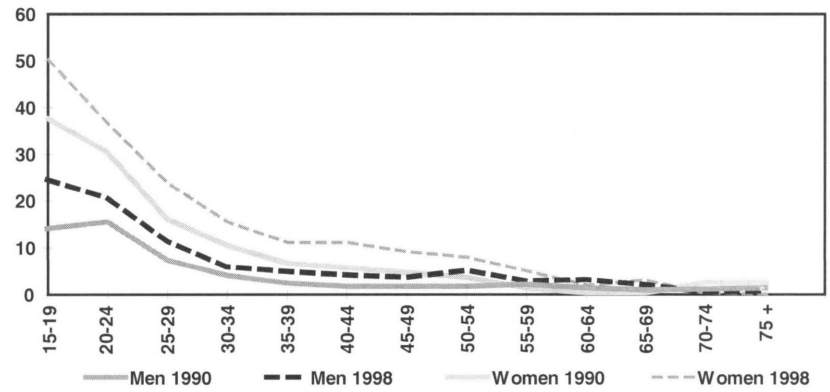
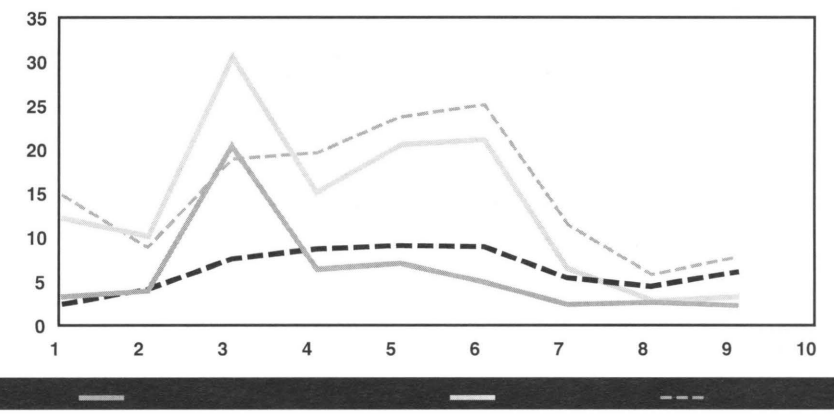


Chart 4: Unemployment rates by sex and educational level, 1990 and 1998



8 In a recent major conference on employment, hosted by the Federation of Greek Industries on February 2001, this view was emphasized by all involved including both sides of the industry and the Minister of Labour. The conference proceedings can be accessed at: http://www.fgi.org.gr

continuing training systems have only recently started to develop, mainly thanks to EU resources. The involvement of the social partners in both vocational education and training has, so far, been limited. Furthermore, the education system and tertiary education in particular, is still geared towards the needs of public sector employment, in spite of the fact that public sector employment is declining fast. As a result, many new graduates lack the skills demanded by the private sector[9].

Educational attainment, skills and sectoral change

The examination of the educational attainment of the population reveals a pattern of segmentation that is best understood in terms of age. Young persons have made striking progress in achieving higher educational levels in relation to older generations. Naturally they seek employment in sectors characterised by higher than average educational requirements and, partly under this influence, these sectors are growing in size. Older people on the other hand are employed mainly in sectors with low educational requirements, such as in agriculture or in traditional manufacture. Employment in these sectors is either falling (as in agriculture), or remains unchanged. Slow overall employment growth however has resulted in large numbers of highly qualified youth, looking for work. Many of these young persons are new entrants in the labour market faced with long-term unemployment.

Employer surveys and the case for ICT

Employer surveys constitute a convenient way of collecting first hand information on skills gaps, and in this capacity, employer surveys have been conducted on a number of occasions during the past five years, in Greece.

To start with, mention should be made of a major study on training needs in Attiki and Thessaloniki by the Centre for Planning and Economic Research (KEPE) and of a number of surveys on sectoral training needs conducted under the ADAPT Community Initiative[10]. The National Employment Observatory (EPA), based on secondary statistical information and utilising the results of various regional and sectoral surveys and studies, has listed occupations according to whether they are in demand or in decline[11]. Moreover, the Manpower Employment Organisation (OAED), with help from the University of Piraeus, conducts surveys (mostly regional) on the balance of demand and supply of occupations[12]. Furthermore, mention should be made of a number of studies and research projects, conducted within the frame of the Operational Programme "Education and Initial Vocational Training" (EPEAEK), aimed at assessing the employment prospects of university graduates. Finally, a major employer survey is currently being conducted by the Ministry of Labour. When available, the results are expected to be utilised in the design of new continuing training courses for the unemployed.

Recently, another employer survey has been conducted by the Federation of Greek Industries (FGI), which is the main employers' association in Greece[13]. This survey has been based on 123 industrial firms, the relative majority of them being large firms, at least by Greek standards (i.e. employing more than 250 persons). Among the various interesting findings of the survey, mention should be made of the following:

- 92% of the firms interviewed stated that they are planning to recruit university graduates with technological skills over the next five-year period. The corresponding percentage for secondary education workers was at lower levels (72%).
- 87% of the firms stated that they intend to train their newly recruited university graduates in various technological fields. Again, the corresponding percentage for secondary education technicians, etc, was lower (60%).
- Finally, an impressive proportion of the firms in the sample (62%) stated that they experience difficulties in finding staff with university degrees in technological subjects. Furthermore, 53% stated that similar difficulties are encountered in the case of secondary education technicians and technical assistants.

In brief, attempts to collect information on skills gaps are numerous, yet fragmented. Most of these attempts rely on trend projections or on employer surveys. Some have tried to combine both approaches, which is understandable, given that the very small size of Greek enterprises precludes the realistic identification of training needs. Reconciling the results of the various studies and research surveys is not an easy task, because studies and surveys rely on different methodologies, while they often arrive at contradictory conclusions. By bringing them together however, one is able to isolate common findings and points of convergence. In this respect, the following trends are particularly noticeable:

First, there appears to be a serious shortage of ICT professionals and technicians currently in Greece. The demand for ICT professionals (possessing a university degree) is higher than the demand for technicians and it involves mainly the following types of skills: communications network design, web developers and e-commerce, software and applications development, data communication engineering and technical support[14].

Second, demand is growing for mechanical, electrical and chemical engi-

9 Extensive public sector recruitment has in the past acted as a means of reducing unemployment. This however introduced various distortions, including a strong social demand for public sector employment and a skewing of the educational preferences of young people towards the public sector.

10 See, Centre of Planning and Economic Research (1996), Priorities for Training and Retraining in the Greater Athens Area and in Thessaloniki, Athens (in Greek).

11 See, National Employment Observatory (1998), Identification of labour market continuous training needs for the unemployed for the period 1998-1999, Athens (in Greek)

12 See, Katsanevas, Th. (1998), Labour Market Prospects in Greece concerning the balance of supply and demand of professions: Research project under the auspices of the University of Piraeus and the Manpower Employment Organization, Papazisis, Athens (in Greek).

13 Results are assessable at the following address: http://www.fgi.org.gr/tipos/27072000b.htm

14 Given the relative distance separating Greece from the other EU member states in the use of ICTs, we would estimate the current deficit in ICT professionals and technicians to lie in the area of 30,000 to 50,000 workers. This is a crude estimate, meant only to illustrate the amount of effort that Greece will have to make in order to converge towards European norms. For comparative data on ICT penetration, see Commission of the European Communities (2001), Benchmarking Report, following-up the "Strategies for Jobs in the Information Society", SEC (2001) 222.

neers as well as for experts in electronics. In general, there is currently a strong demand for workers with university level technological qualifications. This type of demand appears to be only partially covered by supply. Demand is also growing for business administrators, project managers, marketing experts and financial analysts. Supply in these qualifications and skills appears to keep up with demand, but any further growth of demand above its current levels, will probably be met by inadequate supply.

Third, there is a clear oversupply of university graduates with degrees in the fields of science and humanities. Teachers, be it language or science teachers (for both elementary and secondary schools), political scientists, historians, sociologists, psychologists, etc, all face diminishing demand due to the drastic decline of public sector employment.

Fourth, there is unmet need for a great number of technical professions and job profiles requiring vocational education and training at the secondary level. At this level of analysis it cannot be determined whether this unmet demand is frictional, or structural. If it is structural, then the reasons behind inadequate supply of skills, might be found in the low take-up of secondary vocational education and training in general, and in the outdated character of the curricula employed for the needs of training in particular.

To sum-up the review of a number of studies and research surveys revealed a rather serious shortage in ICT professionals and technicians and demonstrated the need to re-orient the education and training systems towards the needs of the labour market, giving some support to the hypothesis that a part of the current unemployment experienced, is structural in character.

Policies to tackle skill shortages

Generally there is no indication that studies on skills gaps are taking into account in the design of educational or training courses, except in the area of continuing training.

Continuing training courses for both the unemployed and the employed are provided by the Ministry of Labour. Although a full-scale evaluation study of these courses does not exist, it is questionable whether this form of training (i.e. job specific and short-term) can address the skills gaps presented above. There is currently a need to retrain university graduates as well as a need to provide secondary education graduates with vocational skills. These needs require longer-term learning in either continuing education or initial vocational training environments, combining preferably learning in the classroom with some on-the-job learning.

Currently, tertiary education is expanding in Greece[15]. During 1999-2000, 35 new university departments have been formed, bringing the total number of departments to 226. Most of the new departments are expected to start their operation during the current academic year (2000-2001). There are also currently 213 postgraduate programmes, the vast majority of which are new, having operated for the first time during 1998-1999. Examining the structure of the new university departments and postgraduate programmes in the light of skills gaps, leaves much to be desired. ICT related new university departments for example, are estimated at 5.7% of the total (in comparison with new university departments in the field of theoretical studies which account for 17.1% of the total). Similarly, only 3.5% of the new postgraduate programmes provide ICT related degrees, compared with 21.4% which is the equivalent proportion for new programmes in theoretical studies.

Furthermore, the number of university places available by degree or subject is regulated each year by the Ministry of Education. Given that in the recent past, the public sector has been almost the sole employer of university graduates from a number of fields and that this is no longer the case, one would expect available places in these fields to decrease. Evidence however points to the opposite direction. In short, education planning appears to be, partly at least, unaware of skills gaps and labour market needs.

Finally, there are no indications that labour market information is considered in the design of vocational education courses at the secondary level. Currently, this sector is undergoing a complete restructuring, following the educational reform of 1998-1999. It remains to be seen whether this restructuring will lead to a modern system, responsive to labour market needs, offering good quality education and employment prospects to students[16].

It is possible that specific organisational features of the Greek education and training system discourage the use of labour market information in the design of curricula and of training places. General education, vocational education and initial training (all provided by the Ministry of Education), are organised in distinct and mutually isolated pathways. These pathways, exist side by side with continuing training, on-the-job training and active labour market programmes, again being kept separately and governed by the Ministry of Labour and the Manpower Employment Organisation (OAED).

It is also possible that the issue of skill shortages is not taken into account by educational and training planners, because the relevant information is not collected, analysed and disseminated by a single agency on a permanent basis. From this point of view, the development of a permanent system of forecasting the occupational structure of employment merits high priority. Such a system could provide information on the current state of affairs as regards occupations in the labour market and estimate future developments, as well as assess the impact of proposed measures on the volume and structure of employment. Finally, such a system could provide guidelines for

15 See, Economou, D. et all (2000), Study on the Mapping of the University Graduates, University of Thessaly (in Greek).

16 Indicative of the low degree of correspondence between vocational education and the labour market are the findings of the Observatory of Transitions to the Labour Market, which is organized as part of the Pedagogical Institute (Ministry of Education). Research among older graduates of vocational education (the sample consisted of 5,000 graduates of the school year 1988-89) revealed that although most of them are currently in employment (ranging from 75% to 94%, depending on type of school, etc), only few (12,1%-36,7%) work in jobs for which they were trained.
See: http://www.pi-schools.gr/greek/organisation/tomeas-sep/project/index.htm

policy formulation in the fields of education, vocational guidance, training, job placement and job creation.

Conclusions

The object of this paper has been to provide an analysis of the situation as regards labour shortages and skills gaps in Greece. The analysis has been limited by the quality of the existing labour market information as well as by the lack of readily available information on a number of key areas (vacancies, job turn over data, earnings and employment projections). Nevertheless, the review of existing data sources and research findings has highlighted a number of points, including the following:

- The notion of labour shortages and skills gaps is generally absent from discussions on employment policy in Greece. This is probably because the institutional setting surrounding the labour market in Greece "hides" existing skills gaps and discourages the take-up of measures aimed at combating them.
- Modest employment growth in the 1990s, combined with rising female labour force participation rates, have resulted in a record-level unemployment rate of 11.7% in 1999 (EU15 9.2%). Furthermore, Greece exhibits high rates of youth unemployment (12.4% in relation to 8.4% for EU15) and high rates of long-term unemployment (6.5% in relation to 4.3% for EU15).
- Although employment projections are not available, there are some indications according to which Greece is unlikely to face tight labour market conditions, except in the case of prime age and older men. The labour supply reserves of young people and of women appear to be too large to be diminished under likely future developments.
- Supply-side approaches to the unemployment problem are very popular and frequently put forward in discussions, both academic and political. It is argued that a large part of unemployment is structural, in the sense that the unemployed lack the skills in demand by the employers and that action should be taken to better adjust the educational and training systems to the needs of the labour market.
- Partly for historical reasons, the Greek educational system never developed strong links with the labour market. Vocational education at the secondary level is perceived to be associated to low social status and is badly organised. Initial and continuing training systems have only recently started to develop, mainly thanks to EU resources. Furthermore, upper secondary general education and university education are still geared towards the needs of public sector employment, in spite of the fact that public sector employment is declining.
- Educational attainment is low, as the general picture is dominated by older cohorts with low educational credentials. Nevertheless young people, and especially young girls, have made a lot of progress in attaining higher education levels and as a result the relative gap between Greece and the EU is closing fast.
- The variation of the unemployment rate according to educational level revealed various structural imbalances. In general, tertiary and indeed university education reduces the risk of unemployment. Partly under the influence of a strong supply of highly educated young persons, sectors with higher than average educational requirements are growing in size. Slow overall employment growth however constitutes a pressing problem.
- Recent attempts to collect information on skills gaps are numerous and tend to cover the whole spectrum of education and training. Some rely on employer surveys, some on trend projections and some on a combination of these two methods.
- According to evidence provided by existing studies and research findings there is a serious shortage of ICT professionals and technicians currently in Greece. Furthermore, demand outweighs supply in a number of technological occupations requiring university education. In contrast, there is a clear oversupply of university graduates with degrees from the fields of science and of humanities. These persons face diminishing demand due to the drastic decline of public sector employment.
- At the secondary level there is also an over supply of general education graduates. Employment prospects here are poor, as the demand for administrative workers is declining. The existing vocational education system appears to be incapable of providing students with skills that are in demand by employers.
- The results of studies and of research projects on skills gaps are taken into account in the design of continuing training courses. However, continuing training (i.e. job specific and short term) cannot adequately address the gaps recorded by studies. More specifically, continuing training cannot act as a substitute for vocational education or for initial (basic) training.
- Labour market information and the emergence of skills gaps appear to have left educational planners unaffected. The structure of the new university departments that were formed following the 1998-99 educational reform resembles the structure of the old ones. Furthermore, a sizeable proportion of the newly created postgraduate programmes offer degrees in traditional fields facing low and diminishing demand.
- Certain organisational features of the Greek education and training system, namely shared responsibility among various Ministries and agencies, and the lack of collaboration, might explain the absence of initiatives specifically aimed at addressing existing skills gaps. In this respect, the development of adequate vocational guidance services could turn out to be decisive. Also, the development of a permanent labour market observatory providing, among other

things, timely information on current and future trends in the demand and supply of occupations could be of help.

Finally in the face of the evidence presented in this paper, we would strongly recommend the development of an action plan for ICT. Given the distance currently separating Greece from the other EU member states in ICT use and the need for the Greek economy to converge towards the European norms, the development of such an action plan would merit priority.

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Ireland

Introduction

An appropriate starting point to this report is a brief review of the overall economic and employment trends in Ireland during recent decades. This provides a useful setting for the later exploration of labour and skill shortages, as these changes have been significant.

During the 1980s, output growth was very low in Ireland. The rate of increase in GNP averaged just over 2% annually when measured in real terms (see Table 1). The global downturn which began in the early part of this decade hit Ireland particularly hard, not only in its intensity, but also in terms of its duration. The Irish economy continued to languish in recession well into the second half of the 1980s, long after other Western economies had recovered and had begun to achieve some employment expansion.[1] This created a sharp divergence in labour market conditions between Ireland and other EU countries, particularly the United Kingdom, resulting in the resumption of emigration on a significant scale. Even though economic conditions began to improve towards the end of the decade, the level of employment in 1990 was much the same as that in 1980 when the downturn began (see Table 2). Even allowing for the easing of labour supply pressures through emigration, the unemployment rate rose from 7.3 to over 13% over the same period.

By the end of the 1980s, a range of developments had occurred which had the potential to transform the Irish economy. Foremost among these were a) steps to correct the national finances; and, b) the negotiation with the social partners of a series of moderate national wage agreements. The former (which involved significant cuts in public expenditure) had the effect of boosting confidence in the economy, while the latter enhanced competitiveness and improved industrial relations. At the same time, the benefits of the longstanding policy of investing in education (especially third level technical education) were finally beginning to materialise. In addition, the international economic environment also began to improve, most specifically through the global fall in interest rates.

With the onset of a further global recession in the early 1990s while real GNP growth remained sluggish there were encouraging signs of some employment expansion in Ireland. For example, the total number of persons at work increased by about 7,000 per year on average between 1990 and 1993. However, the rate of expansion in the labour force was far greater, the end result being a rise in the unemployment rate to 16% by Spring 1993.

The period since 1993 has been unprecedented in terms of both output and jobs growth. Over the seven years between 1993 and 2000 national output has

1 The main reasons reason for this were the fiscal and financial policies followed in the late 1970s and the early 1980s, which left he country with a huge overhang of foreign debt.

increased by an average of almost 8% each year, while employment growth has averaged over 5%. When viewed in absolute terms, the latter represents a net annual rise of some 70,000 - a level of unprecedented job creation. This is equivalent to nearly half a million net new jobs over this period. By Spring 2000 the unemployment rate had fallen to 4.3% and is currently (March 2001) as low as 3.6%, though further falls are unlikely as unemployment is increasingly frictional in nature.

Sectoral trends

Table 3 charts the employment changes by sector within the Irish economy over the past decade. They illustrate the reliance upon the service sector for job creation in the early 1990s as employment in manufacturing and construction was still falling. However, from 1993 onwards, substantial job gains have emerged across a wide spectrum of economic activities. Manufacturing employment began to increase, rising by between 9,000 and 10,000 per year on average in the period up to 2000. Employment in building and construction rose at a somewhat faster rate (14,000 per year) while the pace of job growth in services accelerated to unprecedented levels, reaching nearly 50,000 per year on average over this period. Even the longstanding decline in agricultural employment slowed noticeably during this period. Table 4 gives a more detailed industrial sub-division of employment over the more recent period between 1997 and 2000. These figures show that in manufacturing, all of the increases in recent years are attributable to the high technology sector, such as the manufacture of computer products, engineering, instrumentation and chemicals. On the other hand, employment expansion in the more traditional manufacturing areas such as clothing, textiles and the manufacture of food was limited over the same period. Whilst employment in building and construction rose by just over 50%, the most spectacular employment increases occurred in services, especially in financial and business services and in transport and communications with nearly 60% increase in the numbers of people at work.

Table 1. Ireland. Output and Employment Growth, 1980- 2000, with Forecasts for 2005.

Period	Real GNP	Employment	
		(Annual Average Rates of	% Change)
1980-1990	2.1	-	(-)
1990-1993	2.0	0.6	(7,000)
1993-2000	7.9	5.1	(70,000)
2000-2005	5.1	2.1	(34,000)

Sources: (a) CSO National Accounts Publications
(b) Annual series of CSO Labour Force Surveys
(c) ESRI Medium Term Review, 1999-2005.

Table 2. Ireland. Total Employment and Unemployment, 1980-2000 with Forecasts for 2005

Year	Employment			Unemployment
	Males	Females	Total	Rate %
		(000)		(%)
1980	830	326	1156	7.3
1990	761	398	1159	13.2
1993	749	432	1181	15.7
2000	990	681	1671	4.3
2005	-	-	1839	3.5

Sources. As in Table 1
Note: The employment data (except for 1980) are defined according to ILO concepts.

Table 3. Ireland. Employment by Sector, 1990-2005.

Sector	1990	1993	1997	2000	2005	Net Changes 1990/1993	1993/2000	2000/2005
			(000)			Annual Averages (000)		
Agriculture	174	148	142	131	106	-8.7	-2.4	-5.0
Manufacturing	248	243	289	310	320	-1.7	9.6	2.0
Construction	77	71	110	166	174	-2.0	13.6	1.6
Services	658	718	839	1064	1239	20.0	49.4	35.0
Total	**1159**	**1181**	**1380**	**1671**	**1839**	**7.3**	**69.7**	**33.6**

Sources. (a) CSO Series of Labour Force Surveys and Quarterly National Household Surveys. (b) ESRI Medium-Term Review, 1999-2005.

Table 4. Ireland. Employment by Detailed Sector, 1997-2000.

Sector	1997	2000	Change 1997-2000	
	(000)		(000)	%
Agriculture	142	131	-11	-7.7
Manufacturing – High Technology	127	144	17	13.4
Manufacturing - Other	162	166	4	2.5
Construction	110	166	56	50.9
Public Administration and Defence	72	78	6	8.3
Education and Health	213	235	22	10.3
Wholesale and Retail Trade	193	236	43	22.3
Hotel and Restaurants	76	109	33	43.4
Transport and Communications	65	101	36	55.4
Financial and Other Business Services	135	212	77	57.0
Other Market Services	85	93	8	9.4
Total	**1380**	**1671**	**291**	**21.1**

Sources. CSO. Labour Force Survey, 1997.
CSO. Quarterly National Household Survey, 2nd Quarter 2000.

Emerging labour shortages

It is hardly surprising that in the light of this rate of employment expansion concerns relating to skills shortages eventually began to surface. Initially these concerns were viewed with a degree of circumspection as this is an area which is prone to exaggeration. At the beginning of the recent upturn, it was considered that an adequate 'labour supply reserve' existed that could be drawn down to meet the demand for additional workers. In particular the large body of emigrants who were working abroad was considered to be an important reservoir of skilled labour. Evidence from earlier periods indicated that many emigrant workers returned 'home' if there are employment opportunities in the domestic labour market.

However, with the continuation of strong economic growth, it became clear that the labour market was becoming increasingly tight. From the mid-1990s onwards unemployment began to fall rapidly and labour force participation began to increase more rapidly not only for women, but also, after several years of decline, for men as well. The rate of female labour force participation rose from just under 40% in 1995 to 47.2% in 2000: over the same period the male rate increased from 68 to 71%.

Wages also began to rise as demonstrated in Figure 1, which shows real hourly earnings trends for manual workers in industry and skilled building workers. For the latter, the boom in the construction sector gave rise to severe shortages from 1996 on and wage costs began to escalate. The earnings of skilled building workers rose by more than 40% in real terms between 1993 and 2000. For industrial workers, while real earnings began to rise after the mid-1990s, due to the global competitive pressures in his sector the corresponding upward trend (about 12%) was much smaller and more gradual.

More importantly, information on vacancies began to signal a clear increase in the levels of unfilled posts in private

Figure 1. Indexes of Real Hourly Earnings for Manual Industrial and Skilled Building Workers (March 1993=100)

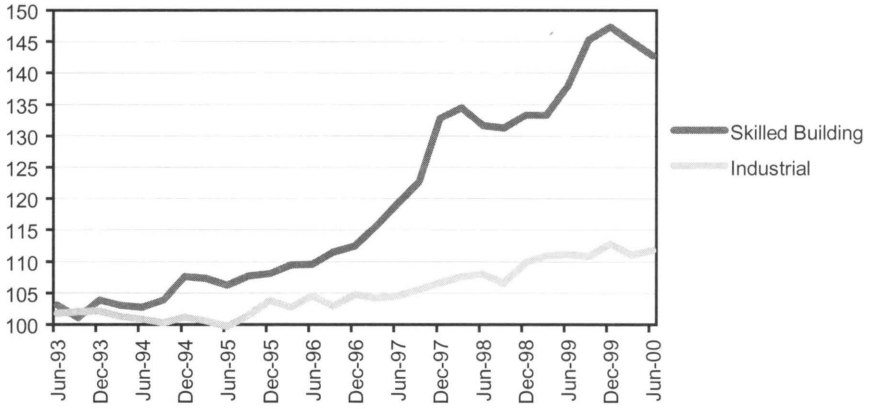

Table 5. Summary of National Private Sector Vacancies Surveys, 1990-1999

Agency Responsible	Year	Percentage of Firms having Vacancies[a] %	Vacancy Rate in All Sectors[b] %	Vacancy Rate in Manufacturing %
FÁS	1990	10.1	2.6	n.a.
FÁS	1991	7.0	1.1	1.6
FÁS	1996	36.0	2.0	1.9
ESRI/Forfás	1997	33.3	5.1	4.2
FAS/ESRI/Forfas	1998	27.0	5.8	5.5
FAS/ESRI/Forfas	1999	31.2	6.4	4.5

Note:
(a) The results for "all sectors" are not fully comparable in the earlier years because of differences in coverage and sampling methods.
(b) FAS is National Employment and Training Authority.
(c) Forfas is a co-ordinating body for various State development agencies.

sector companies. According to Table 5[3], just over 10% of private sector firms had vacancies in 1990 which decreased to 7% in 1991. In turn these yielded vacancy rates of 2.6% and 1.1% respectively. By 1999, following the years of sustained economic growth described above, the vacancy rate had increased to 6.4%, six times that which prevailed in 1991 and which resulted in nearly one third of firms recording vacancies.

Viewing the vacancy data from the perspective of occupations (as in Table 6) shows the highest vacancy rates to for professional workers and technicians engaged in computer activities (15%), with the next highest in engineering and science professionals and technicians, and also security personnel (11% for each activity).

Thus, skill shortages are noticeably more acute for occupations requiring technical skills and qualifications compared to those of less skilled occupations (5.5% for clerical work).

However, when considered in terms of the actual numbers of vacancies involved some occupations with high vacancy rates assume less importance. For example, qualified computer staff, with a vacancy rate of about 15% account for only 5% of all vacancies, whereas clerical staff, sales personnel and those in

2 The detail in Table 4 has to be restricted to the 1997-2000 period in order to ensure consistency in the data over time. The Irish Central Statistics Office carried out a fundamental re-organisation of its Labour Force Survey series in 1997 which is now conducted on a quarterly basis. An essential part of this re-organisation involved the replacement of long-standing national sectoral and occupational classifications by systems which are more in accordance with international norms (including NACE).

3 In this table, Vacancies were defined as unmet demand for labour, where the positions were currently unoccupied, available immediately and where the firm was actively searching for workers. The "vacancy rate" is defined as the number of vacancies divided by total employees plus the number of vacancies.

personal services, while the vacancy rates may be lower, account for some 20,000 vacancies, nearly 40% of the overall total of 54,000. Similarly, vacancies for skilled and semi-skilled manual work (comprising craft manual workers and production operatives) numbered 16,500, or 30% of all vacancies.

Interestingly, employers believed that there were shortcomings in the characteristics of job applicants, rather than problems with the jobs they were offering.[4]. A range of short-term and medium-term non-pay strategies were adopted to try and increase the supply of workers. These included hiring part-time or contract staff and considering a wider range of people for the jobs available. Medium-term strategies ranged from retraining existing staff to developing links with schools and colleges.

The figure quoted above are reflective of the several years of strong and sustained economic growth which extended across virtually every sector of the Irish economy. While the results certainly highlight shortages in certain high-skill areas, these have to be viewed in a wider context of general labour shortages. Naturally, it is important that policy responses address these general as well as specific shortages, though one has to appreciate the additional strategic importance of the latter, as they can cause wider impediments across the economy generally.

Table 6. Numbers of Employees, Vacancies and Vacancy Rates by Occupation, 1998.

Occupation	Employees	Vacancies	Vacancy Rate (%)	Share of all Vacancies (%)
Managers/Proprietors	114,300	2,400	2.1	4.5
Engineering & Science Professionals	16,600	1,900	10.3	3.6
Computer Professionals	9,200	1,600	14.8	3.0
Other Professionals	24,200	800	3.2	1.5
Engineering & Science Technicians	18,100	2,200	10.8	4.1
Computer Staff (Technician Level)	7,300	1,200	14.1	2.2
Other Associate Professionals	28,300	200	0.7	0.4
Clerical	117,500	6,800	5.5	12.6
Skilled Maintenance & Production	82,200	8,100	9.0	15.0
Production Operatives	151,900	8,300	5.2	15.4
Transport & Communications	59,700	3,100	4.9	5.8
Sales	116,600	8,300	6.6	15.4
Security	8,300	1,000	10.8	1.9
Personal Service	58,000	4,900	7.8	9.1
Labourers	57,100	3,000	5.0	5.6
Total	869,300	53,700	5.8	100.0

Source. Williams J and Hughes G (1999). National Survey of Vacancies in the Non-Agricultural Private Sector 1998. *FAS/ESRI/Forfas, 1999, Dublin*

Specific policy responses

The emergence of policy responses began in 1997 when the Government established a "Business and Education Training Partnership" to assist in the development of national strategies to tackle skill and manpower needs, and education and training for business. The Partnership involves three distinct components:

- a Business Education and Training Partnership Forum;
- an Expert Group on Future Skill Needs; and
- a Management Implementation Group

The first body (referred to as the Forum) involves representatives of the social partners, education and training organisations, government departments and the industrial development agencies. Its main function is to point to broad areas of concern that can be the subject of further study. The aim of the Skills Needs Group is to identify the changing pattern of skill needs for different sectors, and to advise on the actions needed to address them. The Group also has responsibility for developing techniques that will assist in anticipating future skill requirements across different areas of the economy. It also advises on improving the awareness of job seekers of sectors and occupations where the demands for skills are increasing, and of the qualifications required and how they can be obtained. The Expert Group has thus far produced two reports, the main conclusions of which are discussed below.

The role of the Management Implementation Group is to consider proposals from the Expert Group and the Forum, and to work to implement appropriate proposals as quickly as possible. This group involves senior civil servants from the appropriate Ministries and executives from the Higher Education Authority (HEA) and the State Development Agency (Forfás).

The first report of the Expert Group on Future Skill Needs, published in December 1998, focused on the Information Technology (IT) sector. This led to a significant investment by Government in the form of some 5,500 additional places in third level colleges, as well as extra places on relevant FAS training programmes. Support was given to enable the provision of 1,500 further places on post-graduate conversion courses in ITC related areas, and the existing Accelerated Technician Programmes (ATPs) were expanded to include over 1,000 students enrolled on relevant IT courses in Institutes of Technology[5].

The scope of the second report of the Expert Group was much wider, in order to respond to the prevailing view that staff shortages extended well beyond specific technical competencies. The report focused upon four sectors with labour and skill shortages that were particularly important to the national economy:[6]

4 Almost half of the firms which had difficulties in filling vacancies in 1998 said that the main reason was a shortage of applicants with the right practical skills or the right experience, while less than one-tenth cited unattractive conditions of employment (source and reference)

5 ATPs were introduced in 1998 as highly focussed programmes of study aimed the less skilled employees already working in companies experiencing technician shortages.

- the main craft areas of the construction industry;
- chemical and biological sciences at third level ;
- researchers; and
- information technology.

All four sectors required some form of longer-term strategic planning within the educational and training systems to provide workers with the necessary qualifications.

With regard to the construction industry, the report recommended that the Business Education and Training Partnership and the Construction Industry Federation should jointly seek to increase their efforts to attract suitably qualified persons from other countries to Ireland. The report also recommended the exploration of routes to formal craft qualifications for experienced but unqualified general workers (an area with a historical reputation for inflexibility in this regard). It was also recommended that FAS should encourage employers to increase the number of sponsored apprentices in skill shortage areas within the industry.

The report recommended additional places at degree level in third level institutions for chemical and biological sciences and that the relevant ATP should be extended to cater for a further 300 science technician students. The need to promote the take-up of science subjects in second and third level institutions was also recognised, given the recent decline in the numbers studying these subjects.

Recommendations for post graduate and postdoctoral researchers were driven by the major new third level research programmes being put in place by the Government in order to develop and sustain a knowledge driven economy. There had been a recent levelling off of students registering for higher degrees, which is partly explained by the current buoyancy of the labour market, offering attractive employment opportunities to graduating students, who would be potential candidates for higher degree courses. Thus a cornerstone of the recommendations was a "science, technology and innovation awareness" campaign in order to promote research as a career. Other suggestions related to the need to develop and implement strategies to attract post-graduate students in appropriate disciplines from abroad, but only as a short-term measure. A central database on higher education research activities for all third level colleges was also recommended.

More general policy measures

The Irish Government has also pursued other avenues in alleviating the labour supply problem. The tax imposition on couples when both partners are working has been reduced, with a view to raising labour force participation. Childcare supports have been introduced and further initiatives in this area are expected. A Family Income Supplement for low paid workers has existed for some years and this has been adapted on a number of occasions in order to enhance the attractiveness of work as against remaining on benefits. In addition, the preventive measures introduced under the National Employment Action Plan have increased the Public Employment Service's provision of job search assistance to the unemployed and their referral to appropriate training programmes. This has helped to reduce the average duration of unemployment. Finally, and most controversially, the Government has been promoting the inward migration of former emigrants and non-nationals as a means of easing the labour supply position. Table 7 shows that the annual gross population inflow rose from an estimated 27,000 in 1989 to about 45,000 in the late 1990s. Whilst in the past, most immigrants were returning Irish who had previously emigrated, in recent years an increasing majority of in-migrants have been non-nationals, both from inside and outside the European Union.

The Government initiatives in this area have taken two forms:

(a) the holding of "Jobs Fairs" in other countries (both EU and non-EU) in order to promote employment opportunities in Ireland; and

(b) easing the restrictions related to the issuing of Work Permits for non-EU nationals.[7] Previously, those who entered Ireland under the work permit system were skilled personnel, such as those coming to work in multi-national enterprises, so that in 1999 the annual number of in-migrants via this route totalled just over 6,000. However, in 2000, the total rose to 18,000, a threefold increase in twelve months.

While these workers came from a wide variety of countries, a significant number (nearly 40%) were from Eastern Europe. Furthermore, most of those now entering are being recruited by employers to fill semi-skilled and unskilled vacancies.

The medium-term outlook

As illustrated in Table 1, the most recent ESRI *Medium-Term Review* (published in October 1999) expects annual average real GNP growth in Ireland to be about 5% between 2000 and 2005. This should in turn lead to an expansion of just over 2% each year in total employment. This equates to an average annual increase in the number of people employed of some 34,000 (net). These growth rates are significantly less than in recent years but this is felt as being necessary in order to consolidate recent gains, and to allow scope to upgrade and extend the economic and physical infrastructure. It is now widely accepted that the latter, in its various forms, is stretched beyond the limits of capacity.

Table 7. Gross and Net Migration Flows, 1989-2000.

Year (ending April)	Outward	Inward	Net (000)
1989	70.6	26.7	-43.9
1990	56.3	33.3	-22.9
1991	35.3	33.3	-2.0
1992	33.4	40.7	+7.4
1993	35.1	34.7	-0.4
1994	34.8	30.1	-4.7
1995	33.1	31.2	-1.9
1996	31.2	39.2	+8.0
1997	29.0	44.0	+15.0
1998	21.2	44.0	+22.8
1999	29.0	47.5	+18.5
2000	22.3	42.3	+20.0

Source. CSO (2000). Population and Migration Estimates, April 2000.

6 The report did recognise that skill shortages were emerging in other areas and indicated its intention to broaden the scope of its investigation in further reports.

7 Under this system the initiative must be taken by the employer to obtain the Work Permit prior to entry of the prospective employee into the State.

In terms of sectors, Table 3 indicates that job gains in manufacturing are expected to be much less in the period up to 2005. This will arise not only from a deceleration in the hi-technology sector, but also from actual reductions in employment in more traditional areas. This is the result of a somewhat less favourable international economic environment and the fact that the proceeds of economic growth have now been taken as increased earnings rather than employment expansion. Thus reducing competitiveness.

Employment in building and construction is expected to rise slowly as the sector reaches the point where it is sufficient to meet ongoing demand.[8] In contrast, employment growth in the services will continue to be buoyant, with a net increase of 175,000 (or some 16%) anticipated for the period between 2000 and 2005. While this increase will relate mainly to market services, it also encompasses modest expansion in public services, both of which signal a significant shift towards service employment in the Irish economy, and brings it in line with other economies at broadly similar stages of development.

The data in Table 8 indicates how these above forecasts are likely to translate into occupational changes over the next five years. Even though employment expansion will be noticeably slower than in recent years, significant increases are expected for some occupations, most notably: professionals (+23%); associate professional (or technician) activities (+14%); managers (+12%) and, also, semi-skilled service functions relating to sales (+21%), transport and communications (+15%) and personal services (+17%). These contrast with growth in other sectors, such as skilled manual workers (+4%), production operatives (+8%) and unskilled labourers (+1).

Concluding comments

The foregoing analysis has traced the progress of the Irish economy over the past decade, with particular reference to assessing the labour supply position. The rapid growth of recent years has given rise to a scarcity of labour, which has led to some acute skill shortages, especially in certain scientific and technical occupations. While the policy approaches which have been put in place to address this are justified, the medium-term expectations for the Irish economy indicate a moderation in growth, which has implications for the speed at which these measures should be pursued. In any event, the disturbing economic signals emanating from some larger countries in the global economy, suggests the increased likelihood of an economic slowdown, sooner rather than later.

Table 8. Forecast Trends in Occupational Change, 2000-2005.

Occupation	% Change in Employment 2000-2005
Agricultural	-11
Managers	12
Professional Occupations	23
Associate Professionals	14
Clerical Occupations	8
Skilled Manual workers	4
Production operatives	8
Transport/Communication	15
Sales workers	21
Security workers	14
Personal service workers	17
Labourers	1
Total	**11**

Source. Sexton, Hughes, McCormick, Finn (2001). Estimating Labour Force Flows, Job Openings and Human Resource Requirements, 1990-2005. *FAS/ ESRI Manpower Forecasting Studies, Report No.9. Dublin.*

Given these sets of economic conditions, the need for consolidation and steady but moderate growth, rather than rapid expansion, would seem to be the most prudent course of action for Irish economic policy makers. The primary objective now is to preserve what has been achieved and avoid an abrupt deceleration in growth rates. Furthermore, as the recent anxiety over labour shortages should ease in due course (as labour supply and demand move more into balance), the scaling down of measures to tackle this, particularly for those in less skilled occupations, would seem appropriate.

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8 This contrasts sharply to previous historical regimes where boom conditions in this sector were often followed by falling output and sharp decreases in employment.

Italy

Description of the sources and analysis of the phenomenon

Introduction

In Italy the phenomenon of labour shortages, which has always existed in the North, has recently intensified as a result of the exceptional growth of employment. The definition of the phenomenon as a "shortage of labour (excess demand) at current wages" is widely accepted at the scientific level, although the discussions on the subject matter have not particularly intrigued academics, perhaps partly due to the its limited practical consequences, given the lack of a scientific methodology for gathering the relevant data.

We are only recently beginning to have survey results that enable us to quantify labour shortages and the attendant skills gaps in the various professional environments in a sufficiently reliable and comprehensive manner. Business leaders and associations, who cannot find the workforce they need, have repeatedly asked for an increase in the legal immigration quotas. The socio-political debate has often revolved around these complaints, provoking public discussions regarding the real weight to be given to, and the interpretation to be provided for, a rise in unemployment in the context of an unsatisfied demand for labour.

The co-existence of labour shortages and high unemployment rates can derive from several factors:

a. marked territorial differences;
b. shortage or low specialisation in the work force for some professions or qualified occupations;
c. limited disposition towards unskilled, inconvenient or humble occupations;
d. ineffectiveness of the allocation mechanisms.

In this paper we will try to isolate these various aspects, indicating in each case the availability or shortage of appropriate indicators.

Available sources

An obvious source for the assessment of labour shortages could be the recently reformed Public Employment Services (PES). Unfortunately, in Italy the reform continues to meet with substantial difficulties; with a few isolated exceptions, the services are still unable to perform their new functions and to provide a reliable and updated data flow.

In the age of multimedia, the meeting point between labour demand and supply could even do without a physical space, but the Labour Information System currently being introduced is not yet operational. The situation has a negative impact on the availability of organised information regarding all aspects of the labour market. If anything, in the case of labour shortages the lack of administrative data can be said to be one of the very causes of the phenomenon itself: indeed the inadequacy of data reflects a poor functioning of the organisations assigned to the management of the labour market.

Some surveys try to make up for the lack of administrative statistics. The Excelsior survey, performed by Unioncamere on behalf of the Ministry of Labour, has been available for some years on a large sample of private enterprises in the non-agricultural sector. The primary objective of the survey is not to quantify labour shortages directly but rather to estimate, based on a questionnaire filled in by businesses, the future demand for labour by occupations.

The survey also contains a question aimed at determining the difficulties in hiring the professional profiles required. While the ability of businesses to plan recruitment in the medium term is still debatable, the information we are interested in is fairly reliable. The statements regarding recruitment difficulties can only be based on specific experience and the answers to this question can therefore be used as an indicator of the labour shortage phenomenon.

Currently, this is the only survey that permits a close examination of the issue with a high degree of statistical coverage and with a sufficiently detailed classification by occupation. It will therefore be the preferred source in the following analysis.

In the absence of direct data on job vacancies, another interesting attempt at quantification of labour demand is carried out by ISFOL and CSA (the national business statistics centre) by means of a survey and classification of jobs vacant ads in the daily newspapers, considered as a proxy of the job vacancies available. The survey has the advantage of covering a period of some 20 years. The unit surveyed is the individual advertisement, which almost invariably offers abundant information on the type of work and allows disaggregations by local areas, occupations and sectors.

An obvious limitation to this approach is that it gathers information on only part of the labour demand, i.e. that which appears as a "box" ad in daily newspapers and is consequently highly selective. Thus the larger companies are heavily over-represented and this, in a country like Italy characterised by small- and medium-sized enterprises, is a relevant bias. The small- and medium-sized enterprises tend to resort to personal relations and social networks to meet their labour needs.

A second limitation is given by the occupational selectivity of the ads: the occupations most frequently appearing in print advertisements are those involving sales personnel, at various qualification levels, high turnover occupations, as well as the so called "new occupations", while only recently is there a call for blue-collar workers. These distortions in the ISFOL-CSA survey prompt us not to dwell on it so as to leave room for the more relevant Excelsior survey.

Labour shortage and skills gaps – the evidence

A stylised territorial picture of the labour market in Italy[1]

As has been repeatedly underlined in past editions of the "Employment in Europe" reports, Italy is one of the countries with the largest territorial disparities in terms of the main labour market indicators. These characteristics have intensified with the crisis in the first half of the 90s and with the subsequent recovery: at the moment the unemployment rate in the North is 3.5-5%, which for the male part of the population falls to 2-3%. In the South the average unemployment rate is of 20.2% and even among males it exceeds 15%. This is mirrored by the employment rates, as shown in Table 1. Within these peculiarities there are differences in the age profiles of the work force which should be analysed in greater detail.

Table 2 shows employment and unemployment figures divided by sex and by age in the four regions. In all the regions, unemployment is highest among young people, complementing the general characteristics already identified in each area. As a result, in the North, unemployment among adults has practically disappeared, with a maximum peak of 4% among women falling to 1% among men. In the South, even among adult men, the employment rate remains 5-10 points below that of the North; substantial unemployment phenomena continue to occur.

Table 1: Population aged 15 and over by condition, region and sex - October 2000 (absolute f igures in 000)

	Employed	Searching	Total labour forces	Non labour forces	Total population	Employ-ment rate	Unemploy-ment rate
			MEN				
ITALY	**13.499**	**1.111**	**14.609**	**5.027**	**19.637**	**68,7**	**7,6**
North-West	3.830	119	3.949	1.298	5.246	73,0	3,0
North-	2.788	58	2.846	822	3.668	76,0	2,0
Centre	2.651	151	2.802	948	3.749	70,7	5,4
South	4.230	784	5.013	1.960	6.973	60,7	15,6
			WOMEN				
ITALY	**7.951**	**1.273**	**9.224**	**10.285**	**19.509**	**40,8**	**13,8**
North-West	2.561	210	2.771	2.363	5.133	49,9	7,6
North-	1.916	113	2.029	1.545	3.573	53,6	5,6
Centre	1.676	211	1.887	1.884	3.771	44,4	11,2
South	1.798	739	2.537	4.493	7.030	25,6	29,1
			MEN AND WOMEN				
ITALY	**21.450**	**2.383**	**23.833**	**15.312**	**39.145**	**54,8**	**10,0**
North-West	6.391	328	6.719	3.660	10.380	61,6	4,9
North-	4.704	170	4.875	2.367	7.242	65,0	3,5
Centre	4.327	362	4.689	2.832	7.521	57,5	7,7

Labour shortage and skill specialisation

Detailed information is available from the Exelsior survey on the percentage of companies reporting difficulties in hiring the professional profiles required; from this it is evident that on average approximately a third of the companies report hiring difficulties.

Those reported by companies in the North-East (43% of the cases) are substantially above this average; at the opposite end stand companies in the South, reporting difficulties in only 28.4% of the cases. These figures are effectively consistent with the general state of the labour market at territory level described above. Therefore we feel encouraged to continue the analysis looking in detail at each occupational group.

Highly specialised occupations

It should be said that on the whole these occupations relate to only 4% of the estimated labour demand, so these data are subject to considerable statistical oscil-

Table 2: Population, Employed and Searching for a job, by age, sex and territory - October 2000 (figures in '000)

	Population							Employed							Searching for a job							
	15-19	20-24	25-34	35-44	45-54	55-64	Total 15-64		15-19	20-24	25-34	35-44	45-54	55-64	Total 15-64		15-19	20-24	25-34	35-44	45-54	55-64	Total 15-64
	MEN								MEN								MEN						
ITALY	1,573	1,843	4.600	4 319	3,779	3,267	19,380	ITALY	221	811	3 612	3,971	3 277	1,353	13,244	ITALY	115	263	404	172	93	61	1,109
North-W	344	433	1,236	1,170	1,041	948	5,173	North-W	65	250	1,089	1,126	915	312	3,757	North-W	19	23	44	12	13	8	118
North-E	239	302	875	836	716	644	3 613	North-E	53	191	796	805	632	256	2,733	North-E	9	13	17	11	6	3	58
Centre	273	330	860	836	740	660	3 699	Centre	38	140	686	785	663	289	2,601	Centre	11	33	64	23	10	9	150
South	717	778	1 629	1,476	1,281	1,014	6 896	South	65	231	1,040	1,255	1,067	496	4,154	South	77	195	279	125	65	42	782
	WOMEN								WOMEN								WOMEN						
ITALY	1,499	1,807	4,512	4,272	3,825	3,489	19,404	ITALY	132	617	2,365	2,409	1,773	558	7,854	ITALY	102	299	491	251	98	24	1,265
North-W	327	424	1,179	1,128	1,044	1,004	5 106	North-W	40	220	828	773	527	147	2,536	North-W	20	40	71	43	27	6	207
North-E	227	299	838	795	713	676	3,547	North-E	39	172	614	565	386	114	1,890	North-E	12	18	46	26	8	2	112
Centre	259	323	855	837	764	716	3,752	Centre	19	118	480	512	393	136	1,659	Centre	11	52	85	44	13	5	210
South	686	761	1,640	1,513	1,305	1,094	6,999	South	33	108	443	559	466	160	1,769	South	58	190	289	138	49	12	737
	MEN AND WOMEN								MEN AND WOMEN								MEN AND WOMEN						
ITALY	3.072	3.650	9,112	8,591	7,604	6,755	38,784	ITALY	353	1.429	5,977	6,380	5,049	1,911	21.098	ITALY	218	563	894	423	191	85	2 373
North-W	671	856	2,415	2,298	2,086	1,952	10,279	North-W	106	469	1 917	1,899	1,442	459	6,293	North-W	39	63	114	55	40	14	325
North-E	465	601	1,714	1,631	1,429	1,320	7,159	North-E	92	363	1 410	1,370	1,018	370	4,623	North-E	21	30	63	37	13	5	169
Centre	532	653	1,714	1,672	1 504	1,376	7,451	Centre	57	258	1,167	1,297	1,056	425	4,259	Centre	22	85	150	67	23	13	360
South	1,404	1,539	3,268	2,989	2,586	2,108	13.894	South	98	339	1,483	1,815	1,532	656	5,923	South	135	384	568	264	114	54	1,519

1 The data of the "Employment in Europe 2000" report have proved insufficient to frame the labour shortage phenomenon, particularly in relation to the local area level and to the classification of labour forces by age. Therefore the study has been supplemented with the ISTAT Quarterly Survey on Labour Forces, which is in line with the Eurostat parameters.

lation. The two major groups involve *experts in mathematics, physics and natural sciences*, for which almost 45% of the companies report hiring difficulties, with relatively small differences from one region to another. Easier to hire are professionals in the group of *human sciences experts*: only a third of the companies report difficulties, with even smaller variations among the four territories.

Technical professions and middle management

The largest groups are those of *middle management* and *clerks*. These occupations share two major characteristics:

i. they are on the whole the easiest positions to fill, with less than 20% of firms reporting recruitment difficulties;
ii. there are no significant territorial disparities.

It is a level of difficulty that can be considered residual, i.e. stemming from structural difficulties in matching labour demand and supply not influenced by tensions in the labour market. Therefore, even in the regions in which there is effectively full employment, a good 80% of companies find clerical personnel easily, even at high levels of specialisation.

These figures are not surprising and are consistent with other data. We have already emphasised that even in the North-East, where there is a better employment situation, there is a high level of unemployment among young people, particularly women. These are people aged 20-24, with a clear profile: they have obtained a generic lower or upper secondary education (classical, scientific, teacher training or commercial education) but have failed to continue or complete their education at university level. This group faces significant employability problems, as it is generally not suited to blue-collar types of occupation, but at the same time without a specific qualification that can be used at higher specialisation levels.

In contrast, there are noticeable difficulties in hiring in the area of the non-clerical technical professions in *physics, natural sciences and engineering*. On average 45.3% of the companies find it difficult to hire personnel of this type but, and this is an important fact, the same is true for 37% of the companies in the South. This is almost twice the percentage recorded for clerical personnel. Thus, not even high unemployment rates protect companies from occurrences of labour shortages.

Blue-collar occupations

At the political level, the skills gap debate very much focusses on blue collar workers, with business in the North of the country arguing that they are being affected by a thinning of the skilled blue collar labour force.

The figures are consistent with the debate: hiring blue-collar workers is even harder than hiring technicians. On average, almost half of the businesses have difficulty in finding specialised workers, with peaks exceeding 60% in the North-East, which confirms itself as the most congested area. But again the surprise comes from the South: it is quite counter-intuitive that in an area with such a high average level of unemployment, around 40% of the industrial businesses of any sector (excluding only construction) should find it difficult to hire specialised workers.

If we go on to consider the recruitment of less specialised workers, the problems fall dramatically and remains within the average in all regions, with the exception of the North-East, where a full 44.6% of companies report difficulties in this category as well.

Commercial services, catering and tourist and hotel activities

On the whole, no significant labour shortages are found for this set of workers. In particular:

i. In the *hotels, tourism* and *catering* categories a little less than 30% of the companies report difficulties, with a strong territorial uniformity of results;
ii. In the *Commercial services* the situation is similar, with the exception of the North-East where 40% of the companies report difficulties.

Unskilled workers

This area of the labour market tends to be underestimated, although it can be an important indicator of the state of the demand-supply relationship. In this sector the tensions are not particularly severe: on average, a little over 30% of companies meet with recruitment difficulties, with the downward adjustment in the South where the level falls to 21%, and the usual exception of the North-East where it rises to 46%.

The evolution of labour shortages

The figures discussed above have been taken from a survey which has only begun to monitor the situation in recent years and which is still in an adjustment phase. Thus they do not permit a dynamic analysis of the phenomenon.

The other indicator available to us comes from the ISFOL-CSA survey on the job vacant ads in the daily newspapers mentioned earlier, which have more than doubled in the last five years. A closer examination at occupational level, however, yields contrasting results which are not easy to interpret: as the authors themselves admit in the preface to the report, the analysis of the results is still in an experimental phase and requires further work.

For an evaluation of the recent period we can only refer to indirect indicators. On the other hand, our analysis clearly shows the close relationship between the characteristics of the labour market at territorial level and the occurrence of labour shortages.

In the last 3 years, after a long period of inactivity, a truly exceptional growth in employment has taken place in Italy, with the creation of 1,150,000 vacancies equivalent to an increase of 5% over the initial number. More recently the recovery has also involved the South to a large extent, undoubtedly contributing to worsen the labour shortages we have documented. A more precise empirical confirmation will be possible shortly: the results of the Excelsior survey summarised above relate to the end of 1999, and the results for 2000 will soon be available. Given that it is precisely in this last year that employment growth has been at its strongest, it will be possible to confirm its impact on labour shortages.

Analysis of the Phenomenon

Policy debates

It cannot be said that in Italy the problems of labour shortage represent a fundamental priority for labour policies at central level. The proof is that in the recent report on the monitoring of labour policies produced by the Ministry of Labour, the problem is not even mentioned. The reason is that, as we have seen, labour shortage is of particular relevance in certain territorial areas, while in other areas there are pressing unemployment problems; thus the issue involves more general socio-political elements, affecting the territorial mobility of labour.

In order to understand fully this political attitude it is necessary to examine some of the implications of labour shortages.

Before entering the analysis, it is useful to underline that there have been specific initiatives in the area of mobility promoted by the social partners, or by individual businessmen, who have launched projects of organised mobility in which the company, in some cases with the assistance of the local administrations, takes on the burden of finding and paying for staff accommodation. Faced with the need of finding workers, companies themselves seek ways to increase their public visibility. At the same time, the recently created temporary placement agencies begin to represent a meeting point for labour demand and supply.

As for some of the aspects of the qualitative differences between labour demand and supply within the regions, these involve above all the system of professional training, to a large extent delegated to the regions. The need to bring the training system and the requirements of the labour market closer together has long been discussed. There have been some efforts in this direction, and a certain "operational sensitivity" towards the problem, but we are still lacking the structural elements to connect the training system to the requirements of the productive system.

Determinants of labour shortages

It is now possible to propose an analysis of the mechanisms that determine labour shortages. It is better to begin with the most difficult situation in this respect, that of the North-East. It is well known that this region has structurally high employment rates and a typical productive structure, founded on small- and medium-sized export companies, in the context of very defined area-systems from the socio-productive point of view. The technological level is sufficiently advanced to require skills that rapidly reach saturation point in an expansive phase of the economic cycle, such as the one we are experiencing now.

Companies compete for specialised labour, but in a short period of time find themselves forced to compromise on the degree of qualifications and recruit from lesser qualified workers, taking on the burden of training them. As a result of this, labour shortages also begin to develop among lower skilled workers. In the sectors of *commercial services, tourist and hotel activities, catering, culture and leisure*, on the other hand, while the increase in income and employment creates tensions and difficulties these sectors can resort to the "complementary" labour forces with generic-clerical qualifications which cannot find adequate employment because they outstrip demand even in full employment scenarios. The numerous ranks of young people who have just finished a non-specialised educational programme and who cannot find employment are more prepared to compromise and use such employment as a stepping stone to further their employability while at the same time providing employers with a flexible labour force.

Before delving into how similar mechanisms operate in opposite situations, such as that of the South, it is necessary to consider the way in which the labour shortage phenomenon is intertwined with the problems of territorial labour mobility.

Labour shortage and labour mobility

Why, in the face of such marked territorial differences, does internal mobility remain at such modest levels? The question emphasises the fact that the labour shortage problem is directly and intimately tied to that of territorial mobility.

One of the main factors in the historical decline of internal mobility flows is the structural change in the composition of labour demand: at the root of the great migrations of the 50s and the 60s were the "great blocks" of an industry which was in an intensive expansionist phase; labour demand was not merely a matter of vacancies, rather it had an identity, that of the great industrial companies, each one of them representing a territory. The shifts of labour were equally clear from the building trade to industry, from the small to the large company.

The current labour demand is more anonymous and less easily identifiable, and paths offered are less clear. It is fragmented in a constellation of small industrial companies scattered in each area or region-specific production cycle, or in the myriad of activities of the services sector. It is almost impossible to quantify the new labour demand for a supply that resides many kilometres away, particularly in Italy where there are no effective employment services.

There are even more barriers on the supply side. The increase in average income obviously makes supply more rigid and less prepared to make sacrifices. It could be argued that the income of the unemployed cannot be high, but this is where the Italian unemployment structure comes in: the unemployed, even in the South, are primarily young people looking for a first job who still live at home. Only recently, after the employment problems at the beginning of the 90s, there has emerged in the South a middle-aged unemployed sector, formed by men and women who have not secured a stable position in the labour market. The slight increment in the migratory pattern originates here, even though it is hard to imagine that this process could continue to evolve. On the whole it is a matter of profiles with medium-high education of the generic type and foreign to the industrial culture.

Another element of difference between the current situation and that of the 1950s and 60s is a general characteristic of the labour market. Even where

"real work" is scarce, there is anyway an abundance of "odd jobs" of various types which, integrated with the support of the family, help mitigate the economic hardships of unemployment.

Also to be mentioned are the difficulties in moving, which is particularly expensive in densely populated areas, as well as the cost differentials existing between the North and the South.

Finally, an element that concerns both demand and supply: as illustrated at the beginning, some skills that are scarce in the North-East are even rarer in the South, and even here those who have the skills and the inclination to use them preserve a certain bargaining power in the market. On the other hand, both in the North and the South there are generic skills for which emplyoment opportunities are scarce.

Skills gaps, labour market and the educational system.

As we have tried to show, the labour shortage phenomenon in Italy is tightly connected to the region, even if there is a mismatch between labour demand and supply that has similar characteristics in all the territories. Graph 2 shows that, if the compulsory school is excluded, it is young people with only a secondary upper education who have the greatest difficulty on the labour market.

Better placed are those, particularly the young, who hold a "short diploma" (two or three years more than the compulsory school) having received vocational training. Better placed, although definitely fewer in number, are also those who have attended schools with a technical-industrial orientation. There is therefore a significant gap between the school and the labour market, which professional training rarely succeeds in correcting. At the moment it is hard to say whether the radical reform of the school system that will be implemented in the next few years will have any impact on these distortions. There is a problem of scarce appeal of a professional orientation in school; young people continue to prefer, even when they choose a university career, academic orientations that have little contact with the real opportunities in the current labour market, either through lack of information or, sometimes, because at the time they make their choices these youngsters are guided more by personal inclination than by the real possibilities of realising their expectations in the future.

Conclusions: Labour shortages and labour mobility in the socio-political debate

The phenomenon of labour shortages in Italy, by virtue of its regional connotations, involves not only the labour market but also the country's overall socio-economic landscape. We are unlikely to see in Italy a spontaneous recovery of internal mobility flows: whether and to what extent to promote them is political problem. The Italian situation may appear paradoxical: at the time when the debate on mobility and skills across Europe is developing and when the European Commission asserts the need for policies aimed at removing barriers, Italy faces above all problems of internal barriers.

This central question has often provoked a lack of understanding and a diversity of opinions between the EC and the Italian authorities. In order to understand them fully, it is necessary to go back to the socio-economic impact of internal migration processes of the past.

In the 50s, and even more so in the 60s, Italy experienced a massive internal mobility phenomenon which transferred millions of people from the South, still markedly agricultural, to the North that was then completing at full speed its industrialisation process. The process, perhaps inevitably, has allowed the South to mitigate the consequences of underdevelopment and the North to achieve the modernisation effort in a very short time. However, it has also created problems of a certain magnitude: congestion and social integration problems in the northern regions, and impoverishment of the more capable and dynamic labour forces of the South.

The immigrants of the past are now sufficiently integrated, but based on this experience there is an attitude ingrained in the social fabric that certainly does not stimulate mobility. The impression is that in the North - with the exception of the industrial sectors directly affected - a large scale repetition of the migratory flows from the South is more feared than desired. In addition, in the South there is increasingly a feeling of cultural identity that stimulates the best resources involving them in the development of the local economy. Some changes are beginning to take place, particularly in the attitudes of the younger generations who no longer see work as something to be waited for, as perhaps happened in the past, but as something to be actively built.

It is perhaps due to such considerations that the NAP 2000 aims above all at increasing the development and industrialisation of the South, whereas a renewal of mass migrations is seen more as a phenomenon to be avoided than a means to reduce the imbalances in the labour markets of the North and the South.

G. Ciccarone

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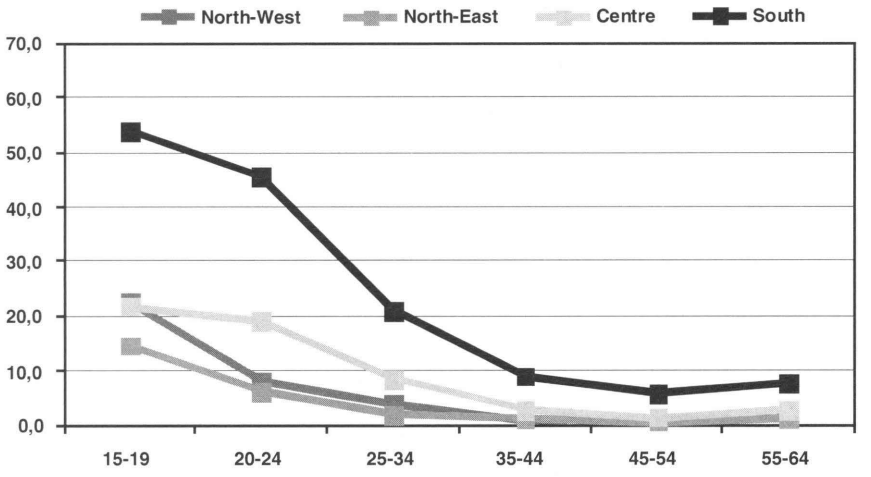
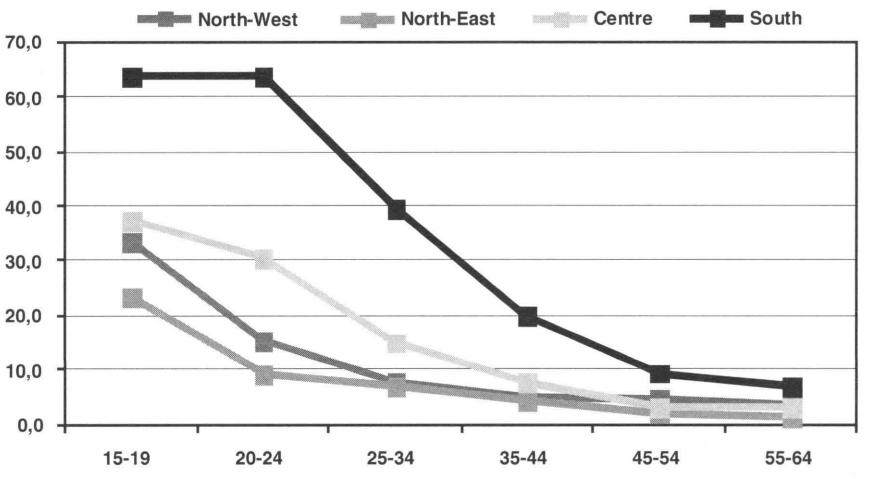
Source: ISTAT, Quarterly Labour Forces Survey

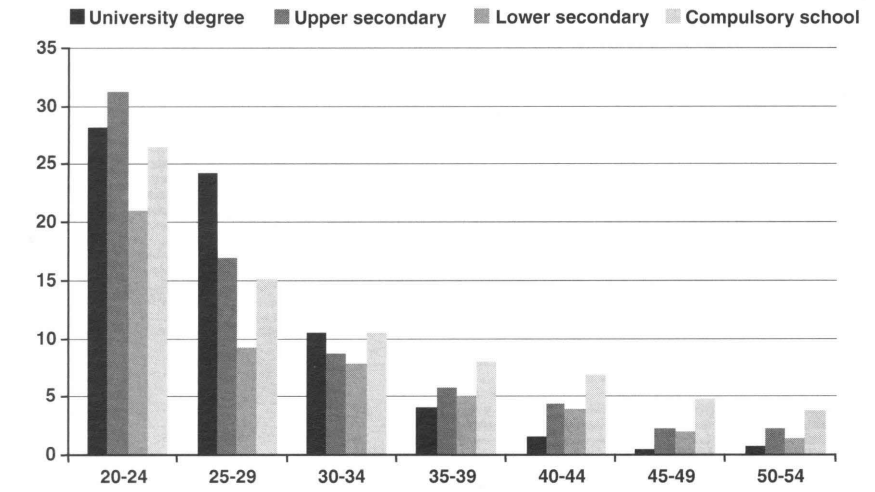
Graph 1a: Unemployment rates by territorial partition and by age (Men)



Graph 1b: Unemployment rates by territorial partition and by age (Women)



Graph 2: Unemployment rates by age and by education level



Luxembourg

Introduction and background

This review illustrates how labour shortages and skills gaps are perceived in Luxembourg, which solutions are currently proposed and how these relate to the recommendations of the new guideline 6 of the European Commission's Employment Guidelines.

A shortage of skilled labour is an inherent feature of the Luxembourg economy. Since industrialisation, Luxembourg has had to import labour, first blue-collar and later, manual and white-collar workers. This has been a consistent trend over the past 25 years. Dealing with this economic and social situation is a core subject of policy and academic debate in Luxembourg.

An emerging issue is that some people demonstrate resistance to technical or manual career choices. Although there has been a relatively recent increase in female employment, female participation in the labour market could be increased by updating existing skills. In some sectors, female participation is reducing, for example figures for the finance sector demonstrate a reduction of 2% between 1990 and 2000.

The second category of labour shortages, described as 'bottlenecks', relates to qualifications that are not readily available. This debate is only raised occasionally. The Ministry of Labour and Employment, the Public Employment Service, and employers maintained that it was important to ensure work permits could be offered to specialists from outside the Union. Around 7,425 first work permits were issued, mainly for qualified jobs, between 1994 and 2000 and 21% of applicants for work permits were refused. There is clearly a need for experts in specialised fields, but this accounts for a small proportion of the labour market. To give an overall estimation of existing skills gaps is difficult, but one expert pointed to 70% of staff recruited being Luxembourg nationals, 25% from the EU and 5% from outside the EU.

However, it is important to note at the outset the limitations of available employment data in Luxembourg, in relation to international requirements. Data is not available on:

- breakdown of unemployment by duration, sector, sex and educational level;
- overview of vacancies by sector and educational level over the last 5 years;
- job mobility in relation to employment growth in the sector;
- forecast of employment growth by sector for the coming 5 years;
- forecast of demographic developments combined with educational level of potential labour force for the next 5 years.

The unemployment situation in Luxembourg is distinctive because:

- Luxembourg has full-employment with a so-called "resistant" unemployment strand, varying between 2.6% (1996) and 3.3% (2000); and
- the majority of unemployed people have no or low qualifications, and therefore they do not fit the criteria of job vacancies. Considerable effort is taken to match these people with vacancies.

Labour shortages and skills gaps – the evidence

The upturn in the Luxembourg economy in recent years (demonstrated by the GDP and employment growth) has generated debate on a number of 'side effects' of the success.

In 1995, the national statistical office (STATEC) sketched two alternative growth hypotheses:

- a 2% annual increase of GDP leading to a relative status quo in employment; or
- a 4% annual GDP growth leading to an increase in employment rates and the population overall, which could reach 800,000 inhabitants by 2050.

The second scenario is quite ambitious, but the population in 2001 is about 440,000 people and the annual performance of GDP in 1999 was +7.5%. The projected shortfall in the labour force is expected to be accompanied by additional infrastructure requirements (roads, schools, hospitals, child-care facilities), and environmental impacts. The subject was publicly discussed by the Prime Minister in his annual speech (2000) on the "state of the nation".

The Prime Minster concluded that the Luxembourg economy should rise to the challenge of qualitative growth, although concern was raised regarding the dependence of the Luxembourg economy on global markets.

The digital economy represents a new skills challenge. Labour scarcity in this field can be met in the short term by transborder migration. Most workers require in-company training. Workers are encouraged to embrace lifelong learning opportunities, and must demonstrate intellectual flexibility and the ability to adapt to new requirements. This is necessary to keep pace with rapid technological change. The new economy requires workers with an ability for network thinking and team working. The government launched an "e-Luxembourg" programme in 2001, and employers of ICT business have launched a range of initiatives. Entrepreneurs of most of the leading ICT companies created a platform at the end of November 2000 to promote a corporate debate on the new digital economy. Employers believe that ICT developments offer significant opportunities for economic growth, and should be acted upon swiftly. ICT should help promote sustainable employment development and regional stability.

Strategic action by actors from all levels of business and government is

needed for the creation of an e-society. The challenge of "e-Europe" should be taken up by "e-Luxembourg" in order to become a driving force in the ICT area in Europe.

The employment debate, including future bottlenecks in skills issues, was launched at the annual public notice of the Luxembourg Economic and Social Board which stated that the Luxembourg economy was at "risk of a bottleneck of qualified labour" developing. Economic growth cannot be resisted, and productivity should be increased. A shortage in qualified labour will slow down the economy, unless an education policy is developed which invests in initial and continuous training, increasing female employment opportunities, and increasing the mobility of workers.

The problem was emphasised by the handicraft sector, as it is difficult to increase productivity in a labour intensive and non-industrial environment. Luxembourg has exhausted its stock of national labour and labour from the transborder Region. It was envisaged that it would become increasingly difficult for companies in the craft industry to find staff at all qualification levels.

A less abundant labour supply increases pressure on salary rates. Employers in the craft sector estimate an increase in labour costs. This would have a negative effect on the sector, resulting in inflationary rises, reducing company competitiveness. These negative effects of labour shortages are recognised by most employers across economic sectors.

The crafts industry concluded that the only possible solution to future bottlenecks and labour shortages in the Luxembourg economy, which is increasing more rapidly than in other member states, is to recruit immigrants from other member states or from countries outside the EU.

The sectoral analysis: Case studies

The manufacturing, transport and service to business sectors demonstrated the most interesting skills movements over the past five years. The case studies focus on ARBED S.A. in the steelmaking industry, on a logistics company, KUEHNE & NAGEL S.A. in the transport business, and on the temporary work business within RANDSTAD Interim S.A in the service sector.

ARBED S.A. is the third largest employer in Luxembourg. The company is an industrial holding, regrouping ACERALIA, SIDMAR, ProfilARBED, TrefilARBED, TradeARBED and Belgo-Mineira. It produces flat stainless steel products, long products, steel cords, drawn wire and extra-thin copper foil. The parent company currently employs about 5,000 full-time staff, including 1% apprentices.

Established in Luxembourg in 1970, KUEHNE & NAGEL Spedition S.à r.l has been based in Contern since 1997. The world wide group has its headquarters in Switzerland. Whilst Luxembourg salaries overall increased by 17.4% between 1997 and 2000, the increase in the transport sector (NACE I 60-63) was notably higher, at 25.7%. KUEHNE & NAGEL Spedition S.à r.l. currently employs about 300 full-time staff.

RANDSTAD Interim s.a. was established in 1995, working from two sites in Luxembourg-city and Esch-sur-Alzette. The headquarters are in the Netherlands. Although temporary work only accounts for 2% of employment in Luxembourg, this sector increased its workforce by 20% between 1999 and 2000. The vast majority of interim workers employed in May 2000 in Luxembourg were French (69.1%), Portuguese (12.5%) and Luxembourg (3.4%). About 6% of enterprises employed temporary workers. The greatest demand was in the construction industry. According to the Holding's analysis, the staffing industry will increase by 10% annually during the next decade in Europe and in the United States. This development is the result of companies increasingly concentrating on core activities and outsourcing other work.

The case of ARBED S.A.

In the mid-seventies and early eighties, the restructuring of the Luxembourg steel industry began. The steel making industry employed 30,000 people in 1974, compared to 5,000 persons today. This was caused by economic recession, combined with a decline in demand for steel products. Structural change was achieved through a national solidarity movement. Several consulting procedures were held, known as the "Steel Tripartite" and the "National Tripartite". This process unites employer representatives, trade unions and government. The movement developed an early retirement model ("préretraite-ajustement").

The international development of ARBED was launched in 1991, including the establishment of a new European steel making company by ARBED, its partner ACERALIA and USINOR. The partnership is progressive and offers greater efficiency, although this should not lead to major staff reductions. The three companies will collaborate in the future, demonstrating an entrepreneurial spirit, focus on profitability and value creation, with regard to employee safety and well-being.

Human resources are vital for corporate development, particularly the life-long learning and ongoing training of managers, employees and workers, focused on increasing competencies and employability. Benchmarking, exchange of experience, transfer of expertise and inter-group training are very efficient tools. Skilled and independent workers are needed at all company levels. The minimum vocational requirement is a CATP. Blue-collar workers are skilled workers fulfilling TPM standards ("Total Productive Maintenance").

Luxembourg's employment force is made up of executives (6%), employees (26% out of which 55% are administrative people and 45% technicians), manual workers (68%, crafts people and production workers).

Modernisation has resulted in an overall reduction in staffing, and a greater requirement for qualifications. A proportion of CDR personnel are seconded to other non-steel companies. Where necessary, this is arranged in co-operation with the Public Employment Service (ADEM).

Luxembourg has an average unemployment level of 2.7%, and people who have been unemployed for longer than three months are difficult to place. ARBED is prepared to employee a proportion of these job seekers, provided they have the ability to complete a minimum qualification during the one-year contract. These contracts are identified

in the NAP. In 2000, ARBED appointed 15 people to this contract.

ARBED operates an early retirement scheme, and the company is currently in discussions with the social partners and the government about extending the scheme in the future. Skills levels within the company are under threat from the number of employees taking retirement.

In order to improve the age structure and to increase skills levels, ARBED was authorised by the Minister of Labour to hire an additional 240 staff in 1999 – 2000, with priority being given to the unemployed. The company plans to appoint a further 115 staff in 2001. Around 80% of these will be manual workers (skilled crafts people and production workers), and the remaining 20% will be technicians. The extent of early retirement will define the skills requirements of the company in the future. In addition to this, ARBED will recruit about 25 managers per year (graduates).

The company is experiencing difficulties in recruiting residents with the required qualification levels as blue and white collar workers. The highly qualified or university graduates are seen to prefer state career opportunities in administrations or in the service and finance sector. There is a particular skills gap in information technology and engineering. There is a recognition that the ARBED company will need to promote a modernised image to improve its recruitment record.

The case of KUEHNE & NAGEL Spedition S.à r.l.

The Luxembourg KUEHNE & NAGEL Spedition S.à r.l. is part of the global network working from 500 sites, all linked through a personalised information and communication technology system. Via this network, the company offers customers multifaceted services combining traditional shipping with modern logistics concepts. The main company activities are handling customer portfolios, freight clearance and warehousing services.

Reliance on well trained staff is a key element of the company's human resources policy. Staff must be able to adapt to new developments. A flexible attitude, willingness for continuous training, logical thought and IT ability are also considered prerequisites for a successful company workforce.

Around 50% of the company are employed in an administrative capacity, the remainder are mainly employed as warehouse workers. Currently, 280 people are based in the Luxembourg office, with 10% being apprentices. Over three-quarters of the employed workforce are non-nationals.

The demand for administrative skills has risen as a result of computerised business. For example, warehouse workers are required to load and unload products, warehouse storage and packing. All activities must be logged on computerised databases.

Training on the job is an important dimension for the company. The Luxembourg school system does not offers a suitable qualification for transport assistant officers, although this was once attempted. The challenges presented by the global logistics environment result in the company preferring a German training approach, where trainees work in the company for 3 years, and follow a one and a half day training course offered by the Chamber of Commerce ("IHK") in Trier (D). Transnational co-operation between both Chambers of Commerce (Luxembourg and Trier) is robust. On average 25 apprentices a year are trained and about 10 new applicants are hired. The motivation of trainees is high, as they can incur high costs as for dual job training (such as a car, fuel and other costs).

The apprenticeship training is recognised, but the corresponding remuneration is less than that received by CATP trainees. These factors result in only about 1% of Luxembourg residents becoming trainees.

A new job profile is emerging for an officer in warehouse management. The offer made by the Group KN to its clients is an integrated process combining multiple means with a computerised data flow which has to be understood and implemented by employees. This will enable customers to be kept up to date on the status of their investment/ products. The required skills are quite different from those of a classic storekeeper, as the warehouse managers have to demonstrate process thinking and IT skills to determine product flows.

About half of apprentices remain in the company after training. Most former apprentices remain in the company for about three years and then switch companies in Luxembourg. This can partly be explained by mobility limitations. The Luxembourg labour market offers competitive job opportunities for qualified people, encouraging people to change jobs. For example, half the qualified trainees pursued alternative job opportunities immediately. Due to the recognised quality of their training, the trainees are very employable in the industry and finance sectors.

The lack of candidates from Luxembourg means that opportunities are offered to those with good experience from the surrounding countries. The company currently has a number of labour shortages: 3 vacancies for administrative people, 1 in seafreight and 4 warehouse workers.

Some of these skills gaps are difficult to fill, for example, a junior management assistant post in logistics has been vacant for five months. The job was initially advertised intra-group and on the web, and a headhunter has also been utilised.

The case of RANDSTAD Interim S.A.

RANDSTAD Interim s.a. employs around 500 interim workers. Around 50% are appointed as knowledge-based workers in the service sector (mostly in financial services) and the other as manual workers in construction, industrial companies and hotels and restaurants.

Assignments are short (1 day to a week) in the catering and hotel business, longer in seasonal peaks in the building sector and longer assignments are available in the finance sector. The greatest demand is for qualified people in masonry and casing, in financial services in back office and fund markets, in administration for accounting assistants and for tri-lingual secretaries. In the service sector, the career levels proposed by the tasks are challenging, from junior officers to more advanced levels e.g. management assistants.

Around 40% of temporary workers under contract at RANDSTAD Interim are from Luxembourg, partly recruited

through the Public Employment Service. Some people wish to use temporary work to acquire job experience in the service sector, some are women wishing to return to work after having had children. Nearly 60% of the employed labour force come from the transborder regions, the majority from France.

The temporary work sector is regulated by the Act of 19th May 1994 which defines the triangle relation between the client company, the temporary worker and the interim job agency.

The company views the current legislative administrative burden as heavy and inflexible for short term assignments. Temporary appointments are common in sectors with seasonal fluctuations, such as the hotel and catering trade.

Another area with labour shortages which can be filled by temporary workers is the health sector. Currently the procedures applied in this sector are lengthy and protectionist, and there is no European-wide recognition of qualifications. In some instances, the temporary worker can fill the post permanently. The priority of all employers should be to regulate employment. Interim workers receive a fixed-term job contract with RANDSTAD Interim for the duration of the task. Even if the employee has a number of jobs, the contract provides employment and social security protection. The temporary work sector acts as a shock absorber for labour shortages, not a competitor for open-ended assignments. Transborder mobility in the Luxembourg labour market is filling a third of internal employment, and it is important that legislation does not hinder the important contribution of this labour supply to the Luxembourg economy. Flexibility will be even more important in the emerging e-society, with job matching increasingly taking place online.

Temporary business has to be proactive and responsive to employment trends. This approach is apparent in the banking sector, the hotel and catering industry and may be introduced to the National Employment Office.

Training for temporary workers in the banking and finance sector is undertaken by RANDSTAD Interim. A new training-secondment project has recently been introduced. 10 temporary workers received a fixed-term-contract by RANDSTAD Interim guaranteeing them the payment of an 18-month salary, regardless of other potential assignments. The trainees will receive free training and will gain work experience in several banks. The training is supervised by job consultants from RANDSTAD Interim, in collaboration with a Dutch and Luxembourg training company. Regular information and training sessions are organised with the Public Employment Service in the fields of administrative work and commerce. It is evident that for large contracts an interim agency can only appoint those unemployed people who are job and training ready.

Employers should share a certain part of social responsibility. In response to this, RANDSTAD Interim in offer inclusion projects for less employable people: e.g. ex-prisoners, women returners, and difficult-to-place job seekers. If procedures could be simplified this scheme could also be extended to asylum seekers.

Policies to tackle labour shortages

Labour shortages have been a key issue in Luxembourg in recent years. Luxembourg is naturally an open economy (motivated by its small native population), and the market is dependent on importing a proportion of its labour force.

Cross-border migration:

The importance of migration is evident in the employment figures of the last five years: Domestic employment (both independent and salaried work) has increased by 19.2% between 1996 and 2000, in comparison to a parallel growth rate of 46.1% of the transborder commuter labour forces. Since the mid-1970's, Luxembourg's labour market has integrated considerable labour and skill inflow from France, Belgium and Germany.

Furthermore, it appears that resident salaried employment increased over recent years mostly due to foreign (migrant) workers and for the past 4 years as a result of increased female participation in the labour force. The growth in native employment was much slower than its transnational counterparts.

This employment dimension reflects the importance of labour and skills from other EU countries to the Luxembourg economy, over the past 25 years. This employment pattern has emerged as a result of the reorganisation of the national economy, following the structural crisis of the 1970's, which caused a worldwide decline in the steel industry. Economic diversification has been focused on the development of the tertiary sector, particularly the banking and finance services for a significant proportion of that time.

Immigration

Between 1870-1975, the steel industry dominated the Luxembourg economy.

Employment movement between 1996-2000 (year average)

Year	domestic employment (incl. non-resident workers)	year-to-year variation	domestic salaried employment	year-to-year variation (incl. non-resident workers)	cross-border commuters	Year-to-year variation
1996	219 558	-	203 121	-	59 571	-
1997	226 599	3.2%	209 991	3.4%	64 423	8.1%
1998	236 408	4.3%	219 713	4.6%	70 795	9.9%
1999	248 261	5.0%	231 454	5.3%	78 362	10.7%
2000	261 818	5.5%	244 947	5.8%	87 026	11.0%
('96-'00)	% growth	19.2%	% growth	20.6%	% growth	46.1%
('96-'00)	absolute growth	42 260	absolute growth	41 826	absolute growth	27 455

Source: statec – igss

Labour shortages in the national population had to be covered by a voluntary immigration policy. The successive immigration waves were essentially intended to fill the gaps of blue-collar workers in industry. The immigration flows were interrupted during both world wars and started up again in the 1960's and 1970's. After deceleration in the late 1970's and the early 1980's, the inflow of manual workers continued at a constant pace to ensure the migration surplus balanced with economic need (cfr. Population flows, below). The later immigration waves were targeting labour shortages in the construction sector, and later in the 1990's for the craft sector.

Key trends in population flows:

- 1961, in addition to a significant natural surplus owing to high birth rates, there was also a significant migration surplus;
- 1971, the low natural surplus was compensated through a high migration surplus;
- 1976, the year of the first steel crisis, besides a low birth rate, the migration excess had been reduced three fold from the preceding year;
- 1981, the birth surplus and migration flow were both low;
- from 1990 - 2000, the birth surplus only reach the level of the early 1960's, despite a population increase of 18%.

Labour immigration has changed significantly in the past five years. Immigration in 1970 focused on the importation of mainly Portuguese workers. The migration surplus of Portuguese people has decreased over the past decade, most sharply in the past 5 years. A partial compensation of the decline in Portuguese migrant workers seems to come from the French and Belgium communities. The skills and expectations of the new dominant migrant populations are different from earlier inflows. This is concern is expressed by employers, notably from the civil engineering and construction industry, who have to cover the immigration gap.

In addition to a voluntary (new) immigration policy, where preliminary agreements have been taken with new member states, an acute shortage, estimated on the basis of existing order books, points to a labour shortage of about 1,000 qualified people in the construction industry. This shortfall could be met by the recent regularisation policy of some categories of asylum seekers and illegal immigrants.

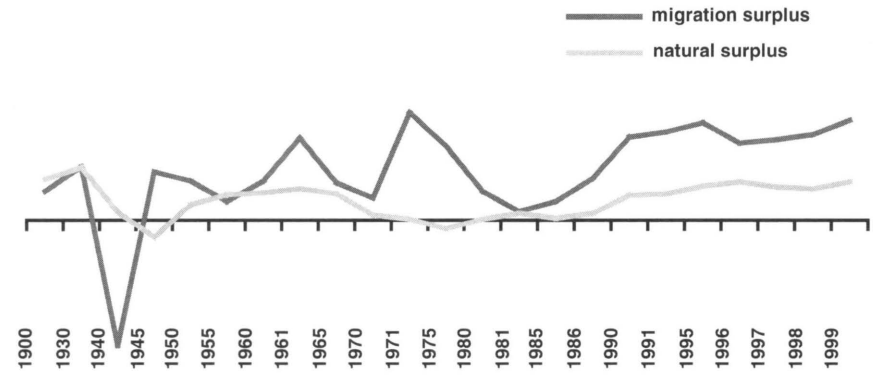
Analysis and conclusion

To tackle labour shortages and skills gaps requires complex and long vision solutions:

- According to the Minister of Labour "green-card" policies or "brain-drain" solutions risk being short-sighted and create economic imbalances on the global market.
- Immediate solutions should not endanger future developments, e.g. immigration without regard to the integration, infrastructures, and perspectives of newcomers.
- Preventive measures, such as involving the vocational orientation systems closer to schools. Proposing practical market oriented intermediate-level qualifications in the ICT should be encouraged (in project in the new NAP).
- The Luxembourg context makes it clear, that intermediate skills are required in employment. People with a CATP qualification are rarely unemployed.
- In a small economy, regional mobility should imply procedural flexibility.
- An economy that is driven one third by national, on third by migrant and one third by transnational workers should adapt its schools to the cultural and societal environment.
- There is an urgent need to support mentality changes via awareness raising for technical and vocational qualifications.
- Women should be encouraged to remain in employment, via the creation of a modern childcare infrastructure and via the adaptation of school times and working hours.
- In the low wage sectors such as agriculture, the hotel and catering business, and domestic services, labour shortage could be better regulated if working conditions were improved.
- In Luxembourg, the construction industry is not a low wage sector, as the salaries are negotiated by collective agreements.

Anne Marie Theisen

Population Movement as of 1900



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Netherlands

Introduction and background

Since the late 1990s, the Dutch labour market has become increasingly tight. While on the one hand increasing employment opportunities have reduced levels of unemployment, this has also led to the emergence of bottlenecks in the labour market. This has the potential to cause stagnation in the economy. Significantly, the increasing pool of hard to fill vacancies is matched with the persistence of unemployment in some areas. An explanation for this paradox is rooted in the rising demand for a highly qualified and skilled workforce while demand for lower skilled workers is declining. Demographic developments in recent decades have tended to aggravate matters: the falling share of young people entering the labour market and the ageing of the workforce in general have served to accentuate the labour force supply shortages.

Bottlenecks at establishment level

This section provides an overview of available data on vacancies, labour supply shortages and the channels employers use to get the workforce they required from the OSA labour demand panel (a panel of 2500 organisations surveyed every two years).

Vacancies

The demand for labour in general, and the number of vacancies in particular, are strongly related to the business cycle. In the previous hausse period, the number of vacancies had reached 134 000 at the end of March 1990 (CBS figures). A slowdown followed, leaving only 33 000 vacancies in mid-1993. Thereafter, a continuing increase peaked at a record number of 219 000 vacancies in June 2000. To date, this number has not been exceeded, although the figures have remained high.

The OSA labour demand panel provides similar figures. According to the most recent data available from OSA from spring 1999, around half of the panel member organisations had at least one vacancy. Compared to the two previous surveys in 1997 and 1995, when 37 and 17% respectively of the organisations had reported at least one vacancy, the rise is substantial.

The vacancy rates, that is the number of job openings as a percentage of staff in an organisation, provide a clearer idea of the extent of the problem. The table below reveals a gradual increase in these rates, although there are variations by sectors of the economy. On an average day in 1999, the figures point towards 4 vacancies for every 100 employees.

The trade, hotels and catering, financial and business services and construction sectors appeared to have the highest vacancy rates, whereas education and health and social care had relatively lower rates. Although the rise in vacancies is a general phenomenon, striking differences do however remain. Smaller companies in particular face high numbers of vacancies, although partly as a result of a statistical bias (one vacancy in a company with ten employees already counts for a ten percent rate). A more substantial argument would point to the more serious problems smaller companies face in a tight labour market. These conditions tend to stimulate larger flows of voluntary labour mobility as a result of the ample opportunities offered. The resulting high level of replacement demand hits small companies particularly hard, given that they have more difficulties in offering attractive career prospects to new entrants. Finally, these developments can also translate into vacancies remaining unfilled for longer.

Hard to fill vacancies

Recent years have seen an increase in the number of hard to fill vacancies. The share of vacancies open for more than three months has almost doubled since 1997 and has reached 34% of total vacancies in 1999. In 1997 the government and the public utility and construction sectors experienced a relatively high share of vacancies of long duration. In 1999, the manufacturing and agricultural sector were mostly affected, with 47% of such vacancies. Indeed, this share was twice as high as in 1997. Education appears to be a positive exception: only one out of ten vacancies remained unfilled for more than three months in 1999. Finally, smaller companies appear to be hardest hit by this phenomenon, as the highest shares of lasting vacancies ap-

pear to be found in organisations hosting less than 20 employees.

The causes behind hard to fill vacancies are diverse, according to the employers participating in the survey. In 1999, most respondents mentioned a lack of candidates (more than 6 out of 10 employers, 1.5 times more than in 1997). Lack of job experience and educational deficiencies were felt to be the most relevant causes by only 15% and 6% of the employers.

What are the measures used by employers to address the problem of hard to fill vacancies? Not surprisingly, intensifying recruitment efforts is the most commonly used. A large proportion of the employers mentioned training of new entrants or of existing staff as suitable solutions. Contracting out part of the workload is another frequently used option (by one third of the employers), a strategy which is quite common in the construction sector. Other less frequently deployed methods are lowering job requirements or increasing working time flexibility to accommodate for the workforce shortages. The techniques used in 1997 and 1999 to address the issue were similar, with the exception of lowering of job demands and offering higher wages. These appear to have been used more frequently in recent years.

Table 1: Vacancy rates in May 1995, May 1997 and May 1999 by industry and firm size (number of vacancies as a percentage of the total staff size).

	1995	1997	1999
Total	**1.2**	**2.7**	**4.2**
Manufacturing, agriculture (*)	1.0	2.4	3.7
Construction	0.8	3.9	6.8
Trade, reparation and catering	1.2	3.1	6.4
Transport and communication	1.1	4.0	4.1
Financial and business services	2.0	4.0	5.2
Health and social care	0.8	1.2	2.1
Other services	1.9	2.6	3.9
Civil service and public utility	1.6	2.7	3.5
Education	0.7	1.7	1.7
5–9 employees	1.3	5.3	8.3
10–19 employees	1.8	4.9	7.5
20–49 employees	1.1	3.8	4.4
50–99 employees	0.9	2.2	4.7
100–499 employees	1.0	2.2	3.1
500 or more employees	1.2	1.7	2.3

* Due to the limited sample size of the OSA data both sectors are clustered.

Recruitment channels

Part of the bottlenecks experienced in filling vacancies might relate to the recruitment channels used. In this context, employers were asked what type of recruitment channels they had frequently used over the previous two years. Among the responses, it emerged that traditional vacancy adverts were the most popular, especially in the civil service and public utility sector. In the construction sector, new staff were generally brought in through contacts with existing staff. In the other two sectors, private employment agencies were the main suppliers of new staff. Public employment agencies, as well as schools, were responsible for a substantial share of new entrants in the health and social care sector. Overall, there appeared to be differences in the channels of recruitment used according to the size of the companies, with larger ones generally using a variety of channels over the two-year period. This is possibly linked to the fact that, given their size, these companies might have more frequent and diverse vacancies.

It is interesting to consider whether prolonged labour shortages impact on the recruitment channels applied. Strikingly, the shifts are on the whole modest: between 1997 and 1999, the popularity ranking of the recruitment channels remained relatively unchanged. However, there appear to be differences by economic sectors and size clusters. In the construction sector, recruitment through existing staff's contacts almost doubled between 1997 and 1999, from 16% to 27%, while recruitment via schools also increased (from 11% in 1997 to 17% in 1999) at the expense of open applications (17% in 1997 against 10% in 1999). This stresses the importance of the vacancy problems in this sector. In the financial and business service sector, labour shortages are reflected in the intensified use of own staff (from 9%

Table 2: Percentages of vacancies open for longer than 3 months and the share assessed as hard to fill by economic sector and establishment size, 1997 and 1999

	Open > 3 months		assessed hard to fill	
	1997	1999	1997	1999
Total	**22**	**34**	**43**	**56**
Manufacturing and agriculture	22	47	46	62
Construction	39	33	74	79
Trade, reparation and catering	16	31	45	61
Transport and communication	11	27	36	50
Financial and business services	24	38	46	47
Health and social care	12	24	28	46
Other services	18	26	32	47
Civil service and public utility	35	40	18	26
Education	11	10	18	40
5–9 employees	25	45	62	76
10–19 employees	20	37	49	66
20–49 employees	22	32	52	63
50–99 employees	16	34	44	50
100–499 employees	24	30	30	52
500 or more employees	28	32	26	35

in 1997 to 17% in 1999). The most remarkable trend in the health and social care sector is the growing tendency to actively approached schools as suppliers of new employees (9% in 1997 against 23% in 1999). The increase in the use of personnel adverts in the education sector (from 25% in 1997 to 45% in 1999) is striking and somewhat exceptional, as other sectors appear to be gradually resorting to more labour intensive measures.

Latent vacancies

In Dutch literature the expression 'discouraged recruiter' is used to refer to employers who have experienced serious and repeated recruitment difficulties and who are as a result unwilling to concentrate more effort to rectify this situation. This results in so called 'latent' vacancies, which represent potential but unrealised employment opportunities.

The table above shows the share of organisations affected by this phenomenon and gives an indication of the extent of the growth in the percentage of the 'missed' employment opportunities between 1997 and 1999. In 1997 only 12% of organisations were affected, while this percentage rose to 19 over the following two years. As a result, the share of unfilled jobs almost doubled (from 1.0 to 1.9%). The construction sector shows the highest number of organisations with unrealised jobs linked to this phenomenon (27% in 1997and 38% two years later). The data for the financial and business service sector show that in 1999 a quarter of the establishments were responding to the tightness of the labour market in this way, as opposed to only 10% in 1997. In the other private sectors of the economy the phenomenon is present in about 15 companies out of 100, whereas the public sectors seem to have been less affected. Finally, looking at the employment share figures, larger organisations appear to be more able to tackle the labour market problems than smaller ones.

Refraining from expanding staff size despite increasing work requirements can have several consequences for the organisation as a whole. A reduction of production targets is possible, though not recommended, while plans to augment production capacity can be withdrawn or delayed. Attempts to raise productivity by automation or other technological applications seem a more viable alternative. However, temporary understaffing is generally adopted as a short-term policy. On the negative side, this policy means that existing staff have to work harder or overtime, with related consequences on work-related stress and health and safety.

The employers in the OSA panel were asked to what extent they had to manage with limited staffing resources and whether this was due to an insufficient availability of adequately qualified personnel. The table below shows that in 1999, about one third of the employers consulted had to cope with understaffing, 63% of whom as a result of labour shortages (implying 20% of all organisations in the panel). The remaining 37%, mainly public sector organisations, ascribed this to other factors, such as drawn out recruitment procedures (for bureaucratic reasons) or budgetary policies.

On the basis of the evidence presented above, the construction sector and financial and business services generally abstain from expanding production capacity, these sectors could be expected to show significant understaffing problems. Scarcity of personnel for both sectors being beyond doubt the most important reason for understaffing in these sectors, although the figures are more significant in the construction sector. The second place in this 'tightness ranking' is shared by the financial services and the transport sector, at some distance from the leading one. At the other end of the spectrum, education appears to be the sector which suffers the least from labour market shortages at an operational level. The underlying element of the results is provided by the marked rise in time of the share of enterprises (mainly in the private sector) affected by understaffing and, more importantly, the growing significance of labour market shortages behind it.

Table 3: Measures taken for hard to fill vacancies during the past two years (% of the organisations that used any of these), 1997 and 1999

	1997	1999
Intensifying recruitment	73	78
Reducing job requirements	13	18
Training of new entrants	56	56
Training of own staff	38	40
Outsourcing	33	33
Offering higher salaries	20	30
Adapting working time	9	11

Table 4: Unrealised jobs during the last two years by sector and size, May 1999 (percentage of organisations responding affirmatively and potential share in employment)

	Share of organisations	Potential share in employment
Total	**19**	**1.9**
Manufacturing, agriculture	18	1.7
Construction	38	7.0
Trade, reparation and catering	17	1.8
Transport and communication	15	1.4
Financial and business services	23	2.4
Health and social care sector	7	0.6
Other services	16	2.3
Civil service and public utility	6	0.1
Education	6	0.2
5–9 employees	23	7.0
10–19 employees	20	3.5
20–49 employees	15	2.3
50–99 employees	17	1.4
100–499 employees	9	1.3
500 or more employees	15	0.6

Skills gaps

Training constitutes one of the best tools for the maintenance of human capital for the economy and society as a whole. For this reason, it might be considered as a preferred strategy to address labour shortages as well. Ideally, the process of designing suitable training starts with the identification of the gaps between the qualifications of the (potential) employees and those required by the employers, that is the skills or competence gaps.

Identifying and researching skill gaps is a delicate question. Employers on the OSA panel were asked to what extent they considered their staff to be equipped for future job requirements. The response was overall positive with the exception of the public sector, with 70% of employers in 1997 and 1999 being confident about their staff's skills.

Concerns about future skills gaps seem to grow with the size of the company, possibly as a result of a clearer insight into expected changes in job tasks and contents. Overall though the ongoing labour shortages do not appear to have affected the perception of skill gaps.

The justifications given by employers for these skill gaps are essentially threefold: insufficient qualifications, work experience and flexibility. The employee's willingness to learn and the type and content of previous qualifications were also highlighted as explanations for the gaps. The findings are presented more in detail in table 6 below.

The table shows little variation from 1997 to 1999, apart from when the sectors and company size are analysed. In the construction sector and in manufacturing and agriculture most skills gaps were attributed to a lack of job experience and shortcomings in the level of qualifications of employees. In the health and social care sector bottlenecks were also mainly related to low educational levels. The civil service and education sectors appeared to suffer mostly from shortcomings in the flexibility of its employees.

When the size of the companies is taken into account, it appears that the lack of flexibility was clearly an issue in larger companies, followed by insufficient qualifications. Concerns about lack of work experience are relatively scarce in the medium sized and larger enterprises. One possible explanation for these observations could be that while in larger organisations employees have more opportunities for developing specialised skills and experience, this might lead to them losing occupational or functional flexibility.

Additional research on labour market bottlenecks

Data collected in the first half of 2000 confirms the findings of the OSA panel (Henkens et al, 2000). About 2800 organisations with 10 employees or more were approached, resulting in just over 1000 responses. The questionnaire focused on recruitment issues and personnel retention. In addition, the research provided an insight into recruitment strategies for specific labour supply categories.

Allocation of bottlenecks

About 36% of the respondents had often encountered serious problems in finding adequate personnel to fill their vacancies. Fifty percent of respondents suggested having encountered occasional difficulties, while only 13% did not report any difficulties at all. Labour shortages are prevalent in manufacturing and construction, with 50% of respondents in these sectors often perceiving difficulties in filling vacancies. In the public sector the same holds true for nearly a quarter of respondents, while nearly two thirds reported only occasional difficulties. Difficulties in retaining personnel were not as frequent, with only overall 12% (17% of the private sector) suggesting they were affected by this problem often, while and 60% occasionally. Interestingly, the manufacturing and construction sectors presented the largest share (35%) of companies reporting the absence of problems with personnel retention. This might relate to firm specific training investments to the benefit of their workers. The opposite is true for the public sector, where recruitment difficulties appear to be less acute, while staff retention is more challenging. This might be possibly related to high levels of training in the sector, which might support greater staff mobility.

In contrast to earlier observations, the research highlights that labour shortages do not simply affect the more highly qualified and skilled vacancies. The findings showed that one employer out of three reported bottlenecks at various functional levels. Twelve percent predominantly face difficulties with lower functions, 18% specifically with the intermediate ones and almost thirty percent mainly with the higher educated functions. Not surprisingly, the trend differs by sector of the economy: in the public sector the search for highly edu-

Table 5: Percentage of organisations dealing with understaffing, in general and specifically due to scarcity of personnel, 1997 en 1999

	1997		1999	
	Understaffing in general	caused by shortages	Understaffing in general	caused by shortages
Total	**25**	**7**	**34**	**20**
Manufacturing, agriculture	27	10	35	19
Construction	28	14	51	39
Trade, reparation and catering	18	5	27	17
Transport and communication	23	7	37	24
Financial and business services	33	10	37	26
Health and social care sector	29	4	35	12
Other services	34	5	36	15
Civil service and public utility	40	2	39	12
Education	18	1	18	6
5–9 employees	21	8	30	18
10–19 employees	27	7	34	23
20–49 employees	29	8	36	20
50–99 employees	27	8	37	24
100–499 employees	25	6	37	21
500 of more employees	25	6	43	19

cated personnel forms the main bottleneck, while in the private sector the shortages are concentrated in the lower and intermediary levels of qualification. Altogether, the findings highlight the rising tension between labour supply and demand.

Recruitment of specific labour supply categories

If labour supply in general is running dry, a sensible approach is to target recruitment towards under-represented categories in labour participation, as in the case of efforts directed towards female labour supply and the introduction of more flexible working patterns (possibly related to the former). The public sector appeared to be at the forefront in terms of targeting women in their recruitment strategies (63%) and in the introduction of flexible working patterns (75% of organisations).

Other measures to address recruitment of specific categories of labour supply training of existing employees, as practised by 45% of respondents, and encouraging recruitment of people with disabilities (40% of organisations).

Employers were also asked about measures to tackle enduring shortages. The majority of respondents mentioned offering higher wages and better labour conditions (about 35% of the organisations), while only 13% of respondents suggested encouraging older employees not to take early retirement. Only one employer in five specifically directed its recruitment activities towards older job seekers, although the proportion would double in the case of sustained bottlenecks. Calling upon retired personnel was scarcely considered.

Foreign recruitment

Almost three out of four organisations did not tend to recruit foreign workers in order to tackle labour shortages. However, this practice was relatively common in manufacturing and construction, where 17% of the employers actually recruits foreign personnel, while an additional 25 had seriously considered this. The shares are slightly lower in the service sector. Recruitment efforts were mostly confined to the nearby countries presenting a similar education system, such as Germany, Belgium and the United Kingdom, while Eastern European countries were targeted less frequently.

Table 6: Reasons for competence gaps as indicated by employers (percentages of the organisations; multiple answers possible), 1999

	Lack of job experience	Level of education too low	Wrong direction of education	Lack of willingness to learn	Lack of flexibility
Total	**38**	**42**	**14**	**30**	**37**
Manufacturing, agriculture	46	59	15	32	33
Construction	51	47	18	42	39
Trade, reparation and catering	38	40	15	31	39
Transport	31	44	17	19	33
Financial and business services	43	38	5	28	23
Health and social care sector	23	50	20	22	36
Other services	30	15	29	14	25
Civil service and public utility	31	42	18	33	59
Education	21	14	9	28	58
5–9 employees	38	33	19	36	37
10–19 employees	42	39	13	33	28
20–49 employees	37	44	11	23	36
50–99 employees	40	56	12	30	45
100–499 employees	31	46	16	30	51
500 or more employees	32	45	19	23	60

Automation

Automation was not a widely considered option. While a quarter of the respondents already applied this strategy, one third had taken it into account, but almost half of them had little confidence in it. This is particularly significant when related to developments in wage costs. According to the findings, the majority of the employers did not consider the wage increases negotiated through several collective agreements as an incentive to move towards more labour saving and productivity raising technologies. The option of relocating production capacity beyond national borders was also considered by only a very small fraction of the employers surveyed.

Overall, the findings showed that employers were more willing to accept higher wage costs than prepared to switch towards more labour saving investments. However, the structural reduction of labour supply discussed previously could lead towards further changes in that direction in the future.

Policy considerations

A recent letter from the Minister of Social Affairs and Employment to the Dutch Parliament provides an indication of the direction taken by the government and social partners in addressing the issue of labour shortages. The letter, which is based on their regular so-called Spring consultations, reflects a high level of awareness of the challenges ahead by all the parties involved. In preparation to the deliberations, the government representatives also had the support of a policy note containing almost fifty concrete measures to tackle bottlenecks. The following sections provide a summary of the key findings and action points presented in these two documents.

Flexibility and tailoring in labour conditions

In the context of labour market and wage costs developments, more attention to variable or flexible wage components and fringe benefits, like training and child care facilities, is recommended. Social partners stressed the importance of agreements on working time flexibility in collective agreements, relating to the challenge of creating feasible options in combining time for work, for training, for private care activities, for recreation and leisure.

Labour participation of older workers

The government aims to raise the participation age from 55 to 65 years of age. By 2030, it is hoped that participation for this age group will have doubled. However, setting targets is easier than reaching them. The onus is primarily on the social partners. Replacing early re-

tirement regulations (financed by collective savings) with pre-pension schemes contains an important signal into the desired direction. Another indicator can be found in some kind of a median age of early retirement: this age is gradually rising from around 60 under the old rules to 61 under the new ones.

Training and employability

A solid investment in training of employees and job seekers is essential. Priority has to be given to providing everyone with a so called starting qualification (a form of minimum standard in the qualifications required for a firm and lasting entrance on the labour market, mostly fixed to the level just above lower vocational education). Achievements through on the job learning need to be made transparent, by means of a qualification system provisionally denoted as 'competencies regained elsewhere'. Lifelong learning continues to attract attention from government and social partners and translates into rising training budgets.

Ethnic minorities

For the Netherlands, the divergence in labour market participation and perspectives between ethnic groups constitutes a delicate topic. Several specific measures have come into force to encourage employers to recruit ethnic minority members.

Prospects and conclusions

In its biannual report, *The labour market by education and occupation until 2004,* the ROA (Research Centre for Education and the Labour Market) anticipates increasing shortages of highly skilled workers. In spite of an expected reduction in employment growth during the early years of this millennium, a gradual upgrading of skill requirements is responsible for tightness in the labour market. The researchers point towards the possibility of a 'demarcation line' between two categories of labour supply, one educated at secondary vocational level and above and one below, the prospects for the former being generally more favourable than for the latter. The most significant recruitment bottlenecks are foreseen in the trade, financial and business services, health and social care, education and civil service sectors. These bottlenecks specifically relate to the more highly educated entrants these sectors require and they might be addressed by an increased labour mobility between sectors. Employees with economic-administrative qualifications, for instance, have a wider range of work opportunities within a variety of sectors, contrary to teachers or health care professionals. As a result the ROA expects the bottlenecks to impact more strongly on the health care and education sectors.

Similar conclusions were reached by a forecasting study realised by the ROA (ROA, 1998). In this study however, it is anticipated that the difficulties experienced will be solved by adjustments in the labour market, with Labour shortages inducing wage increases at primary level and drawing extra attention to fringe benefits. The labour market will give with greater consideration to the demands of employees with regards to wages, contracts, working time arrangements among other aspects. Recent observations, for instance, point to a reduction of the share of temporary contracts, which are generally not appreciated by the employees (Fouarge et al., 2000). Finally, the study focuses on training and extra incentives to enhance participation of groups generally under-represented in the labour market in order to limit the expected costs connected to the bottlenecks.

In a secondary analysis, the Dutch CPB questioned the picture portrayed by the ROA (CPB, 2000). The CPB presented a sensitivity analysis focusing on two crucial assumptions of the ROA approach. The first assumption related to the anticipated pace of upgrading. Over the years, the average educational level has risen in many occupational areas. The ROA expects this process to proceed with the same intensity. On the basis of this, the CPB calculated the hypothesis of zero upgrading, implying that no shifts will occur in the structure and allocation of educational levels in the economic sectors. This is of course a rather extreme assumption, certainly for the full period under consideration (1997 to 2007). However, the exercise reveals that the ROA analysis heavily leans on its assumption: in a situation of zero upgrade, the estimated shortages for higher educated employees would diminish strongly.

The CPB calculations were intended to play down the relevance of the ROA projections, however, there are good reasons to suppose that upgrading will continue at a similar pace as before, especially when considering globalisation and technological developments, especially in the ICT field.

Overall, the assessment of the present situation and of the near future lead to similar conclusions. The Dutch economy is flourishing and the recent boom has led to an increased economic activity and a strong upsurge in prosperity. As a result the demands made on the production factor labour have also risen. In the author's view, the onus for responding to the increase in labour market discrepancies lies primarily with employers. The way employers can make a substantial contribution to solving the labour shortage problem in the Netherlands by enhancing the employability of both existing and prospective personnel. There are some positive signs in this direction, although more needs to be done. The attention devoted to personnel training is gradually increasing but the redirection of recruitment efforts towards groups that are under-represented in the labour market remains modest. More effort is required on behalf of employers to find innovative solutions to enhance their personnel recruitment and retention strategies.

Jean Paul Vosse

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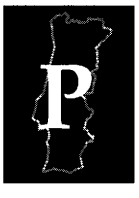


Portugal

Introduction

At Lisbon the European Council defined an ambitious strategic goal to be attained by 2010: to make the European Union "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion".[1]

In this context labour shortages[2] and skills gaps must be discussed. In fact, the European Union can only achieve such a goal if it invests more in education and skills and encourages labour force mobility within the emerging "new European labour market".

Portugal's contribution to that target is in some areas not yet satisfactory.

Since 1996, the employment rate in Portugal has been one of the highest in the European Union. In 1999 the country's employment rate was 67.4%, while the European Union it was 62.1% in average[3]. Thus, Portugal has achieved already the benchmark of having an employment rate as close as possible to 70%, as set by the Lisbon Summit for Europe in 2010[4]. During 2000, around 83 000 new jobs have been created, almost half of which have been taken up by women. Between 1998 and 2000 the growth of the employment rate in Portugal was higher among women than among men, 4.9% and 2.5%, respectively.[5] However, more than half the jobs created in 2000 were based on temporary employment. Compared to 1999, in the year 2000 precarious work increased by 7.7%, while contracts of indefinite duration grew by 1.1%[6]. That means that the observed dynamism of economic activity has been associated with a decline in the quality of employment. With regards to unemployment, Portugal has one of the lowest unemployment rates in Europe. In fact, in 1996 the unemployment rate was 7.3%, while in 1999 it had decreased to 4.5%, much lower than the European average of 9.2%[7].

The structure of the labour market

In spite of these figures, a deeper analysis of the labour market in Portugal shows

1 Source: Lisbon European Council (2000) – Presidency Conclusions, European Commission
2 For the purpose of this text, labour shortages exist when employers are unable to fill, or have difficulty in filling vacancies in a recognised occupation at the current level of remuneration and conditions of employment including realistic location.
3 Source: European Commission – Employment & Social Affairs (2000), Employment in Europe 2000
4 Source: Lisbon European Council (2000) – Presidency Conclusions, European Commission
5 Source: INE (National Statistics Institute) – Employment's Survey
6 Source: INE (National Statistics Institute) – Employment's Survey
7 Source: European Commission – Employment & Social Affairs (2000), Employment in Europe 2000

that there are structural problems, which must be addressed. According to the Beveridge Curve (see Figure 1), it is apparent that, since 1996, the drop in the unemployment rate has been followed by an increase in number of vacancies reported to the Public Employment Services (PES). This suggests that the country's labour market has tightened[8].

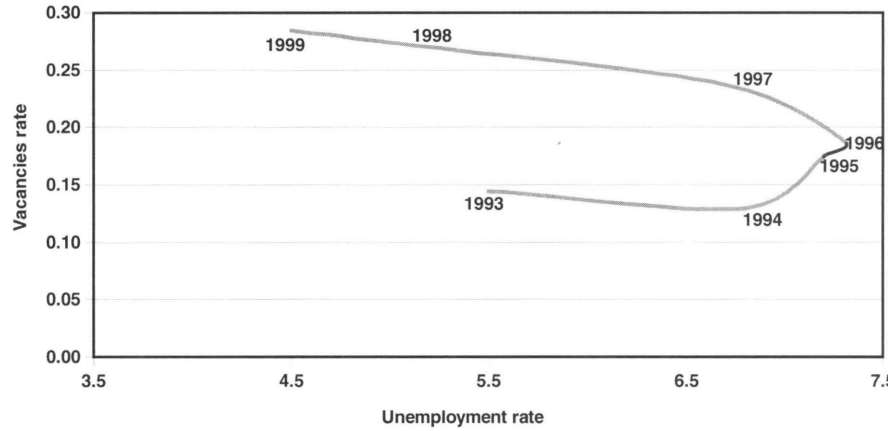
However, if we compare the demand and supply of employment in terms of occupations, we can see that in some cases the labour market does not absorb all the highest qualified workers. For instance, in 1998, the relation between the number of unemployed people and the available jobs reveals major imbalance in relation to managerial staff and health professionals (see Table 1). The occupations where there are fewer imbalances are non-qualified workers in civil construction and manufacturing, education professionals and other workers.

In Portugal the lowest unemployment rates occur mainly among individuals with lower educational levels.

This suggests that the structure of the Portuguese economy has traditionally not placed high demands on the skills of the workforce. The transformations in the economic structure in Portugal over recent years in favour of the services sector, which is usually considered a sector requiring a high level of qualifications, appears thus far not to have affected skills requirements. This could be the result of the fact that the nature of service companies being established is such that such higher level skills are not required. More than half of the service sector's employees in 1998 had an educational level below secondary school (67%), while only around 10% had a higher education[11].

In fact, as table 2 below shows, the Portuguese workers, independently of their occupational position in the scope of the enterprise, have a low level of education.

Figure 1 – Beveridge's Curve[9]



Sources: IEFP – Monthly Statistics of the employment market
INE – Employment's Survey

Table 1. Relation between unemployment and jobs' offers

Occupations[10]	Unemployed per available job
Managers	768
SME's managers	218
Health professionals	190
Other experts of scientific and intellectual occupations	164
Qualified workers of agriculture and fishing	145
Professionals of protection and security services	25
Non-qualified workers of mines, civil construction and manufacturing	21
Workers of metallurgy and similar workers	20
Workers of extractive industries and of civil construction	16
Intermediary professionals of education	15
Other workers	13

Source: IEFP – Situation of the employment market – annual report (1998)

Table 2. - Distribution of employees by educational and qualification levels

	High Technicians		Intermediate Technicians		Supervisors		High qualified professionals		Qualified professionals		Semi-qualified professionals		Non-qualified professionals		Apprentices and trainees	
%	1995	1998	1995	1998	1995	1998	1995	1998	1995	1998	1995	1998	1995	1998	1995	1998
Less or equal to the lower secondary education	27.1	21.4	36.3	31.2	82.8	78.4	53.5	50.2	84.6	80.6	93.7	90.3	95.0	91.5	86.1	79.3
Upper secondary education	17.9	15.8	22.0	26.0	13.6	15.7	31.9	33.3	14.2	17.1	6.1	9.3	5.0	8.3	13.1	18.5
High education	54.9	62.8	41.7	42.7	3.6	5.9	14.6	16.5	1.2	2.3	0.2	0.4	0.0	0.2	0.8	2.2

Source: Department of Labour, Employment and Training Statistics: Quadros de Pessoal, October 1995 and 1998

8 Data concerning jobs offers should be understood as a proxy indicator of the number of real job offers. In fact not all employers used the public services to recruit their workers and the same is true for highly qualified workers.

9 Vacancy rates were computed as a ratio between job offers and active population

10 According to the National Classification of Occupations

11 Source: Department of Labour, Employment and Training Statistics: Quadros de Pessoal, October 1998

Related to the low level of qualification of the labour force is the low level of wages in Portugal. The country's employers have the lowest labour costs in EU. In 1999, "Portuguese labour costs represented 1/3 of EU average and ¼ of the labour costs in most expensive EU Member States"[12].

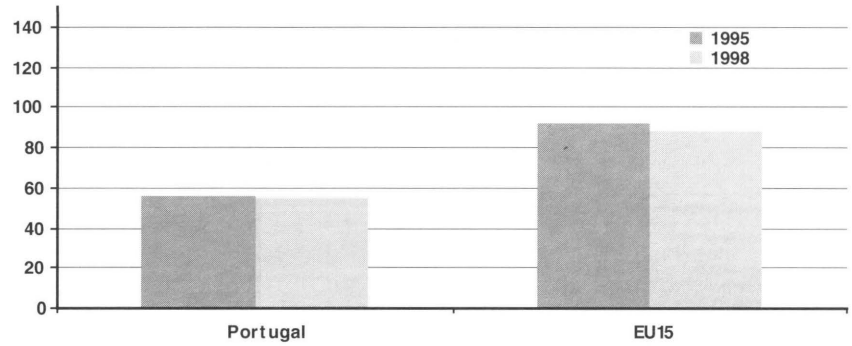
One of the main consequences of a low qualified labour force is low labour productivity. In 1995, Portugal came last in the ranking of the 15 EU Member States, a position unchanged in 1998, when the country was still considerably below the EU average.

Long-term unemployment continues to affect a considerable section of the unemployed population, in spite of a slight decrease in recent years. In 1999 the share of the long-term unemployed in relation to the unemployed population was about 41%.

When we analyse the structure of long-term unemployment in recent years, the majority of people affected are aged between 35 and 64, and about 80% of them have lower levels of education[14].

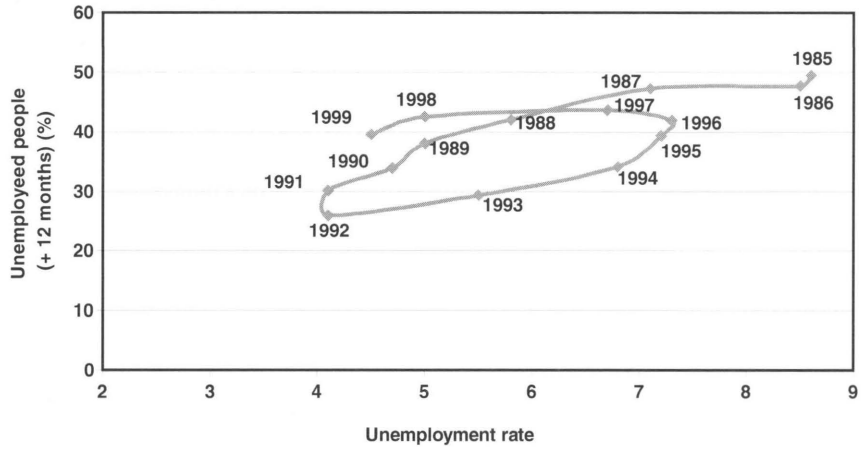
In summary, Portugal has met the EU employment target rate and has a very low unemployment rate. However, this scenario is combined with the low level of qualifications of the great majority of the labour force, with a low educational level of employees, low wages, and with low absorption of more qualified people by the labour market. Nevertheless, changes have occurred in some areas, such as in the Information Communication Technologies (ICT) sector where higher skilled staff are increasingly sought after, thus posing a significant problem of supply in the Portuguese labour market.

Figure 2. Labour productivity (per hour worked)[13]



Source: Eurostat - General Statistics, Key Indicators

Figure 3 – Relation between long term unemployment and the unemployment rate



Source: INE – Employment's Survey

Employment in the Information and Communication Technologies Sector

The Information Society represents one of the main challenges facing the European Union in the years to come.

The production and processing of information requires a strongly qualified workforce, trained in new skills and able to adapt to the diversity of forces shaping the working environment.

The country's delays in adjusting the literacy and qualification levels of its human resources have strongly hindered the development of the Information Society. For instance, the percentage of internet connected households in Portugal in October of 2000 (see Figure 4) was only 18.1%, far below the average in EU (28.4%). This gap is even greater when the top European countries are considered; some of them have internet coverage of above 50%. Also in 1997 there were on average only 7 computers per 100 inhabitants, compared to an EU average of 18.

Nevertheless, in recent years, the ICT sector has grown in Portugal. Between 1995 and 1998 the annual growth rate of the number of enterprises in the sector was 5.5%. In 1995, there were 3200 enterprises in this new sector, compared with 3898[15] in 1998. The sub-sectors that created the majority of the new enterprises were, between 1995 and 1998, telecommunications (+175%) and other ICT services[16] (+23.3%). In 1997, the main ICT added value was in telecommunications (51%).

In relation to employment, the ICT sector has also contributed to the increase in the number of jobs. The annual growth rate of employment in this sector between 1995 and 1998 was 3%, while in the totality of the enterprises it was of 2.6%.

Compared to traditional occupational sectors, the ICT sector requires a more

12 Eurostat – Population and social conditions. Ana Nobre: *EU Labour costs 1999*, p. 1.
13 GDP in PPPs per hour worked relative to the United States (US=100)
14 Source: IEFP – Situation of Employment market
15 Source: Department of Labour, Employment and Training Statistics: Quadros de Pessoal, October 1995 thru 1998.
16 Accordingly with OECD criteria, this includes computer services and the wholesale supply of machinery, equipment and supplies.

highly skilled workforce. In 1998, the percentage of graduate workers in this sector was 20.4%, while in all sectors it was 6.8%[17]. The annual growth rate of graduate employees in ICT sector between 1995 and 1998 was about 14.6%, compared to 11.2% across sectors.

The sub-sectors of telecommunications and other ICT services require higher qualifications (see Figure 5). In 1998, 23.6% and 22% of the employees of these two sub-sectors, respectively, were graduates.

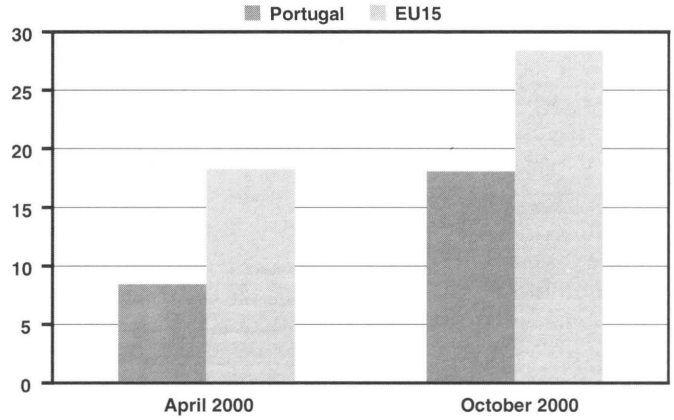
Considering the diagnostic made earlier about the level of qualifications of the Portuguese workforce, it is anticipated that the ICT sector in Portugal will have serious recruitment difficulties, which in turn will place pressure on the wages in this sector.

This suggests that it is imperative to enlarge the lifelong learning of Portuguese population, although the indicators concerning lifelong learning show that few investments have been made in this area. In 1999 only 3.2% of the population was engaging in lifelong learning activities (against 3.3% in 1995[18]). According to Eurostat data, Portugal was one of the two countries that did not increase the percentage of lifelong learning in that period (see Figure 6).

Despite structural constraints that make the development of this sector difficult in Portugal, the government has already taken some medium-term measures, namely: (a) Network Science Technology and Society (RCTS), which supports the connection of universities and schools to the internet; (b) the modernisation of public administration and its equipment in particular, although this process has not yet had the desired effects on productivity nor have the benefits spread to the main public services; and finally (c) the introduction of the internet in all schools, especially in the last two stages of basic education and secondary school.

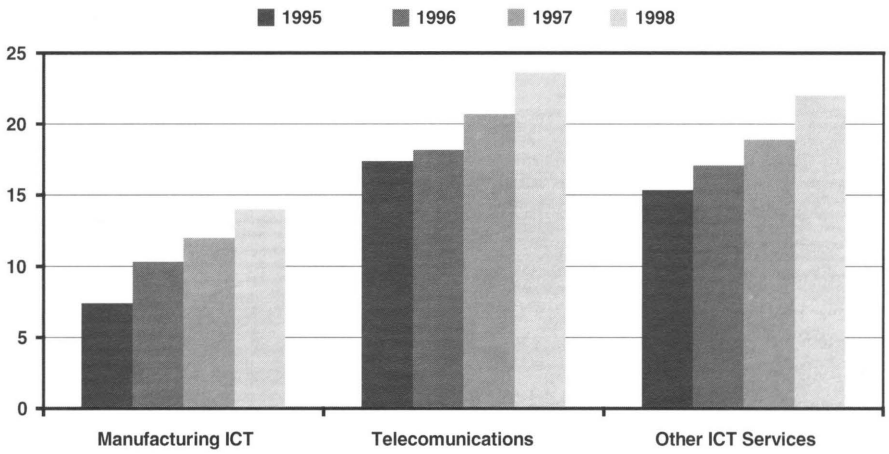
Measures such as this last one can contribute to the creation of new conditions of access and generalisation of the use of the internet. Portugal already occupies a high-ranking position in the EU

Figure 4. Percentage of connected homes



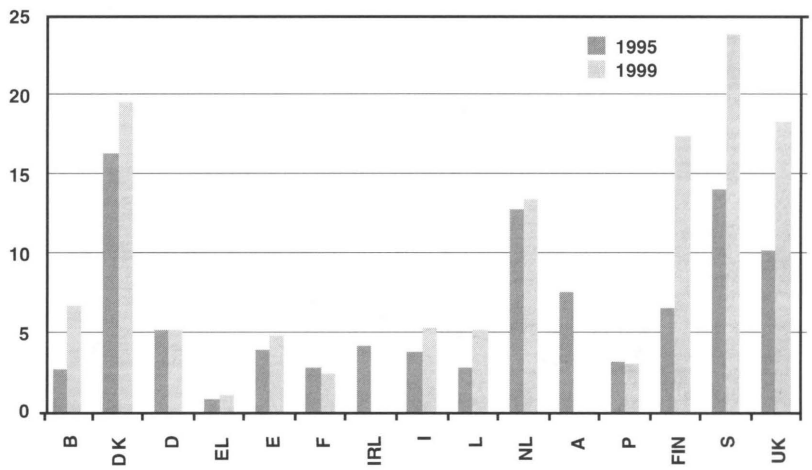
Source: Eurostat, Eurobarometer(April/October 2000)

Figure 5. Graduate employees as a percentage of total employment in ICT sector between 1995 and 1998.



Source: Department of Labour, Employment and Training Statistics: Quadros de Pessoal, October 1995 through 1998.

Figure 6. Percentage of population, aged 25-64, participating in education and training[19]



Source: Eurostat (Labour Force Survey, 2001)

17 Source: Department of Labour, Employment and Training Statistics: Quadros de Pessoal, October 1995 thru 1998. Workers whose education levels were unknown were not computed.

18 According to the Labour Force Survey, before 1998, "education was related only to education and vocational training which was relevant for the current or possible future job of the respondent". So results in 1995 are not totally comparable. However, the relative comparison among countries' performances in that period is relevant.

in terms of the level of connection of such schools to the internet.

The European Commission has been more ambitious and proposed that all schools should have access to the Internet and multimedia resources by 2001. According to national plans, this will achieved during the implementation of the III CSF, without a specific date. However, the intensification of the development of the Information Society requires the urgent introduction of ICT in all schools at the first stage of obligatory education and in the pre-school stage. Also basic PC training should be generalised to cover employees in all sectors of economic activity. However, the installation of equipment is not enough: it has to be closely associated with an effective use of ICT.

The new curriculum that is being implemented for basic education aims to reinforce the link between its three stages and to improve initial vocational training. Another measure will be introduced developing a certification in basic informatics skills that will cover students in the last year of obligatory education. However, according to the government's plans, this will only be achieved in 2006.

Besides these educational measures, public authorities have looked forward in order to stimulate R&D at the enterprise level and strengthen its links with the universities, but the dynamism in this area is still insufficient to bring Portugal closer to the EU average. For example, R&D expenditures in 1999 were less than half of the EU[20].

In the next five years, these linkages will need to be strengthened in order to increase the quality and innovation in ICT activity. Also, it will be necessary to intensify the professional training of employees who work in this sector and to implement regular lifelong learning initiatives in order to preserve their employability. Government and social partners[21] have recently agreed a pool of initiatives in this direction. Among the more relevant ones concerning ICT are: (a) the development of an IT basic skills diploma available to all, particularly students completing obligatory education; (b) to create a skills certification system in information technologies; and (c) to reach the ratio of 1 computer for 20 students in 2003 in all schools that teach the 3rd stage of basic education.

If they are effectively implemented, these various projects, and the educational ones in particular, will have a positive impact on the growth of the ICT sector.

Prospective approaches to the labour market

The model of economic and social development for Portugal foresees the modernisation of the country, bringing it closer to the productive and competitive averages of the EU Members. This modernisation will only be obtained through the combined effort of public sector, social partners, and the business world in particular.

However, employers' efforts to tackle the constraints that influence the Portuguese situation have had limited impact. According to the initial results of the 3rd European Survey on working conditions[22] the proportion of Portuguese employees having undergone training provided by their employer is much lower than the average of employees of the EU. In Portugal, such training decreased from 18% to 12% between 1995 and 2000, while it increased somewhat across the EU (from 32% to 33%).

A closer look at the results of this study shows that in Portugal in-house training decreased much more than in any other EU Member State and was at the lowest level in 2000 compared to countries with the best performance, like Finland and the United Kingdom, where it represented respectively 55% and 53% of employee training. These results are very worrying as they suggest that Portuguese employers are facing reverse trends compared to the direction of other more competitive economies. When making a comparison with Greece, which occupied the last position in the ranking of employer training provision in 1995 (with 17% only), the relative positions of both countries were reversed in 2000.

This scenario is confirmed by the results of the study about the needs of professional training of enterprises for the years 2000-2002[23], reflecting the re-

Table 3. Training needs in short and medium term and situation of the enterprise (for the years 2000-2002)

Indicators of the enterprise situation	Total	With training needs %	Without training needs %
Productivity	**37403**		
High productivity	4141	52.1	47.9
Low productivity	5528	34.8	65.2
Enough productivity	27734	28.0	72.0
Production process	**37403**		
Productive systems (goods and services) based in traditional technological processes	21208	25.5	74.5
Productive systems (goods and services) based in innovative technological processes	10299	39.6	60.4
Productive systems restructuring	5896	40.0	60.0
Labour	**37403**		
Labour surplus	2143	22.5	77.5
Lack of qualified labour	16854	45.0	55.0
Adequate labour	18406	20.5	79.5

Source: Department of Labour, Employment and Training Statistics: Survey at the needs of training of the enterprises 2000/2001, December, 2000

19 Based on adult participation in training over the 4 weeks prior to the survey, except for France, the Netherlands and Portugal for which it refers to the date of the survey.

20 Source: OECD – Structural indicators (main science and technology indicators), 2001.

21 Source: Economic and Social Council – Acordo sobre política de emprego, mercado de trabalho, educação e formação (2001).

22 European Foundation for the Improvement of Living and Working Conditions (2001) - First results of the 3rd European Survey on working conditions

23 Department of Labour, Employment and Training Statistics: Survey at the needs of training of the enterprises 2000/2001, December, 2000

quirements of more than 37 403 enterprises with ten or more workers. Only 31.6% of the enterprises consider that they will have training needs in the short and medium term and for 68.4% of them, professional training does not constitute an area of concern nor will it attract any investments over the next couple of years.

An analysis by sector of activity shows that enterprises in the financial services sector invest more in in-house training than companies in other sectors (56.2% compared to, for example, 45.7% in manufacturing) The analysis also showed that larger companies are more likely to invest in training than SMEs.

Also significant is the apparent high dependency on public funding for in-house training investment, with many companies unwilling to invest much of their own money in training efforts.

Many of the enterprises offering professional training provide their staff with additional skills in the new technologies.

The following table shows the percentages of enterprises *with* and *without* training needs in the short and medium term, by specific economic indicators.

The high number of enterprises which argue that staff do not have additional training needs in the short and medium term tend to be the companies displaying lower productivity rates.

By contrast, the majority of the enterprises (52.1%) with *high productivity* are planning to continue to invest in their workers' training. Also the majority (55%) of enterprises with shortages concerning qualified workers consider that they do not have training needs. The most salient features exhibited by those enterprises who consider that they *do not have training needs* are that: (a) the employees' qualification meet the needs of the current enterprise (53.8%) and (b) the employees are too busy, therefore not available to participate in training actions (31.7%).

Overall, these results show a lack of understanding of the strategic importance of lifelong learning as a determinant factor to tackle the changes and the challenges faced in the national and international economic context. At the same time these results suggest that most of the employers act in a passive and reactive way and are focused on the short term, with little concern about the challenges that labour market and society have to face in the near future.

Policy measures to address skills gaps

In face of the persistence of the structural delay in adjustment to increasing skill needs and the low level of productivity, the government has chosen educational and professional training as one of the main strategic areas of the Plan of Regional Development to be implemented up to 2006 (III CSF).

In agreement with the Plan of Regional Development this area of intervention intends, above all, to raise the qualitative profiles of human resources - a strategy that aims at matching a "more efficient performance of the education system (at all levels), a reinforcement of the investment in long life training and a strong involvement in the generalisation of the skills associated to the information society and the knowledge-economy"[24].

Among the various operational interventions for the accomplishing these goals, those of education, training, employment and social development, science, technology and innovation, and information society, are of particular relevance.

The goal of these interventions in relation to human resources focus, generically, on the improvement of education at all levels, in initial vocational training, in employability and lifelong learning, and in the promotion of the knowledge-society.

One of the initiatives to be implemented over the next few years with a greater long-term impact on the quality of basic education is aimed at the generalisation of pre-school education for children aged 3 to 5. Another aim is to increase the employability of young people who complete obligatory education, by enhancing vocational skills education. Another strategic initiative that will be implemented aims at the training and professional updating of the teachers in diverse domains, including ICT and multimedia techniques.

Regarding the promotion of the Information Society, the targets for 2006 are to increase by up to 50% the number of students with a certificate in basic skills in informatics, and to raise the number of schools connected to the internet and the number of households with PCs.

Conclusions

In summary, although the country has reached a situation of more or less full employment there is some evidence of skills gaps in the labour market. National authorities are aware of the educational gap as a critical factor for the employability of employees and for the competitiveness of the enterprises. Employers, on the other hand, generally have a passive attitude concerning these issues, giving priority to utilising low cost labour without appreciating the threats that are growing in the global economic environment. Therefore, it is important to rethink the approaches that have been used to deal with the imbalances in the labour market. Qualifications should become the main priority for employment initiatives and employers should support these accordingly.

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24 Plan of Regional Development 2000-2006 (PDR, p. IV-24).

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Spain

Introduction and background

Spain has been, and still is, the European country with highest unemployment rates. This is in spite of four years of above-average EU economic growth and strong employment creation. In March 2001, and following the Spanish Labour Force Study, more than 13% of the active population remain jobless.

Given such persistently high unemployment rates, one of the issues being examined since the mid-eighties is the existence of "mismatches" between job supply and demand structures, as the cause of this market imbalance. Labour mismatch is a broad concept that refers to unemployment structure, i.e., to the situation that arises when labour supply does not meet businesses' needs, for whatever reason, and equilibrium is not reached. Such labour mismatch may be the cause of unemployment (if there is an over supply of labour), or labour shortages (if there is excess demand excess), or both at the same time, where the supply-side (i.e. the unemployed) does not meet the demand-side (i.e. job vacancies).

The reasons behind this dysfunction are complex and they have been examined in a regional (lack of geographical mobility), sectoral (lack of occupational mobility) and educational (skills gaps or skills shortages) context. Due to recent demographic trends and forecasts in OECD countries, attention has also been focused on future demographic labour force mismatches that could arise if the labour force does not grow sufficiently to maintain production.

The consequences of labour mismatches for other labour market and economic variables depend on whether the economy is at full employment or facing unemployment. If the economy is at full employment then labour supply is rigid and the economic costs of labour shortages will be inflationary. The market solution implies that wages increase by above average rates in specific occupations, which in turn affect established wage differentials and –through imitation - may induce a wage-wage spiral. In addition, above average wage rises in an economy with high unemployment lead to lower employment creation, both in occupations with excess demand and in other occupations.

However, theoretically, another mechanism can be set in motion in the case of labour shortages that would prevent wages from raising. If instead of wage increases there is an increase in the supply of labour, (e.g. a baby boom or foreign immigration into the national labour market), then equilibrium can be reached at lower wage rates.

Data availability

Measuring job vacancies in Spain is not straightforward. The usual way is to register the quantity of vacancies at the end of the month managed by the Spanish Public Employment Service (PES). This is the only way to approximate employment creation and unfilled labour demand. However, this is not reliable, as the number of vacancies directly managed by PES can be as low as 15% of total vacancies.

Another way to approximate labour shortages is through wages. As argued above, those occupations experiencing labour shortages should increase their wages in order to attract either workers from other occupations, or unemployed persons who have no incentive to work at current salary levels. In Spain the Salary Survey provides information by occupation and economic activities.

Finally, there is data available on education levels and structures as well as on the annual supply of university degrees and qualifications from (upper and lower) secondary schools. Data on flows of people moving in and out of employment is also available. In addition the Employment Observatory, managed by INEM, provides information about qualifications in most demand and training needs, by sectors and economic activities.

Academic debate

The academic debate about labour mismatch, and its possible variants, has been focused on explaining high unemployment rates with persistent regional

differences in employment and unemployment rates. In the context of high unemployment, labour mismatch, as an explanation of labour shortages, has only attracted interest in recent months.

Fina et al.[1] distinguish between *general* and *partial* mismatches. A general mismatch refers to the aggregate mismatch between qualified and unqualified labour i.e. a lower than desirable general educational level of the labour force. A partial mismatch relates to existing differences between competences required and educational supply.

A general labour mismatch arises from a fall in demand for low qualified labour, where the unemployed are mainly low qualified workers. Moreover (it is at least implicitly acknowledged) because of age and, or, low educational levels, it is difficult to increase their employability.

Partial mismatches between labour supply and demand occur in specific occupations (sectoral mismatch) or in particular local labour markets (regional mismatch). Educational mismatch appears when technological change outpaces skills renewal[2].

General labour mismatch has been investigated as the cause of unemployment. The European Commission has also recognised that an inadequate educational level of the working population may have been the root cause of low employment creation in the European Union during the nineties. In contrast, partial labour mismatches appear mainly in periods of economic growth where employment creation may well lead to labour shortages, possibly combined with pockets of unemployment. As well as such skills mismatches, lack of geographical and occupational mobility might be the cause of these labour shortages (possibly combined with unemployment).

The issue of the coexistence of high unemployment rates in some regions and labour shortages, also for unqualified workers, is thus at stake. There has been a huge reduction in geographical mobility over the last thirty years. The current very low levels in Spain have been caused, among other things, by the evening out of real income per capita among the regions[3], by a lack of infrastructure and services for migrant populations such as rental housing[4] (house rental rates in Spain are 15%, compared to more than 50% in the Netherlands or Germany), and by existing unemployment benefits, particularly in some regions.

Looking at skills shortages, the idea of mismatches is to be found in Beveridge[5], with the relationship between unemployment and vacancies. Measurement of vacancies in Spain, as explained below, can be problematic[6]. However, in Spain De Juan[7] argued that structural unemployment (defined as vacancies unfilled due to a lack of sufficiently skilled workers) was very low, accounting for scarcely 3% of total unemployment[8]. Bentolila and Dolado[9] drew on the relationship between the different unemployment rates among occupations and educational levels and concluded that these differences had increased enormously in absolute terms in Spain, along with an increasing general unemployment rate. In relative terms, however, they concluded that skill mismatch had decreased over time. In the same vein, Blanco[10] pointed out that the relative dispersion of unemployment rates at different educational levels has decreased continuously since 1981. Since this dispersion rate was relatively low in 1992, compared to other European countries, past unemployment rate increases in Spain were not to be explained by this skills mismatch, nor were such differences with other European countries.

The mismatch between labour supply and demand can be expressed, not only in terms of unemployment, but also in terms of an inefficient use of human capital, expressed in over, or under, qualification, or both at the same time. In Spain, García Montalvo[11] argued that over-qualification occurred between 1985 and 1995, particularly in the case of women and young people. According to data from the Spanish Economic and Social Council[12] highly qualified workers competed with low qualified workers for the same occupations.

According to Toharia et al.[13], Espina Montero[14] and Fina et al. (2000), the Spanish working population (a proxy for labour supply) still has noticeable educational deficits compared with other European and OECD countries, deficits that – albeit to a lesser extent - are also noticeable among younger persons. Furthermore, the Spanish working population (a proxy for labour demand) presents a rather different educational structure compared to other major European countries, e.g. Germany, France, the UK and

1 Fina Sanglas et al. (2000): *"Cambio ocupacional y necesidades educativas de la economía española"*, en F. Sáez (coord.) (2000) *"Formación y empleo"*, ed. Fundación Argentaria

2 Santos Ruesga et al (2000), *"La relación entre educación y empleo. Una aproximación a su análisis económico"*, en Felipe Sáez (coord.), 2000,*"Formación y Empleo"*, ed. Argentaria

3 Bentolila, S. (1997): "Sticky labour in Spanish regions", European Economic Review, 41; Jimeno, J. And Bentolila, S. (1997) "Regional unemployment persistence (Spain 1976-94)", Labour Economics, 4, 1997

4 Consejo Económico y Social, CES (2000): "La movilidad geográfica", ed. CES

5 Beveridge W (1955), *"Full employment in a free society"*, in Ebstein, F. (ed.), *Modern Political Thought*, NY, Rinehart&Co.

6 Antolin, P. (1994) "Unemployment flows and vacancies in Spain", IVIE WP-EC 94-05 and Antolín, P (1999): "La curva Beveridge y las disparidades regionales en España", Papeles de Economía Española, N° 80

7 De Juan, O. (1996): *"¿Explica alguna teoría la causa del desempleo español?"*, en De Juan, Roca y Toharia, *"El desempleo en España, tres ensayos críticos"*, Albacete, Universidad de Castilla la Mancha

8 Note that the variable to explain is unemployment, and not vacancies.

9 Betolila, S. and Dolado, J (1994): "Desajuste laboral y migración interior en España, 1962-1986" en Padoa (1994): "Desajuste y movilidad del trabajo", Madrid, Ministerio de Trabajo y Seguridad Social

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Italy. Its main feature is polarisation, with an equal or higher number of highly qualified workers and of very low qualified ones, but with a much lower share of intermediate educational levels (lower and upper secondary school) than in the other countries. In dynamic terms, the average educational level is increasing progressively, but it is not based on these intermediate qualified workers. One explanation for this increase in post-secondary education could be the high unemployment rates experienced by young people in recent years, which has led to them delaying their decision to seek work.

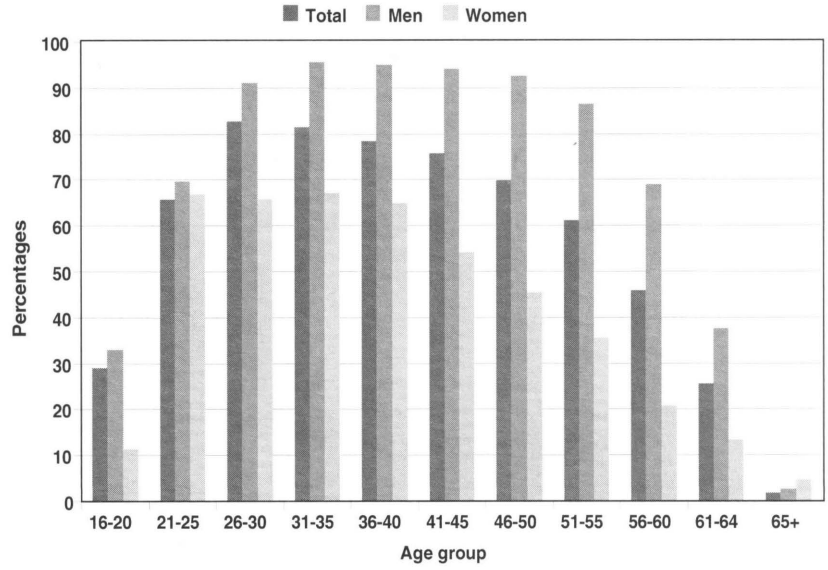
This polarisation in the educational level of the working population is a feature of all occupations. However, this structure is strongly affected by manual workers, who have much lower educational levels, and they represent the most rapidly growing occupational group, both in absolute and relative terms. The educational structure of non-manual workers is more in line with those of other major European countries.

After carrying out some projections of educational needs for the period 1999-2004, Fina et al. (2000) and Espina Montero (2000) conclude that the Spanish education system, such as it currently is, will deliver sufficient numbers of higher education degrees, though specific sectors may experience difficulties. Yet, the number of workers with an intermediate educational level (low and upper secondary school) may be under the estimated needs. This is a problem that has been addressed with several unsuccessful reforms of the secondary school system.

Labour shortages and skills gaps – the evidence in Spain

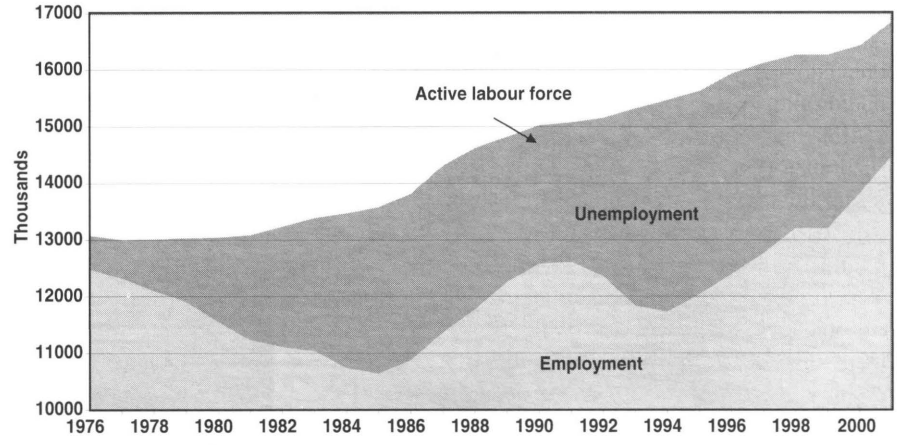
In spite of above average EU employment creation, Spain suffers the highest unemployment rate (15.9% according to Employment in Europe, 2000) and one of the lowest employment rates of all Europe (52.3%). Activity rates for women in Spain are also among the lowest in Europe at just 49% (Employment in Europe, 2000).

Graph 1. Employment rate by age group in Spain



Source: EPA, INE, 1999

Graph 2. Evolution of the active labour force in Spain, 1976-2000



Source: Spanish LFS, EPA.

In Graph 1 we show the employment rates by age group and sex. Three basic problems are reflected in this graph. First, the younger cohorts have the highest unemployment rates at the same time that formal schooling has been extended resulting in higher inactivity in this group. Second, women are still the untapped labour resource with most research in this area suggesting that child-bearing and lack of adequate and certified childcare facilities is seriously hindering higher activity. Third, the sharp drop for men after 50 reflects a wide use of pre-retirement schemes affecting these age groups, including use of disability as disguised early retirement[15], not unlike other European countries.

In Graph 2 we show the evolution of the active labour force from 1976 to 2000. Since 1994[16] employment has increased year on year (3.4% per annum), but unemployment remains at 14% (according to Spanish LFS figures) which is comparable to levels in 1983 (2 million 300 unemployed) when the country was going through a harsh economic crisis like most other European countries at that time.

With such employment and unemployment rates, is it possible that Spain suffers from labour shortages? The an-

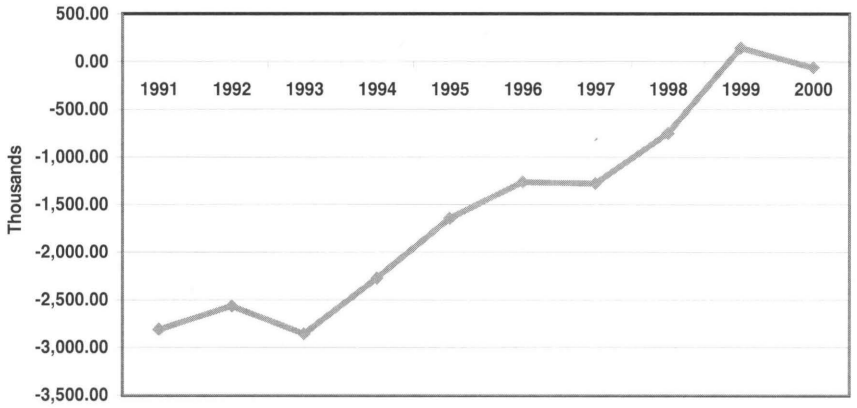
15 Villagómez E. "National programme for ageing workers in Finland: The view from Spain", Peer Review Programme 2000.

16 The break in the employment series between 1997 and 1998 is due to a methodological change, which does not change the trend in employment growth.

swer is definitely yes. In Graph 3 we show development, since 1991, of the administrative data from the National Public Employment Service (INEM) which shows that in 1999 the number of job offers (not strictly vacancies)[17] rose above the number of registered job seekers. This labour market tightness cannot be easily dismissed, although one has to take into account that not all the unemployed are registered at INEM. In fact, in the year 2000, the difference between survey and administrative data was around one million more persons in the survey count than registered unemployed. Another argument reinforcing this idea is the age structure of the population. Over the last 20 years, and projections into 2005, show a steady decline in the younger population (see Graph 4) and a rapid increase in the older population. There are regional differences and geographical mobility could be an important compensating force when labour market imbalances are found.

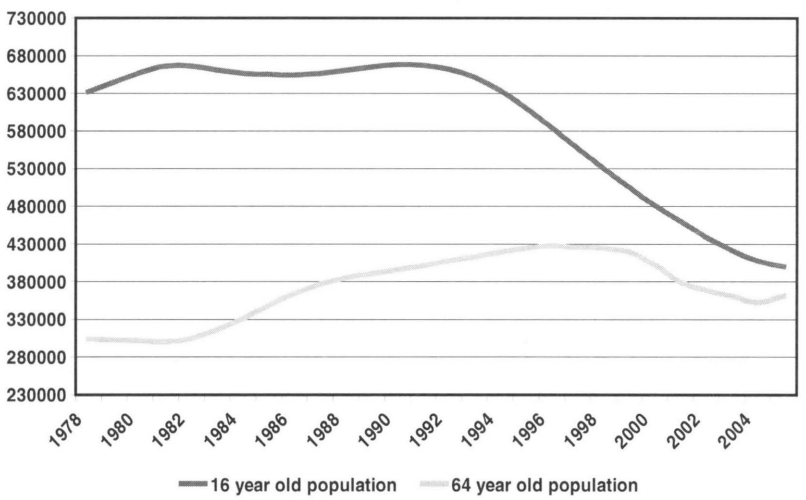
In the past Andalusia and Extremadura were regions with the highest emigration rates to the high growth regions of Spain (mainly Madrid, Catalonia and Basque Country). This, coupled with the fact that they experience the highest regional unemployment rates in Spain, means that they could, in principle, provide the missing labour for high employment growth regions and sectors. However, as pointed out above, there are strong forces countering this mobility, mainly wage inflexibility (and indeed working conditions in general through the increase of immigrants or the negative influence of rural unemployment benefits) as the main variable moving these people into regions with sectors suffering labour shortages. Also other elements play an important part such as housing problems, matching of skills needed with unemployed workers, the size of the hidden economy, reduction of income differentials between regions and other cultural factors. Furthermore, Andalusia and Extremadura have the highest unemployment rates in the nation (25% and 23% respectively for the

Graph 3. Difference between registered job-offers and registered job-seekers



Source: INEM (Public employment service) administrative data

Graph 4. Evolution of the population aged 16 and aged 64, Spain



Source: INE population projections

year 2000) and together they represent 35% of all unemployment in Spain, albeit concentrated in Andalusia (31%).

On the other hand, there have been above average wage increases for particular occupations and in sectors (e.g. construction), which can also be taken as a sign of shortages. This overall labour market tightness is reflected in a large body of evidence supporting the existence of labour shortages, whatever the source. Although there is a salary survey covering information by occupation and economic activities, the readily available information is presented only in three sectors, industry construction and services. According to this data, since 1996, there has been a significant difference in mean salaries only for construction, which could be interpreted as the existence of labour shortages in this sector and this seems to be in fact what is happening. In the other two sectors, at this aggregate level, there seem to be no differences, but as will be shown below, there is evidence that labour shortages exist in specific activities of the Spanish economy.

We now turn more specifically to indicators related to the issue of skills gaps. First we shall look at the educational structure of the Spanish

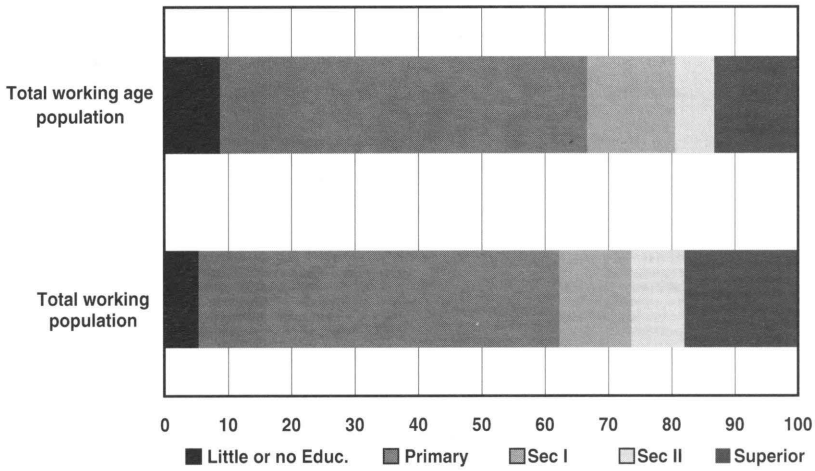
17 All labour contracts in Spain must be registered with INEM but only a small part of the actual vacancies are posted at INEM (or at present the Regional Public Employment Services). The information represented in the graph simply shows the difference between all job offers (including contracts that were only registered but not managed by INEM) with the registry of unemployed persons which includes those not receiving any unemployment benefits. Only 16% of job offers are managed entirely by INEM or the Regional Public Employment Services.

workforce (Graph 5). Over the last 25 years Spain has substantially improved school attainment levels. These improvements, as reviewed in previous sections, have not always reflected the skills demanded in the market. Although some over qualification for certain posts might be present and the causes remain to be further investigated, a simple contrast between what the population offers (supply of the total working age population) and what is being demanded (reflected in those who are in fact working) can give an idea of possible skill gaps in Spain. The difference in the structure reflected in the graph confirms that for higher secondary education and for university education demand might be higher than supply and thus some gaps might exist.

On the other hand, all the skills needed by employers may not be perfectly matched to what the formal educational system offers. This situation is typically reflected in surveys such as the Spanish Labour Force Survey. CEET (The Centre for Economic Studies of the Tomillo Foundation) has developed, in recent years, a methodology and collected first hand information from firms on different skills or competencies needed by different types of workers. Although most of the firms interviewed are exclusively from New Sources of Employment and NGOs[18], it is clear that there will be a demand for different types of workers with different skills at different levels. The workers may match the level of skills demanded or have deficits. In Graph 6 we show only one type or group of skills named technical skills (there are also human and conceptual skills included in the original work) for different types of workers. The maximum difference possible in this case would be 4, as interviewees were asked to rate needs, on the one hand, in a scale from 0 to 4 and, on the other, the present level in their firms also in the same scale.

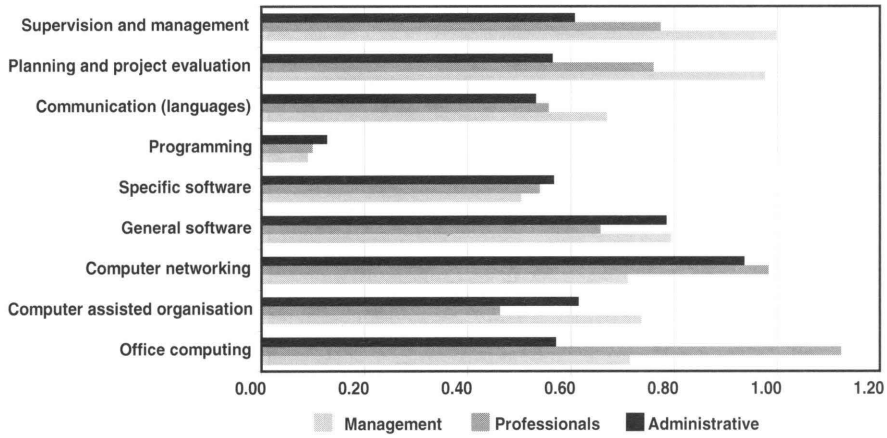
On average, management seems to have the largest technical skills gap followed by professionals and administrative personnel. On the other hand, the largest gap is found for office computing skills in the professionals' category.

Graph 5. Educational structure of demand and supply of workers



Source: EPA, INE

Graph 6. Deficits in technical competencies



SOURCE: Fundación Tomillo. Encuesta sobre los perfiles ocupacionales de las ONG de acción social

This is very important as these professionals are mostly university graduates, which shows that university education in Spain, and indeed in other countries, is not always accompanied by other relevant skills demanded in the market. On the other hand managers seem to have some gaps in skills inherent to the job they carry out, namely in supervision and management and in planning and project evaluation. Although the results shown here are statistically significant only for social service NGOs in Spain, the results in New Sources of Employment firms in other studies have similar patterns although the levels are different. One other important issue arising from this graph is that, due to new forms of work organisation, skills that could be thought of exclusively for managers are also needed by other types of workers and vice-versa (office computing skills required by administrative personnel are also needed by professionals and managers).

Case studies of skills gaps

We have carried out a review of existing information on the demand for immigrant labour (literature, Regional Employment Services and newspapers). The sectors in which there is evidence of labour shortages, as in other European coun-

18 CEET. Martínez, I., González, E., González, A. Tomillo Foundation (2001) *"New sources of employment in Madrid"*, and CEET. Martínez, I., González, E., González, A. (2000) *"Employment and volunteering in NGOs in the social field"*

tries, are agriculture (mostly seasonal agriculture), construction and some specialist areas of industry (traditional specialist workers in metal and extractive industries in some regions as well as new specialisations), catering and tourism[19]. As for the regional dimension of these labour shortages, they are concentrated basically in the Mediterranean regions, Andalusia, the Balearic and Canary Islands.

There is an important difference between low and high skilled occupations: Whereas demand for labour in agriculture and tourism is mainly for low qualified workers, in the case of construction and industry specialist workers cannot be found. The consequence is that in the former cases, the quality of work is the reason Spanish unemployed reject the jobs, so that labour shortages (but not skills gap) have arisen. Since immigrants have been able to access these low-qualified jobs in agriculture and tourism, wages have not increased, but have been kept at levels considered unacceptable for national unemployed. In the latter case, by contrast, the skills gap – insufficient specialist professional workers - has led to the labour shortage. In these occupations that require higher specialisation, such as some technologies or very specialised occupations in industry or construction, and to which most immigrants do not have any access, wages have increased above average. As an example, the employers association in the construction sector (CNC) intends to develop training programmes in Morocco, to train 500 persons up to year 2002 and 1,000-1,500 during the following years and bring them legally to Spain.

For the information technology (IT) sector Antonio Pulido[20], draws on data from the International Data Corporation (IDC) for 1999, based on an ample sample of 12,000 businesses, and completed with another two surveys on Spanish firms and another one undertaken by the Catalonian Government. He points out that the deficit in skilled professionals in the IT sector amounted to nearby 5% (about 22,000 workers) of the demand in this sector (already twice as high as in 1998). In 2003, moreover, this deficit could reach more than 100,000, about 13% of potential demand.

Case study 1: "Information and Communications Technology sectors in Madrid" (CEET)

A study carried out by the CEET[21] has examined and identified the most sought after professional profiles[22] in the field of information technology (excluding communications). The study has analysed job offers (an approximation to vacancies) in IT published in the Internet job pool *Infojobs.net* in May 2000 in the region of Madrid[23]. A total of 11,074 job offers have been explored, which at that time meant about 90% of job offers in IT in Madrid, and about 50% of total offers in this field in Spain. All this information has been complemented with 26 case studies of IT businesses carried out between January and February 2001.

The first and most important result obtained during the analysis is that in 32% of total job offers the question of "minimum study required" was explicitly answered with "None"[24]. This does not mean obviously that enterprises do not require any qualifications at all. This means that "qualification requirements" are not longer equal to "formal education degrees" in the field of IT.

This outcome is of great relevance for the design of public policies aimed at tackling the issue of labour shortages in the field of IT. On one hand, it provides an opportunity for people without degrees, either jobless or persons willing to change/improve their professional careers; they may be able to step, through adequate training but without need of formal degree, into the world of new technologies. On the other hand, this is a piece of good news for policy makers, who can find here a way to tackle bottlenecks that have arisen in this field.

The share of offers without formal education requirements varies greatly among the different occupational areas: the above mentioned average estimate of 32% rises to 38.5% in the area of training, or even to 54% in the area of helpdesk; conversely, only 8% of offers in consultancy did not require a formal degree.

As can be seen in the table, two occupational areas absorb about 80% of offers, either in the case of total offers as in the case of offers without a degree requirement: programmer/developer and systems.

The comparative analysis of the occupational profiles of offers with and without degree requirements highlights notable and significant differences in labour conditions for both groups of offers. In offers with no degree requirement wages are lower and the incidence of fixed-term and part-time contracts are much higher, though important differences exist also between occupational areas. The area of programmer/developer does not show big differences as far as labour conditions are concerned, but the areas of systems and helpdesk do offer significantly worse conditions between offers with and without degree requirements. An econometric exercise proposed in the study relates the size of the enterprise (as number of workers) to the requirement of a formal degree. It seems that larger businesses are more likely to hire workers without a formal degree in IT.

All the same, a glance at the description of technical knowledge requirements and tasks to be performed in both kinds

19 As of March 15th, and given that compulsory military service has been abolished and that efforts to attract people to the new professional Army have not resulted in a sufficient number of applicants, the Defence Minister has forwarded the possibility of engaging immigrants in some corps of the Spanish Army. This proposition is however in its very infancy so far.

20 Pulido A. (2001): "Informe sobre necesidades de empleo y formación en las Nuevas Tecnologías de la Información y las Comunicaciones"

21 CEET, Martínez, I., González, E., González, A. (2001): "Demanda de trabajo cualificado en Nuevas Tecnologías de la Información en la Comunidad de Madrid"

22 Professional profiles have been understood here as a wide concept that includes a description of the main tasks to be carried out by each occupation, studies and experience required, technical knowledge, human, technical and conceptual competences requirements and working conditions (fixed-term and part-time contracts incidence and wages).

23 A similar control sample extracted over a week in January 2001 with 2,743 offers was also analysed in order to control for possible changes. The main results of the study have been herewith confirmed.

24 This percentage can in fact be interpreted as a minimum quota, for there is about 20% of the offers that do not answer to the question.

of offers does not show significant differences among them. This could be interpreted as different labour conditions for the same occupations, but taking into account a differential factor (the formal degree) that operates for the enterprises as a signal of the possibilities of the candidate to hire.

The businesses interviewed have proposed measures and actions for public administrations, and themselves, to improve the supply of professionals in this sector. Taking into account the key role of vocational training in businesses in providing an increasing number of professionals in the sector, the difficulties highlighted by businesses should be dealt with. These are high economic costs, difficulty in combining work and training journeys and, given the high functional mobility within the firms, the possibility that trained workers abandon the business. As for formal education, they suggest quicker and better adaptation to technological progress of topics learnt at the universities as well as improving secondary schooling.

Occupational Areas	Distribution of total offers (%)	Distribution of offers without degree requirement (%)	Percentage of offers without degree requirement
Programmer/Developer	62	66	34.2
Systems	18	12	22.8
Consultancy	9	1.6	8.2
Training	5	6.25	38.5
Sales	2	2.4	36
Helpdesk	2	9.6	54.4
Other	2	1.1	73
Total	100	100	32.1

Source: CEET (2001)

Case study 2: Care Sector in Spain

There are two main demographic changes taking place in Spain, which directly affect the demand for care services for older persons and children. One of them is the rapidly ageing population and the other the increasing participation rates of women, especially those in the younger groups. Although there is a third phenomenon, which is the very low birth rate in Spain (1.06 children per woman), which is likely to lessen the need for childcare, the need to increase female employment will, in any case, push the demand for child care services over what is currently on offer.

Comparing the number of public places for childcare (33,164 in 1999 including publicly funded private institutions) and the total number of children (858,276) the provision so far is clearly inadequate. In addition no discounts in income tax or other relief are given to parents who opt for hiring a person at home. There is also the possibility of home services by local authorities to look after children, but recent analysis has shown that this is the smallest proportion of home services that are presently provided.[25]

On the other hand the number of persons over 65 is 6,858,209 and at present there are a total of 194,652 places in both public and private residences. Between 1995 and 1999 the ratio of places to total over 65 population has decreased slightly. In addition it is important to note that home services by local authorities for the elderly take up 86% of all resources[26].

The number of workers involved in these services is estimated at 150,000, with most of the workers concentrated in work for elderly or dependent adult people (around 70%).

One must be careful when analysing the potential demand for a service such as child or elderly dependent adult care, because it has not been fully developed as a service outside the home, particularly - though not exclusively - because of strong cultural attitudes towards the care of these family members. However, it is evident that the number of persons needed to cover these services is expected to increase over the next years[27]. In recent studies by CEET[28] it is clear that demand is now being hindered by a number of factors, among which the absence of service provision, lack of quality in the service and the high price of the service are important.

Public training for jobs related to caring, which vary widely in level of education needed, is already in place. According to the latest figures by INEM's occupational observatory, the placement rate (obtaining work after finishing the course or courses) of trainees taking up care related courses is 71%, which is much lower than other service related trainees (80%). Given this situation it will be important to monitor these indicators in order to provide the necessary properly skilled persons for the forecast rise in demand.

In addition to care by family members, the issue of informal activity in Spain for these activities must be mentioned. Another issue is the employment of home-help workers (48,000 persons in total), who may be combining their household chores with some care tasks for dependent members of the families they work for, albeit with no specific training. In both cases proper training and certification, along with other instruments (primarily price subsidies, tax rebates and public provision of services) are clear. However, working conditions and wages may create shortages that, in fact, are already appearing and the jobs are beginning to be taken up by immigrant workers.

Specific occupations that are expected to run into some problems are:

- home-help and health care assistants;

25 Villagómez, E (2000). " A brief overview of working conditions in the care sector in Spain" Country report for the project "Employment status of workers in the care sector. Data, qualifications training and pay", European Commission European Community in the framework of programmes and actions in the social and employment sectors.

26 Ibidem

27 CEACS. Fundación Encuentro (2001): *"Informe España 2001"*

28 CEET: Martínez, I., González, E., González, A. *"Nuevos Yacimientos de Empleo en Extremadura"* (1999) and *"Nuevos Yacimientos de Empleo en Andalucía"* (2000).

- technicians in child education;
- nurses and doctors specialising in geriatrics; and
- child care employees

Policies

While labour shortages caused by skills gaps are not on the political agenda, the new Immigration Law, passed in December 2000 and in force since February 2001, is a hot political topic. It limits entry to Spain, and the rights of illegal immigrants, much more than the previous Law. Besides legal, human rights and other considerations that are being discussed at present in Spain, employers are demanding more and more immigrant workers for certain sectors and in particular regions where unemployment is still as high as 20-25% of the active population.

The Spanish Government has recently announced a set of measures included in the Info XXI Programme for the Development of the Information Society, aimed at tackling the shortage of information and communication technology (ICT) professionals. This programme intends to provide one million people with basic skills in new technologies and 14,000 unemployed will be trained in new technologies; employers have committed to hiring at least 60% of them. However, the objectives set by this Info XXI plan are insufficient if compared to the activities of other European countries who are more advanced in developing the Information Society and addressing skills gaps.

In addition, co-ordination between Regional Employment Offices and what is left of INEM has proven to be very inefficient at handling of vacancies between regions. Some 100,000 jobs, it is reported, have been left vacant because of such co-ordination problems.

INEM and the Regional Employment Services (to which INEM has delegated responsibility for active policies) have an occupational observatory in place (which we have described above) that is in fact used to plan vocational and occupational training in those occupations where employment is growing fastest. In this sense policy to tackle any possible labour shortages can be said to be in place. However, the rapidly changing pace of many occupations and also tasks within specific occupations do not always make this possible.

Conclusions

To date, the issue of labour shortages as a consequence of skill gaps has not been given sufficient attention in Spain. Persistently high unemployment in the country, and in particular regions, has pushed the political and academic debate towards the analysis of unemployment structures (which covers just some of the problems behind labour mismatches).

In political terms the only issue being discussed is that of immigration and the need to cover some jobs in which wages and working conditions are unacceptable to unemployed Spaniards.

On the other hand the growth of IT jobs is accelerating and, as in other European countries, labour shortages are appearing. The fact that 32% of all job offers analysed in the field of IT explicitly do not require any formal degree is revealing that standards are being lowered as long as the worker knows how to carry out certain tasks needed for specific jobs. This is good news for unemployed persons without formal qualifications and a challenge for the public administration.

The lack of geographical mobility, rural unemployment benefits, and inefficient co-ordination between recently decentralised Regional Employment Offices and INEM are three areas in which there needs to be specific policy action to minimise the negative effects they have on labour shortages.

Elvira González
and
Elizabeth Villagómez

Sweden

Introduction and background

According to the National Institute for Economic Research (NIER - the Swedish government's economic research institute) the Swedish economy is still growing strongly, but at a decreasing rate. The most recent estimate for 2001 predicts that GDP growth will be 2.8% compared to a previous estimate of 3.4%. In 2002, assuming the US economy recovers, the NIER expects growth to increase to 3.1%. During 2000, employment increased by 90,000, the largest annual increase for 40 years, yet growth is expected to decline in the coming years. Currently, unemployment stands at 4.2% and is expected to decline to 3.6% in 2002. However, according to the NIER, there are still unutilised resources in the economy.

In Sweden, in both the academic and in broader circles, interest in labour shortage and the skills gap has been limited, as has interest in econometric modelling and forecasts of labour demand. However, with the recent tightening of the labour market some employer organisations have shown a renewed interest in these methodologies.

The National Labour Market Board, an important source of information on recruitment needs through its recruitment surveys, produces useful information on occupational needs. These have

some serious limitations due to the setting of subjective responses in hypothetical situations. Thus, the advent of quarterly survey of vacancies by Statistics Sweden, available since 3rd quarter 2000, represents a very significant advance in measures of unmet labour demand.

Projections of future labour demand and ensuing educational requirements are carried out by Statistics Sweden. The most recent projects are from 2001 to 2008. They do not publish quantitative tables of the projections (and so none are presented here) but rather rely on a description of areas in which labour shortages and skill gaps are to be expected.

While this report views popular perceptions of labour shortage and skill gaps as exaggerated, there is clearly evidence for their existence. Currently, labour shortages and skills gaps can be found in the health and care sector, in teaching and among highly educated IT workers. It is clear that if these shortages are not rectified there will be a recruitment crisis in these sectors within the next five years.

Labour shortages and skills gaps – the evidence

This report defines a labour shortage as an absolute lack of manpower without any regard to the particular type of labour demanded and supplied. The skills gap is the mismatch between demand and supply.

Labour shortage

There are two potential sources of labour shortage as defined above: a decreasing share of the population of working age (16-64) and a decline in labour force participation.

Demographic aspects of labour shortage

Recently, a lot of attention has been placed upon the age structure of the population and the possibility that it may inhibit growth in the long-term.

It would appear that the demographic concerns are somewhat exaggerated, at least in the medium–term. According to the most recent population projections in Statistics Sweden (2000), the population of working age (16-64) is expected to increase by 185,000 persons up to 2008 (see Table 1). The prime age labour force, i.e. those between 25 and 54 years of age will continue to decline.

Table 1: The Population Share for Various Age Groups 2000-2008 Prognosis.

Year	15-64	25-54	54-64
1990	64.2	63.7	9.8
1995	63.7	65.4	9.7
2000	64.4	64.0	11.6
2005	65.5	60.5	13.4
2008	65.7	59.4	13.4

Source: Statistics Sweden (2000)

The labour reserve

The last five years have seen considerable changes in the Swedish labour market. Unemployment has fallen sharply and employment rates have increased (as described in Table 2 below), but they have yet to reach the same levels as existed prior to the recession of the early 1990s.

Table 2: Employment and Unemployment Rates 1990 -, 2000.

Year	Employment rate	Unemployment rate
1990	84.5	1.6
1995	72.2	7.7
2000	77.9	4.7

Source: The Labour Force Surveys.

Moreover, there is also a considerable labour reserve, both in terms of persons and hours. The labour reserve is comprised of the unemployed, those working part-time due to lack of work and discouraged workers[1]. As demonstrated in Table 3, the labour reserve in 2000 is roughly nine million hours greater than in 1990. Five million of these hours are accounted for by higher unemployment, three million by discouraged workers and just over a million by involuntary part-time work.

Consequently, in absolute terms, there is little basis to suggest that there is a current shortage of labour in Sweden. The main concern remains that participation rates of the 55 to 64-year olds remain relatively high.

The skills gap

The current situation

The main source of information on the current skills gap is from National Labour Market Board surveys. The most recent survey, in AMS (2001), notes a recent increase in job growth but states that "this is on the point of decelerating in several occupations that have been short-handed for a considerable length of time". This has occurred in several graduate occupations, particularly within the caring and technical sectors. AMS (2001) sees no remedy to these problems in the short-term and expresses concern about the possibility of maintaining standards in these sectors. They do suggest that the severity of this deceleration has been reduced by the high levels of supply in occupations with the strongest job growth

The IT sector continues to grow, and shortages in higher-education trained specialists still remain, such as system architects, developers, designers and programmers. However the supply of workers in less educated IT occupations, such as network technicians and IT technicians and database administrators, has improved greatly.

Recruitment difficulties in manufacturing have begun to increase in most

Table 3: The Labour Reserve 1990, 1995 and 2000

Year	Unemployed		Part-time		Discouraged		Total number
	Persons	Hours	Persons	Hours	Persons	Hours	Of hours
1990	751	2.77	1917	2.00	366	0.83	5.61
1995	3327	12.77	3599	4.58	1549	4.94	22.29
2000	2031	7.77	2639	3.31	1302	3.74	14.82

Note: Persons in hundreds, hours in millions

Source: The Labour Force Surveys.

1 Discouraged workers satisfy all the criteria for ILO unemployment apart from actively seeking work.

recent months, especially in the area of CNC/NC operators and mechanical engineering in general.

Others sectors show evidence of a skills mismatch at the regional level. Thus for example, while the total number of jobs in construction has not grown significantly there is evidence of increased regional mismatch. This is particularly the case in Stockholm. Indeed the Stockholm County Labour Market Board reports distinct signs of impending slowdown of employment growth due to recruitment problems and a growing housing shortage.

The other major publication on current recruitment is "The Labour Market Tendency Survey" produced by Statistics Sweden. Its most recent survey (November 2000) indicates more serious recruitment difficulties than the AMS (2001). Indeed, despite the large increase in the labour reserve highlighted above, employers claim that the current shortage of labour is as serious now as it was in 1990.

While it is possible that skill requirements today are both higher and correspond less to the supply of skills currently available, we believe this not to be credible. It is more likely that the during the mid-1990s, employers became accustomed to a very good supply of labour and that when the labour market tightened somewhat they experienced the less serious actual recruitment problems as relatively acute. Indeed one should treat all surveys asking general questions about hypothetical recruitment needs with great caution.

Medium term forecasts

Statistics Sweden conducted research into labour demand and has estimated occupational shortages between 2001 and 2008 (SC 2001). Labour demand is based on employment projections by the Ministry of Finance, LU (2000). Assuming that there is no change in the education system, it is estimated that the demand for labour will continue to increase but at a slower pace and that a shortage in occupational skills will arise. This is despite the considerable labour force reserve of 350 000 persons (unemployed, discouraged workers and those in active labour market policy programmes).

The main points of this argument are:

1. The current shortage of care workers of all categories is expected to become more acute up to 2008.
2. The shortage of teachers is expected to increase across the board, with the greatest shortages for those teaching blue-collar skills such as carpentry and car mechanics. Teachers at pre-school day-centres will also be in short supply.
3. Despite a recent increase in the supply of university educated engineers, shortages are expected to continue. It is estimated that by 2008, the shortage will amount to around 10% of the current employment level. This shortage will also spread to lower level educated engineers who previously have not experienced such conditions.
4. Information technology workers with university level education amount to less than half of current recruitment needs and demand for these skills is still considerable and will continue to grow.
5. There will be a continued excess supply of those educated in the social sciences and arts subjects.
6. The supply of labour (measured in terms of students completing their training) in occupations within hotel and restaurant trade is currently twice the recruitment requirement. Current expressions of shortage from employers in this sector may possibly be explained by these students working in other sectors.

SALA (2001) published a major report on the recruitment needs in Swedish municipalities for the next ten years (including most care workers and nearly all teachers). It underlines the fact that post-second world war baby boomers are over-represented in the municipal sector and that their impending retirement will increase the current shortages in those sectors particularly. They believe that if measures are not taken there will be a serious shortage of care workers (all categories), teachers, pre-school teachers, social workers and technicians with university education and IT workers.

Table 4: Newly registered vacancies per month during 2000

Month	Newly registered
jan	40137
feb	54149
mar	59114
apr	46125
may	58097
june	38702
july	23361
aug	45555
sep	41528
oct	41752
nov	41900
dec	32037

Source: The Swedish National Labour Market Board

Table 5: Newly registered vacancies, 1994-2000

Year	Newly registered
1994	40137
1995	54149
1996	59114
1997	46125
1998	58097
1999	38702
2000	23361

Source: The Swedish National Labour Market Board

Since the third quarter of 2000, Sweden has had a regular quantitative survey of vacancies and job openings. Previously, vacancy statistics were based on reported vacancies to the Public Employment Service (PES) which, though compulsory, only accounted for between 30 and 40% of the total labour market and were fraught with other quality deficiencies as illustrated in Tables 4 and 5. The current data is based on a survey addressed to 19,500 establishments in the private sector and various public corporations. It thus excludes the main part of the public sector. For the private sector, it provides excellent data by economic sector and region. Its weakness is that it lacks information on occupation and educational requirement and that sample size does not permit a very detailed breakdown by economic sector.

From tables 6 and 7, we observe that during the 4th quarter of 2000 there were 63,100 job openings in the private sec-

tor[2], which corresponds to 2.6% of all jobs in the private sector. Of these 26,600, should be considered vacancies[3] or unmet labour demand (28,900 in the previous quarter), which corresponds to 1.1% of all jobs. Most job openings and by far most vacancies in the private sector were to be found in Business (including financial) Services. This sector is followed by sectors C, D & E and G.

Although we cannot adjust for seasonality, the evidences points to the current decline in job openings and vacancies as defined above.

From Table 8, we observe that the counties that include the three major metropolitan regions of Stockholm, Göteborg and Malmö account for 63% of all job openings. Stockholm alone accounts for 38% of job openings and 43% of the unmet labour demand.

The skills paradox: An alternative view of skill and educational mismatch

While this section is termed "an alternative view" it is by no means one without support within a broad sections of the Swedish establishment. The questioning of the existence of the significant or serious skills gap can be found from prominent academics (Åberg 200), The National Labour Market Board (AMS 1999) and Ministry of Industry, Employment and Communications (Ds 2000).

Employers claims of labour shortage and skill gaps

Much of the data presented on skills gaps and labour shortage emanates from various surveys of recruitment needs, primarily carried out by the National Labour Market Board (AMS). In AMS (1999) an analysis of 5,000 employers who had reported a vacancy to the PES found that 35% of the firms experienced difficulties in recruiting. However, 23% of the employers had specified qualifications for the vacancy that were higher than were necessary for the job and so in only 12% of all the cases was there a real skills gap. Thus study concludes that "a large part of the recruitment problem claimed by employers is more an ex-

Table 6: Number and percentage of job openings and vacancies by industry* in the PRIVATE SECTOR, 4th quarter of 2000

Industry	Number of job openings	Percentage job openings	Number of vacancies	Percentage vacancies
A+B	656	1.0	292	1.1
C+D+E	13639	21.6	5711	21.2
F	3561	5.6	1944	7.2
G	10969	17.4	4503	16.7
I	5273	8.4	1796	6.7
J+K	18366	29.1	9740	36.2
M+N	3658	5.8	864	3.2
H	3431	5.4	797	3.0
O	3563	5.6	1242	4.6
Total	**63147**	**100.0**	**26903**	**100.0**

Source: Statistics Sweden (2001)

Table 7: Proportion of job openings and vacancies to total number of jobs by industry in the PRIVATE SECTOR, 4th quarter 2000

Industry	Job openings	Vacancies
A+B	1.9	0.8
C+D+E	1.8	0.8
F	2	1.1
G	2.5	1
I	2.5	0.8
J+K	4	2.1
M+N	2.9	0.7
H	4.1	1
O	2.9	1
Total	**2.6**	**1.1**

*** Industries (NACE-1)**

A+B	Agriculture, forestry
C+D+E	Manufacturing industry, mining, electricity, gas and water supply
F	Construction industry
G	Wholesale and retail trade
I	Transport, storage and communication
J+K	Financial institutions, insurance and real estate companies, business activities and institutes for research and development
M+N	Health and social work
H	Hotels and restaurants
O	Cultural and other community and personal service activities

Table 8: Percentage of job openings and vacancies by region and proportion of job openings and vacancies to total number of jobs by region in the PRIVATE SECTOR, 4th quarter 2000

Region	Job openings	% job openings	Vacancies	% vacancies	Proportion job openings in region	Proportion vacancies in region
Stockholm	24073	38.1	11423	42.5	3.8	1.8
East middle Sweden	7641	12.1	3417	12.7	2.2	1.0
Småland and the islands	4389	7.0	1960	7.3	1.9	0.9
South Sweden	8364	13.3	3528	13.1	2.6	1.1
West Sweden	10218	16.2	3814	14.2	2.1	0.8
North middle Sweden	3135	5.0	1046	3.9	1.6	0.5
Middle Norrland	2497	4.0	698	2.6	2.8	0.8
North Norrland	2826	4.5	1015	3.8	2.5	0.9
Total	63147	100.0	26903	100.0	2.6	1.1

2 A job opening occurs when an employer has commenced active recruitment outside the establishment but is yet to fill the post.

3 A **vacancy** or **unmet labour demand** is defined as an unoccupied job opening to be filled immediately. Compared to a job opening unmet labour demand (vacancies) excludes occupied.

pression for a subjective wish rather than an objective need".

An over-educated workforce?

A central premise of what Atkinson (1999) terms the "transatlantic consensus" is that the number of unskilled jobs have declined due to international competition and the introduction of new technologies and forms of work organisation. The excess supply of unskilled workers is seen to be an important explanation of unemployment in Europe. This view is not unchallenged. Åberg (2001) finds that while unskilled jobs in Sweden have declined, this has been balanced out by an increase in the educational attainment of the workforce. He also finds clear evidence of workers being over-qualified for many jobs.

In Ds (2000)[4] the Ministry of Industry, Employment and Communications expands on the over-education theme (or rather, the lack of high-skilled jobs) by pointing out that although the Swedish labour force is very highly educated, the tasks performed by that labour force at the work place do not utilise available competence, or match those skills and expertise. They also point out the importance of regional problems in this sparsely populated country. Many regional labour markets are un-differentiated and thus give rise to considerable mismatches. In contrast to traditional Swedish mobility policy, the report does not advocate increased migration but sees more promise in increased commuting and, above all, to attempt to create a more differentiated regional labour market through, for example, Regional Growth Pacts.[5]

Work organisation is seen to be a key factor in determining whether the competence of employees is utilised. Despite the widespread rhetoric on the flexible organisation of work, it would appear that this has not occurred to a significant and sufficient extent (see NUTEK 1996; NUTEK 1999).

Finally, the report underlines that competence cannot be utilised if individuals are excluded from the labour market. It is highlighted all individuals in Sweden do not have the same opportunity to succeed in the labour market, due to "non-production related factors such as ethnic background and sex. As a means of dealing with these problems the government has considered the amalgamation of anti-discrimination legislation into one body of laws applicable to all disadvantaged groups.[6] Another possibility considered is the use of public procurement to ensure a diversified work place. Among the specific measures mentioned are:

- an intensification of special efforts to educate immigrants in the Swedish language; and
- improved caring services to facilitate female labour participation.

Policies to tackle labour shortages or skills gaps

Labour shortage age structure and immigration

As mentioned above, Sweden's demographic structure may become a problem in ten years time. The long-term survey of the Swedish Economy (LU, 2000), (*långtidsutredningen*), suggests that in order to deal with this problem, it will be necessary to attract immigrants to Sweden. However, Broomé et al (2001) point out that since the mid-1980s, Sweden had great difficulties in integrating "foreign" residents in the labour market, due to changing skill and work organisation requirements. These skills will also be those required in the future and with other EU countries also trying to attract mobile high-skilled workers from oversees, this would not appear the be a promising strategy to addressing future labour shortages.

Active labour market policy

A more straightforward means to deal with an eventual labour shortage is to include the current labour reserve into the labour force. This is one of the main functions of Swedish active labour market policy. Sweden has long a tradition of active labour market policy, originally, designed to promote labour occupational and geographical mobility. Some key features of this are:

Employment services

The institutional infrastructure consists of a national network of PES. All vacancies are to be reported to the PES (though in estimates suggest that only 30 to 40% are reported). While there have been no evaluations of the PES in Sweden during the 1990s, there is little reason to believe that the earlier positive results still do not hold.

The unemployed and others in the labour reserve have frequent contacts with the PES as it provides not only matching services but also plays the central role in both active and passive labour market policy. Both of these instruments are used to try to maintain an active supply of labour. For example, in an attempt to reduce unemployment in the care sector (one of the main sectors with recruitment difficulties) the following measures were proposed:

- from May 2001, all part-time employees in the health and care sector are required to produce documentation from their employer that demonstrates that desired working time is not available; and
- labour market training courses in health and care shall only be provided if local employers (the municipality, for example) take measures to reduce part-time unemployment.

Another important development in Sweden has been the liberalisation of private employment exchanges and temporary work agencies. Private employment matching services are not an important phenomenon in Sweden. In contrast, temporary work agencies (TWA) i.e. those hiring out its own employees to client firms are a significant recent innovation. While still only 0.7% of all employment is to be found in the TWA sector, job flows are appreciably greater and they do appear to have played a role in matching labour in short supply, particu-

4 This is a document written by employees of the Ministry of Industry, Employment and Communications and signed by the Secretary of State.

5 These pacts are similar in construction to EU regional pacts and have been inspired by work with The Structural Funds, see Ds 2001:15.

6 In practice this would entail that all disadvantaged groups would benefit from the strong legislation against sexual discrimination. This needs to come into the text

larly in the care sector and more recently in the education sector, see Bergmark (1999).

Labour market training

While labour market training has moved away from narrowly defined traditional vocational training courses and can be provided by private companies and universities, it must be vocationally oriented. In recent years, courses related to technical occupations and ICT, manufacturing, services and the care sector have dominated the supply of retraining programmes.

Vocationally oriented retraining programmes have been extensively evaluated. Studies from the 1980s (see Axelsson, 1989) found positive effects for employment and earnings, whereas later studies showed more negative effects (reference), which was possibly due to the increased volume of training, as unemployment increased, accompanied with a decline in programme quality.

Thus the role of vocational training programmes to solve short-term skill shortages would appear to be limited. The only escape clause for these programmes is if the selection problem in evaluation has not been solved in practice.[7]

Finally, Carling and Richardson (2001) when examining the effect of several types of labour market policy measures on the probability of getting a job., found that measures with some form of placement at the establishment gave higher employment probability than pure vocational training.

Geographical mobility

In a large, sparsely populated country, policies to promote geographical mobility are of particular relevance. In 1995 the government re-introduced a mobility grant available to the unemployed, or to those who have completed a labour market retraining programme and who received a job offer at a location where commuting is not feasible. The grant amounts to 1222 Euro and includes a free furniture removal service. Evaluations of the mobility grants have given mixed results. Harkman (1988) found that grants, together with the activities of the PES, have promoted greater mobility. However, Westerlund (1995) and Storrie and Nättorp (1997) found few or very marginal positive effects.

On-the-job training

The National Labour Market Board can, under certain circumstances, finance training within the firm. Employers may be eligible for this support if they intend to expand their activities or if there is a shortage of work. The maximum daily payment is 6.6 Euro per hour and a maximum of 6133 Euro per employee.

An important recent development is a bill to be presented to Parliament, which introduces an "individual competence saving scheme" (IKS). While details have yet to be made public, one suspects that this will involve employees being able to save a part of their wages in a fund which can be used for 'human capital investment' i.e. training. The employer may also contribute and it is likely that the bill will envisage collective agreements to regulate the type of education in such cases. Making the contributions to the fund tax deductible would be a further incentive, as would a state contribution to the fund for low-wage workers.

Recently, The National Labour Market Board have suggested that labour market retraining schemes should be divided into two categories: a) labour shortage programmes; and, b) activisation programmes for high priority groups. They further suggest that those currently employed should also be eligible for these "labour shortage programmes". Additionally, they suggest a higher rated student grant to those in training schemes designed to fill a skills gap.

Analysis and conclusion

Labour Shortage

In order to increase the effective aggregate supply of labour three factors must first be taken into account:

- demographic factors will not be a significant problem in Sweden for the next five years;
- the level of labour utilisation is still well below the level prior to the recession of the early 1990s; and
- that there are signs of a current slow-down of the Swedish economy.

Labour market shortages caused by the drop in the participation of older workers can easily be addressed through the re-integration of excluded groups into the labour market. Thus, much relevant policy focus can be found in *a labour market open to all.* Evidence suggests that the skills required of Swedish employees in the near future are not those that the non-Swedish labour force can realistically supply. In light of this evidence, calls for an increase in immigration to solve labour shortages and the skills gap are both ill advised and premature.

Sweden has a long tradition of active labour market policy, has had high levels of participation and there is little to indicate that together with the current favourable macroeconomic climate that participation will not continue to increase. The major problem, as mentioned above, is the low participation of immigrants. There are emerging policy discussions aimed at sharpening discrimination laws and the possibility of using public procurement to promote ethnic diversity at the work place. A solution to this problem, however, is not yet apparent.

Skills gap

One should be somewhat sceptical about the perceptions of a widespread lack of an educated workforce and serious skill mismatch. By most standards, the Swedish labour force is well educated and this high educational level has recently grown, particularly during the mid-nineties. Surveys of employers with general questions on recruitment difficulties are not reliable measures of skills gaps and labour shortages. At the very least such surveys should be related to concrete

7 While the econometric techniques to take account of section to programmes pioneered by Jim Heckman may in principle have solved some problems remain. Selection to programmes can be a complicated process and econometric technique can never fully account for unobserved heterogeneity.

cases of attempts to fill vacancies. Moreover as mentioned above, the most recent forecasts of the Swedish economy (March 2001) and the new vacancy data described previously indicate that the economy, and labour demand, is slowing down.

This is, of course, not to say that recruitment is always easy or without cost. In the short to medium term, the most serious problems, are care workers, teachers and highly qualified IT workers. The newly introduced quantitative data for the private sector show that unmet labour demand is greatest in construction, Business and Financial Services. There is also evidence that shortages in construction are to a great extent due to a regional mismatch, with the most severe problems being felt in the Stockholm area.

Apart from the traditional means of active labour market policies discussed above, there may be other policy options. It appears that many of the recruitment problems in the public sector are related to wages and working conditions. While this may be partly attributed to financial constraints in the public sector, this is not the only issue. A particularly unattractive feature of many jobs in the public sector is the low employment security associated with the disproportionately high intensity of temporary contracts. The revision of the Employment Protection Legislation in 2000 may have contributed to an improvement of this situation.[8]

There will always be a tendency to regional mismatch of skills and labour shortage problems in such a large and sparsely populated country as Sweden. The traditional Swedish approach to regional mismatch has been to promote migration, i.e. to move workers to jobs. The Regional Growth Pacts represent a different approach in their attempt to create differentiated labour markets within the more disadvantaged areas. While such a policy is probably the only means of addressing regional imbalances in the long-term it remains unclear if this policy can be successful, especially when you do not cite any evidence from studies addressing this issue.

A tentative glance to future

In the coming five years, estimates of shortage and skill mismatch appear to indicate an intensifying of the skill gaps in sectors and areas that are currently in short-supply, such as teachers, care and highly educated IT workers. In the longer-term, the major challenge will be posted by the departure from the labour market and into retirement of those born during the post second world war baby boom. As these individuals are over-represented in the public sector, there will be a continuing demand for and a continuing shortage of care-workers, teachers and some other similar professions. While this generation is under-represented in the IT sector, it is a truism that this sector will continue to grow and thus continue to require a technically proficient labour supply. If the Schumpeterian view of technological innovation has any worth, (and we believe it does), one would expect the labour requirements of the coming years to focus not so much on depth but rather breadth, i.e. of standardising and implementing the new technologies. This requires a highly and broadly educated flexible work force able to perform within the new organisation of work that the new technology has itself made possible.

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United Kingdom

Labour shortages and the dynamic efficiency of the UK economy

Introduction

The British debate about skills problems over the last two decades has covered a wide intellectual and practical ground. The debate has brought the policy, practitioner and research communities into closer communication with each other but the central problem remains: the apparently insufficient volume and quality of education and training in the UK. This extends from one end of the spectrum of attainment to the other: from the large numbers of people with major problems with the basic skills of literacy and numeracy through to the lack of entrepreneurial training and expertise among graduate scientists and engineers.

The work of the National Skills Task Force (1999, 2000a-c) has given special momentum to both the policy debate and the funding of research intended to inform it.

This paper provides a commentary on selected aspects of the skills problem focusing on the relationship between lack of skills and 'dynamic effectiveness' of the economy.

Data on labour shortages

Vacancies reported to the public Employment Service (ES) are roughly estimated to represent about a third of all vacancies at a point in time (Birtwhistle, 2001). However, the picture they give is biased towards less skilled and manual occupations by the fact that they represent the outcome of a relationship between ES and those employers who find their services useful, at least for certain types of recruitment. The much smaller client-based records maintained by private jobs agencies are similarly biased towards the principal recruitment businesses concerned.

The main regular surveys carried out in the UK are the Confederation of British Industries (CBI) Industrial Trends Survey (1958-), the British Chamber of Commerce Quarterly Economic Survey (1985-), and Skill Needs in Great Britain (1990-98). However, for present purposes, their usefulness has been eclipsed by the Employers Skills Survey conducted in 1999 as part of the Skills Task Force research programme (National Skills Task Force, 2000c; Bosworth *et al.*, 2000) and repeated with modifications in 2000, though findings from the latter have not yet been published. The features of these four main sources differ significantly (Table 1). Blake *et al.* (2000) provide a comparison of the first three.

The conceptual distinctions that have come to the fore in the technical discussion of how to identify the extent of the skills problems faced by organisations have, in the main, been resolved, at least in the design of the ESS, in favour of seeking to map 'skills deficiencies' as shown below.

Skills deficiencies arise through the presence of:	Survey category
• hard-to-fill vacancies	*'external recruitment difficulties'*
of which those due to 'a lack of job applicants with the required skills, qualifications or work experience' are:	*'skill-shortage vacancies'*
• a significant proportion of existing staff in a particular occupation who lack full proficiency at their current job:	*'internal skills gaps'*

Skill shortages and dynamic effectiveness

The latter half of the 1990s has seen the achievement of macroeconomic stability with low inflation and low unemployment but, alongside the successful elements of UK economic performance, there are still problems which undermine the momentum of long-run economic growth. These are wrapped up with matters relating to skills but there are several elements to the wider debate about what amounts to the disappointing dynamic effectiveness of the UK economy.

- Productivity is low relative to that of the larger EU economies (van Ark and McGuckin, 1999).
- Entrepreneurial drive is weaker than it needs to be in the face of international competition.
- The science base has not been harnessed sufficiently for business purposes. Institutional conditions for effective university-business co-operation have still not generally been created.
- Product market competition is not vigorous enough in some areas, allowing less efficient producers of goods and services to survive on the back of the domestic market.
- Investments in education, initial training and continuing professional development are inadequate: as regards employer behaviour, too much reliance is still placed on voluntarism and exhortation, despite continuing skills deficiencies.

Thus a deeper understanding of the nature of the UK's skills problem in this wider context would be desirable.

Skills problems

This section deals with three sorts of evidence in considering labour constraints on economic development: the situations of individuals as regards earnings and the risk of unemployment associated with different qualifications and occupations; the extent of skills problems and how they are perceived by employers; and employment projections.

Individual investment in human capital

Rates of return

A study of skills problems might start off by examining the benefits to individuals, employers, providers and society as a whole of investing in education and training. Only the first of these however, has been subject to substantial investigation in the UK. Measurement of employer rates of return and 'social' rates of return are still at a rather preliminary stage and calculations that relate to the investment returns obtained by *providers* of education and training seem to be non-existent, at least for the UK. At a technical level, the production of rates of return is not a straightforward exercise and the results have to be interpreted with care (Dearden *et al.*, 2001; Harmon and Walker, 2001).

Referring only to individual rates of return, the main results seem, nonetheless, to be robust enough to summarise here without immediately smothering them with heavy caveats caveats (Table 2):

Table 1: Surveys of Skill Shortages

	CBI Survey	BCC Survey in Britain Survey	Skill Needs Survey (ESS)	Employers Skills
Period	1958-	1985-	1990-98	1999-2000[b]
Frequency	1958-71: three times yearly 1972-:quarterly	Quarterly	Annually	In 1999 and 2000 only
Geographical coverage	UK	UK	GB (UK for 1998)	England
Sectoral coverage	Manufacturing	Manufacturing and services	All businesses, except AFF[a]	All employers except AFF[a]
Size of enterprise or establishment	All sizes	All sizes 25 or more employees	Establishments with	Establishments with 5 or more employees
Sample size in1998)	800-1500 companies	9000 companies drawn from BCC affiliated members	4000 (plus 400 for Northern Ireland	27000
Method of data collection	Postal survey	Postal survey	Telephone interview	Telephone interview (23000) and face-to-face interview (4000)

Source: Blake et al. (2000) and Bosworth et al. (2000).

Notes:

(a) Agriculture, forestry and fishing.

(b) Details relate to the 1999 survey. The results for the 2000 survey have yet to be published.

- there are significant returns to acquiring basic literacy and, especially, numeracy and these returns are still obtainable by doing so in adult life;
- despite enormous post-compulsory educational expansion, private rates of return to academic qualifications are still high for both men and women at GCSE/'O' level and significantly higher for women than men for GCE 'A' levels and probably also for first degrees;
- the returns to lower level vocational qualifications are negligible – this includes not only the more recently introduced courses but also those which have a more established pedigree such as City and Guilds qualifications;
- those with lower ability are better off if they take GCSE qualifications rather than NVQs below Level 3;
- when allowing for the time taken to get the qualification (longer for academic courses, such as GCE 'A' levels and first degrees, than for vocational courses such as ONC/OND and HNC/HND), the returns to intermediate and higher vocational qualifications (NVQ Level 3 and above) are quite comparable to those for equivalent academic qualifications in the case of men but are lower for women;
- those with lower ability among the group taking intermediate or higher vocational qualifications do significantly better than if they take the equivalent academic qualification;
- the returns to 'professional qualifications' are especially high but they are more difficult to assess because of the ways in which they are obtained and the presence of effects which are partly attributable to the degree-level qualifications often also held by recipients;
- analysis of the limited data that enable subject-specialism to be identified suggest that there have been significant relative gains by graduates in science and engineering and, to a lesser extent, in business and social sciences (Harkness and Machin, 1999)

The above analysis derives from indicators that do not distinguish qualifications by specific subject-matter or particular vocational or occupational routes or, indeed, common types of career histories that link initial education /training to subsequent labour market experience, let alone more complex ones, for example, those qualifying in science who go into financial services or craft-trained people who take jobs in office administration. Moreover, time series estimates of these rates of return are not generally available. To get a sense of *changing* conditions, it is necessary to examine relative wage and unemployment data which are much easier to obtain.

Table 2: Selected Rates of Return

	%	
	Men	**Women**
Academic		
GCSEs/'O' Levels	12-21	10-19
GCE 'A' Levels	15-18	18-23
First Degrees	10-28	21-26
Vocational		
City & Guilds Lower	-	n.a.
City & Guilds Higher	4-7	n.a.
City & Guilds Advanced	7-10	n.a.
NVQ2	-	-
ONC/OND	7-12	8
HNC/HND	6-15	9
Professional Qualifications	15-35	20-40
Academic – Vocational	Annualised returns	
NVQ Level 3 and above		
ONC/OND	5½-9½	6½
GCE 'A' Levels	7½-9	9-11½
HNC/HND	5-12	7
First Degrees	3-9½	7-8½

Source: Author, derived from National Skills Task Force (2000d).

Note: Range of results reflects the sources of data used: National Child Development Survey (NCDS), International Adult Literacy Survey (IALS) and Labour Force Survey (LFS). However, other ranges based on different primary features, notably, the assumptions behind the calculations, are potentially equally important.

Relative wages and unemployment

The occupational distribution of earnings for both men and women began to spread out in the 1980s (Table 3). In the case of men, in 1975 only health professionals had average weekly earnings which were as much as twice those of the least skilled manual occupations. By 1998, corporate managers, science and engineering professionals, teaching professionals and other professional *and associate professional* occupations fell roughly into that category; meanwhile health professionals were earning at three times the rate of the least skilled. In the case of women, in 1975, the average earnings of all four professional groups were twice those of the least skilled women and whilst health professionals moved substantially ahead in parallel with men, the other professional groups increased their relative earnings to a more modest degree. Associate professionals also caught up to the extent that, by 1998, they recorded similar relativities with respect to the least skilled as those recorded by *professional* women in 1975.

Amongst other non-manual occupations, there were also substantial gains in relativities usually in the more skilled occupational areas of the broad category concerned: protective services increasing faster than personal services; buyers, brokers and sales representatives increasing faster than other sales occupations. Amongst the skilled crafts only engineering trades shared in the benefits of the widening earnings distribution. Other skilled manual workers made no significant gain in their relative earnings.

Overall, the results indicate that despite the rapid expansion of post-compulsory education those occupational groups most affected have gained most

Table 3: Occupational Relative Earnings of Men and Women

SOC		Male			Female		
		1975	1985	1998	1975	1985	1998
1.2	Corporate managers and administrators	1.57	1.85	2.35	1.60	1.88	2.44
1.3	Managers/proprietors in agriculture and services	1.02	1.25	1.48	1.09	1.31	1.53
2.1	Science and engineering professionals	1.53	1.67	1.93	1.92	1.88	2.29
2.2	Health professionals	1.97	2.53	3.05	2.05	2.55	3.32
2.3	Teaching professionals	1.58	1.58	1.83	1.96	1.93	2.29
2.4	Other professional occupations	1.46	1.70	2.05	1.86	1.95	2.39
3.1	Science and engineering associate professionals	1.19	1.45	1.57	1.40	1.66	1.94
3.2	Health associate professionals	1.18	1.20	1.42	1.50	1.45	1.88
3.3	Other associate professional occupations	1.45	1.71	2.14	1.51	1.73	2.00
4.1	Clerical occupations	0.92	1.01	1.02	1.07	1.18	1.29
4.2	Secretarial occupations	1.21	1.23	1.10	1.10	1.25	1.39
5.1	Skilled construction trades	1.04	1.00	1.08	1.31	1.01	1.32
5.2	Skilled engineering trades	1.16	1.28	1.42	1.28	1.30	1.65
5.3	Other skilled trades	1.08	1.10	1.13	0.98	1.01	1.05
6.1	Protective service occupations	1.20	1.53	1.44	1.57	1.92	1.97
6.2	Personal service occupations	0.93	0.95	0.89	1.04	1.03	1.03
7.1	Buyers, brokers and sales reps	1.18	1.41	1.51	1.25	1.64	1.85
7.2	Other sales occupations	0.89	0.90	0.83	0.82	0.92	1.00
8.1	Industrial plant and machine operators, assemblers	1.09	1.14	1.19	1.03	1.11	1.17
8.2	Drivers and mobile machine operators	1.16	1.18	1.13	1.40	1.34	1.34
9.1	Other occupations in agriculture, forestry and fishing	0.83	0.84	0.90	0.82	0.95	0.96
9.2	Other elementary occupations	1.00	1.00	1.00	1.00	1.00	1.00

Source: Derived from Table 7.1 & 7.2, National Skills Task Force (2000d). Based on the:New Earnings Survey

Note: Weekly earnings relative to those of other elementary occupations (SOC 9.2)

significantly in terms of weekly earnings. From the point of view of the skill shortage debate this suggests that there has been dynamic excess demand in which supply grows but demand grows faster.

The other indicator which helps to take stock of what is happening in relation to labour markets for different skills is the unemployment rate. Some changes in occupational classification and policy-induced changes to educational and training qualifications mean that comparisons over time can only be made roughly and at a much higher level of aggregation than is the case for earnings.

Adopting similar stages in the economic cycle, the National Skills Task Force (2000d) has drawn attention to the situations in 1979, 1990 and 1999. Their data are reproduced in Table 4.

Employer perceptions of skills problems

The short-run indicators of recruitment difficulties appear to indicate no further significant exacerbation of the position. However, their interpretation is not straightforward. The very short-run indicators may not be continuing to rise but they have stabilised at historically high levels and the average duration of vacancies registered with the public employment service is nonetheless still growing, yet the CBI manufacturing labour shortage index is barely above its long-run average for skilled labour and slightly below for unskilled labour.

The sources of evidence reviewed above point to the relatively recently commissioned Employers Skills Survey (ESS) as by far the best on skills problems, even though it has been conducted only in 1999 and 2000.

Internal labour market positions

The incidence of 'skill gaps'

According to the ESS conducted in 1999 (Bosworth *et al.*, 2000, p.62), a fifth of establishments with five or more employees reported that 'a substantial proportion [at least a third] of their staff, in one or more occupational areas, were less than fully proficient in their jobs.' Among establishments employing the occupation concerned, the proportions reporting that all their staff were fully proficient was about two thirds for most occupations, including the least skilled but for personal and protective services, sales staff and plant and machine operatives the proportion fell to about 55% (*ibid.*, Table 3.1). The proportions reporting nearly all staff being proficient averaged about a quarter, somewhat nearer a third for the three occupations noted. These three occupations were those with the highest proportions of establishments reporting that 'over half, some but under half, or very few' were proficient. This is the technical definition of skills gap adopted in the analysis of the survey findings: sales were the highest under-performing category where 14% of establishments reported the problem in this way, compared with 5% for professional staff, the lowest group.

The survey classification of degree of proficiency is somewhat awkward

Table 4: ILO Unemployment Rates by Broad Occupational Group and Qualification Level (1979, 1990, 1999) %

Occupational Group	1979	1990	1999
Professional	1.0	1.1	1.9
Intermediate	1.6	2.5	2.4
Skilled non-manual	2.6	4.1	4.0
Skilled manual	3.5	5.3	5.6
Partly skilled	5.3	7.3	7.9
Unskilled	8.9	10.6	12.4
Total	**5.7**	**6.9**	**6.1**
Qualification Level			
Degree	2.4	2.5	2.8
Higher vocational/ Sub-degree	2.5	2.7	3.0
A-Level or equivalent	3.2	5.4	4.8
GCSE/O Level or equivalent	4.1	5.8	6.5
Other	6.2	8.4	8.0
No qualifications	7.1	11.2	12.4
Total	**5.7**	**6.9**	**6.1**

Source: National Skills Task Force (2000d), Tables 7.3 and 7.4

when it come to expressing the incidence of degrees of proficiency in terms of numbers of *people* rather than *establishments* involved. Using some quite crude assumptions, it has been estimated that about 1.9 million employees were regarded by their employers as being less than fully proficient in their jobs and, of these, 860 thousand employees could be said to be implicated in skills gap situations as defined above.

Given the nature of the data and the scale of less than fully proficient performance, it would be desirable to explore the characteristics behind and consequences of the 1.9 million people involved. To date, however, the reporting of key findings by the Skills Task Force has concentrated on the 860 thousand people in 105 thousand establishments experiencing more substantial skills gaps. Compared with the occupational structure of all employees in the survey (Table 5), the occupations disproportionately involved in under-performance situations are sales staff and plant and machine operatives; those least involved are the professional and associate professional occupations. Thus, when analysing skills gaps in terms of people rather than establishments (as above), personal and protective occupations become less problematical.

External labour market operations

In addition to the skills deficiencies of existing employees, organisations experience hard-to-fill vacancies, some of which relate to lack of applicants with the required skills, qualifications or work experience.

Almost a third of surveyed establishments had vacancies; half of these had hard-to-fill vacancies; and half of those with hard-to-fill vacancies had skill-shortage vacancies. In terms of the number of vacancies (i.e. rather than the number of establishments with vacancies), there were 560 thousand vacancies in total (about 3% of employment), 255 thousand hard-to-fill vacancies, and 110 thousand skill-shortage vacancies.

Half of all external skill shortages are found in manufacturing, wholesale and retail trades and business services, but then so is half of total employment. The main difference between the proportion of skill shortages and proportion of employment is found in construction which has 13% of the former but only 4% of the latter.

In occupational terms, differences between the distribution of external skill shortages and employment among occupations are rather more striking that is the case for sectors (Table 5). About 40% of shortages are found among associate professionals and craft and skilled occupations which represent only about a quarter of employment. Occupations which are significantly less subject to skill shortages than we might expect from their levels of employment are managers, clerical/secretarial staff and, most of all, other manual occupations.

Skills gaps and skill-shortage vacancies: the relationship between them and their consequences

In principle, the ESS would also enable skills gaps and skill shortages phenomena to be analysed *together* for the same establishment. Such analysis is not yet available and so care has to be exercised with commenting on the two sets of findings in an integrated fashion, i.e. as if they portray some 'representative' establishment. What the results produced so far do reveal is that recourse to recruitment of *new* employees is a significant response to the presence of skills gaps amongst *existing* employees. This is especially noticeable for personal and protective occupations but applies much less so to managers and clerical staff.

On average, about 30% of establishments with skill gaps (i.e. a tenth of all establishments) had increased recruitment in response. If they were trying to fill such vacancies at the time of the survey, vacancies induced by skill-gap situations would account for very roughly a third of all establishments with vacancies and, given the nature of the vacancy, an even higher proportion of establishments that reported hard-to-fill and skill-shortage vacancies.

Overall, the ESS suggests that skill gaps cause most trouble for the establishments involved in two areas, customer service and quality of products, with about half of establishments mentioning these impacts. In the former, skill gaps in all occupations, not just in sales, are reported as having an effect. The same is true of the latter, where problems with quality arise not just from skill gaps among craft and related occupations and among plant and machine operatives, but from professional and unskilled employees alike. Difficulties with organisational change and increased costs were reported by over a third of establishments

Table 5: Internal Skill Gaps and Skill Shortages by Occupation

	Managers and administrators	Professional	Associate professional and technical	Clerical and secretarial	Craft and related	Personal and protective service	Sales	Plant and machine operatives	Other	Total
Employees in sample	15	15	8	16	9	8	11	10	8	100
Employees in skills gaps	15	7	5	15	8	11	16	15	10	100
Skill-shortage vacancies	7	8	17	9	22	11	13	9	3	100

Source: STF Employers Survey 1999. Derived from Tables 2.4, 2.24, 3.3 and 3.11 in Bosworth et al. (2000).

In the case of skill-shortage vacancies, the impacts are rather different. Difficulties with customer services were cited by 60% of establishments, especially those with shortages of skilled and unskilled manual workers. Difficulties with quality, delays in new product development, loss of business to competitors, and increased costs were each reported by 40% of establishments.

The most significant general finding, however, is that the impacts of skills problems upon dynamic efficiency, market strategy and costs arise from a wide range of occupational areas. The notion of *crucial occupations or skills* which need to be given special attention does not really emerge from the evidence.

Employment projections

Since the late 1970s, the Warwick Institute for Employment Research (e.g. Lindley, 1980 ed.; Lindley, 1994; Wilson, 1994; Wilson, 2001 ed.) has provided annual medium-term projections of the structure of UK employment. The latest findings are, in summary, as follows:

- Employment growth will vary between 0.5 and 1.0 % p.a. such that over the next decade employment will increase by over 2 million, concentrated in professional and associate professional occupations, and caring, leisure and sales occupations.
- Of this increase, about two-thirds of new jobs are expected to be taken by women, almost three quarters will be in the form of part-time employment (including significant increases for men), and there will be a slight increase in self-employment.
- Despite this growth in employment, unemployment will probably stay roughly constant because labour supply will grow at a similar rate to that of employment.
- About 60% of the increase in supply will be due to demographic change, namely through growth of the population of working age and 40% will be due to a continuing rise in female activity rates.
- Labour force participants with university degrees or equivalent qualifications are expected to rise by over 2 million and, whilst roughly the same growth is anticipated on the demand side for such people, it is also expected that graduate employment will diversify into non-traditional areas of the industrial and occupational structure and into work for smaller enterprises.

Generic skills and advanced IT

The skills sought after in each occupation go beyond those which are particularly associated with the occupational context concerned. The notion of generic skills has been given increasing prominence in the UK debate and has also been explored in the ESS. Establishments attribute greater importance to them in the case of skill gaps than for skill-shortage vacancies (where 'technical / practical skills' are cited in half the cases). But, aside from the more occupationally-specific technical skills, employers tend to identify the same generic skills that matter most for both types of skills problem: communication skills, team working, and customer handling. The other generic skills are all mentioned but do not assume the same significance.

Another area of considerable concern has been IT skills both as a generic skill capable of being deployed at various levels and as a specialist occupational area. The latter is addressed briefly in Box A.

A regional footnote

The evidence on employer opinion and employment projections is also available by region, subject to sample size considerations. In general, given the relative tightness of regional labour markets and the pattern of industrial location, we would expect London and the South East to experience the highest rates of skill gaps and skill-shortage vacancies, with the East and South West in a similar position. The North East, as the most depressed of the English regions would be expected to have the lowest rates of skills problems reported by establishments. This is borne out by the regional results. Similarly, the growth of employment, especially in the more skill-intensive occupations, is projected to be greater in the 'east, south east and south west', as they continue to expand more rapidly than other UK regions, though growth in London will be at the UK average. Where the regional issue comes to the fore is in the lack of underlying dynamism among the weaker regional economies. The relatively low qualification rates among the work force in those regions is both a symptom of this as well as a contributory factor. The relative lack of skills shortages is therefore not a cause for complacency, quite the reverse.

Policies to tackle skills problems

The Government's own diagnosis of the skills problem and policy responses to it are strongly linked to the perceived lack of appropriate education, training and life-long learning. This operates at

two levels: one is concerned with skills and competitiveness and the other focuses on the role of education and training in preventing and correcting labour market disadvantage and its consequences for social exclusion. Here we are primarily concerned with the former 'dynamic' issues but it is obviously not possible to separate them out entirely from those that concern the 'social well-being' issue. Space permits only a brief reference to a selection of policy initiatives from among the many which have been launched by the Government in the last four years.

There has been some rationalisation of the existing pattern of advisory and financial support for 16-19 year-olds introduced as pilots or full-blown national initiatives. These include Education Maintenance Allowances (a pilot) for those in full-time education from low income families; a right to time off for paid part-time study or training for those in employment (with no special derogations relating to small companies, part-time employees, or length of service); a major new re-configuration of careers and other personal advisory services which emphasises the integration of the advisory process; enhancement of minimum training allowances for work-based training. Other innovations, dealing with adults, include the establishment of a national framework of Individual Learning Accounts during 2000 aiming to achieve 1 million opened accounts by 2002.

In trying to raise the dynamic capacity of the economy, successive governments have struggled with the policy design problem, experimenting not just on the labour market front with measures to increase the volume, pattern, and quality of initial training and (more recently) continuing professional development (Galloway, 2000) but also with different approaches to 'industrial strategies', 'foresight initiatives', and various forms of science and technology policy etc.

Overall, they aim to operate on both demand and supply to increase the amount of flexible, certificated training provision which improves individual 'employability' and helps enterprises, especially small firms, to take more advantage of the scope for investing in their labour forces. The ***University for Industry***, planned as an intermediary body taking course content and learning materials from such providers as colleges of further education and offering information and advice to 2.5 million people per year by 2002 is one such innovation.

Another, much more substantial development is the replacement of the independent local Training and Enterprise Councils by a national ***Learning and Skills Council*** with 47 local arms from 2001. This re-organisation of the arrangements for co-ordinating local provision and injecting more strategic thinking at national level is intended to have an annual budget of over £6 billion to cover its responsibilities for the education and training of an estimated 5 million learners. Yet the National Skills Taskforce (2000a/b), itself, warns of the need to ensure that the DfEE retains its own capacity for high-level analysis and strategy making.

The Government has also created a new framework within which problems relating to the lack of regional dynamic are to be addressed. ***Regional Development Agencies*** were established in 1999 for the English regions and are responsible for promoting sustainable development which addresses the need for social and physical regeneration as well as the design of more specific strategies on competitiveness, such as 'skills action plans'.

Meanwhile, the Government has continued to develop the training system to promote more ***high quality work-based training***. The rationale behind this effort is to strengthen basic incentives for employers and individuals to engage in training for competitiveness. This is somewhat separate from the New Deal initiative which is essentially aimed at reforming how the disadvantaged are enabled to enter or return to the mainstream labour market. Both training elements of the 'competitiveness' and 'social exclusion' strategies are, however, underpinned by mainstream educational reforms and the construction of a more transparent qualifications system. The latter attempts to maintain continual consultation among employers and training providers within the framework of sec-

Box A: Advanced IT Skills

There has been considerable attention paid to the supply of IT skills. Yet the evidence for their importance in the UK tends to follow that of the USA where concern over skill shortages has inevitably arisen as the US has experienced roughly eight years of expansion. Most prominent in the US media have been claims of shortages in the IT area but these have also been accompanied by reports of shortages of construction labourers and craftsmen, registered nurses, and teachers. Veneri (1999) concludes that dramatic stories of shortages, high earnings potential and an over-heated hiring climate for information technology workers do not really square with the facts. The evidence is more in keeping with a conclusion that stresses *the similarities of their situation with that of professional specialists in general.*

The UK's ITCE (Information Technology, Communications and Electronics) Skills Strategy Group (1999) report covers electronics as well as ICT. It points to the fact that, although, these labour market may have 'cooled' at the turn of the millennium and the supply from education is expanding, the long-term scenario is, in effect, one of continuing dynamic excess demand. However, employers in ICT and, to a lesser extent, in electronics were still not using the device of raising pay as much as might be expected from claims of serious shortages in the media. This may be because of a reluctance to dislocate professional wage relativities within the organisation, allowing contracting out to take the strain of higher costs for a time. The latter area is very poorly mapped and, somewhat ironically, the Group identifies the lack of an adequate labour market information system to be a major problem. This greatly limits the quality of diagnosis from the public policy perspective and fails to generate the signals that individuals and employers need in order to act effectively.

tor/occupation-based training organisations.

The two main concepts for monitoring purposes are Work Based Learning for Adults (WBLA) and Work Based Training for Young People (WBTYP). At end-September 2000, almost 36 thousand were engaged in WBLA and over 300 thousand in WBTYP. Roughly 40 % of those leaving WBLA are in work six months afterwards and about 50 % gain a qualification or formal credit towards one. About half of the WBTYP participants were in Advanced Modern Apprenticeships and a quarter were in Foundation Modern Apprenticeships. Overall, about 55 % of all leavers gained full qualifications, 70% entered jobs, and 10 % took up further education and training.

How such statistics on the outcomes of a changing policy design should be interpreted in a tightening labour market presents something of a problem when provision for establishing 'counter-factuals' is very limited. No further comment will be made here, except to note three main criticisms of these programmes: the level of qualification is too low, their scale in relation to overall need is too modest, and the deadweight is high (i.e. the proportion of individuals concerned who would have obtained training in the absence of the programme).

Conclusions

Although *educational reform* is intended to contribute to the solution of the problems of both dynamic deficiency and social exclusion, this is a blunt instrument with largely medium-to-long-term results for the *economy*. There is a danger that education is being generally over-sold as a socio-economic strategy.

Moreover, rate of return analysis suggests that three aspects of UK education and training policy are probably questionable (though, in each case, there are also important caveats). First, the proliferation of low level vocational qualifications as substitutes for initial academic qualifications, usually taken at or soon after minimum school-leaving age, is not in the interests of the least able young people they are intended to help. They offer poor returns *unless* they are used as a stepping stone to something higher.

Second, expanding the range of full-time provision in school sixth forms and in further education colleges may be no more beneficial for the individual than promoting vocational routes involving the co-operation of employers and part-time study. In particular, the least able students who stay in full-time education would probably be better off in intermediate level vocational provision.

Third, whilst there are a number of reasons advanced to justify expanding conventional academic higher education, the evidence suggests that it is probably wrong to assume that, for those benefiting from the increased opportunity, this route is necessarily more financially beneficial than is the case for more vocational qualifications.

Labour market policies that focus on enhancing skill supply via boosting initial training in certain sectors and occupations seem not to alter the fundamentals in the ways which are needed. It is as if the problem is the *lack* of skill shortages rather than their presence, since the former reflects the under-performance of organisations in the economy more than does the latter.

Recent research has shed important further light on the natures of skills gaps and shortages. Skills gaps, in the form of employees who are not fully proficient in their work are spread throughout the occupational structure and cling to the most and least skilled occupational contexts alike

Skill shortages, through a lack of potential recruits with the particular skills, qualifications and/or work experience, embody concerns about generic skills as well as the technical skills associated with the occupation. There is some evidence that these are becoming more important as they enhance the proficiency with which occupation-specific skills are deployed in changing work environments.

The employment structure is shifting in favour of those occupations that require continual opportunities for learning. In addition, as the employment rate rises and a higher proportion of the labour force is drawn into work, at the same time as the population ages, it will be imperative to make work-based learning a much more effective activity.

Although there are significant areas of actual and potential skill deficiency in the UK economy, the policy debate needs to focus not so much on the tackling of very specific situations in sectoral-occupational labour markets but more with creating the capacity to responds to whatever the changing supply and demand situation presents. The current supply-side orientation of policy is too concerned with the behaviour of individuals in the 'markets for learning and labour' and too little with issues relating to organisational effectiveness which influence so strongly the dynamism of the economy and the quality of working life that results.

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