



Recruitment problems, labour supply and workers' mobility

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Abstract

This summary report analyses the matching of labour supply and demand, as well as workers' mobility and labour supply for the unemployed and other groups currently outside the labour force in Finland.

The report, compiled by the Secretariat of the Economic Council, contains an assessment of the current situation regarding recruitment problems, as well as an overall review of the factors affecting job-matching, occupational and regional worker mobility and general incentives for easing labour supply problems. In addition, the policy response to mismatch problems is discussed. The report draws upon three independent studies commissioned by the secretariat for this purpose.

Keywords

recruitment problems, labour supply, labour mobility, mismatch, employment incentives, unemployment trap

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FOREWORD

Alongside economic growth and favourable changes in employment rates during recent years, problems in finding a suitable workforce have intensified in Finland. Simultaneously, numbers of unemployed people remain and the employment rate is low, both historically and in comparison with other Nordic countries. This has raised many questions: on the precise nature and severity of these problems, on future prognoses, on the factors underlying the demand-supply mismatch and on what should be done to secure improved job-matching and an adequate supply of labour.

This report, conducted by the Secretariat of the Economic Council, aims to shed light on these issues. The project was based on the recommendations of a group of experts mapping existing research. New research projects were begun on:

- Employment incentives
- Recruitment problems
- The occupational mobility of labour

Other research projects already running were taken into account in the choice of project themes, such as a project on the regional mobility of labour (Myrskylä, 2006) and one on anticipating educational needs (prepared jointly by the Ministry of Education and Ministry of Labour). In addition, a review of the availability of workforce, commissioned by the government employment policy programme (TYPO, 2006), was taken into account and discussed by the group of experts. An intermediate report of the project was presented to the Council of Occupational and Education Affairs (VNK, 2006a).

The purpose of the report was to provide a more detailed analysis of labour supply and mobility than that presented in the report on globalisation published by the secretariat in December 2006 (VNK, 2006b). The focus of the report is on the efficient utilisation of working age domestic labour resources. Therefore, questions related to retirement decisions have deliberately been omitted. In addition, the role of immigration as an additional source of labour receives only limited attention.

The original report, published in Finnish, consists of four parts. The introductory section and summary in Part 1, compiled by the Secretariat of the Economic Council, contains an assessment of the current situation regarding recruitment problems, as well as an overall review of the factors affecting job-matching, in particular occupational and regional worker mobility. Also, general incentives for easing the labour supply and policy responses to mismatch problems are

discussed. Part 1 is extensively based on the sub-segments reported in parts 2– 4 of the original report. In Part 2 reports the research of Heikki Räisänen and Juha Tuomala, "What are recruiting problems? – answers based on micro data". Part 3 consists of the research of Ilkka Virjo, Simo Aho and Hannu Koponen, titled "The occupational mobility of workers in Finland 1995-2003." In Part 4, the research of Pertti Honkanen, Markus Jäntti and Jukka Pirttilä is presented under the title, "The incentives of labour supply in Finland 1995–2004".

The present report in English is a slightly abridged version of Part 1 of the original report. Pekka Sinko was the person responsible for the project within the Secretariat. Iiris Koskela-Näsänen assisted in data processing and accounted for the technical details of the report. Valtteri Ahti contributed to the analysis on skills needs (section 4.3), while Pekka Myrskylä of Statistics Finland provided the necessary data on regional mobility (section 3.2). Minna Autio translated the report into English. Before publication, the English text was edited at Donesolutions Oy.

Vesa Vihriälä Secretary General, the Economic Council of Finland

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1 BACKGROUND INFORMATION AND DEFINITION OF THE PROBLEM

Alongside improved employment statistics, problems in finding suitable workforce and a worsening of the labour shortage at a worrying rate have provoked lively discussion within the Finnish political economy during recent years. Employers have repeatedly cited problems in finding qualified labour. Many statistical indicators measuring the imbalance between labour supply and demand – such as the number of vacancies, the period during which vacancies must remain open and recruitment problems experienced by employers – have constituted recent signs of increased problems in finding workforce.

At the same time, Finland has untapped labour force potential: just under 75% of the population between the ages of 15 to 64 participates in the labour market and, of these, 8% are unemployed. Despite recent positive developments, the number of jobless is almost double that of the 1980s i.e. before the slump of the nineties. The 65–74 age group is almost completely outside the labour market: only five percent of this group formed part of the labour market in 2005. As long as unemployment remains involuntary, it can also be described as a shortage of work: part of the population is unable to find work that matches its skills.

Since the general, rather moderate wage trend does not indicate an "overheating" of the labour market, for the time being the labour shortage seems be a passing phase affecting only certain sectors, occupational groups or regions and its extent cannot be estimated based on observations at the aggregate level. In other words, it is a question of a mismatch between demand and supply. Despite ample labour reserves, for one reason or another, these reserves are unsuited for open positions. Both skills shortages and the skills/demand mismatch can be linked to regional differences or general employment incentives.

Labour shortages also tend to constitute trends that affect certain sectors, groups of professions and regions. Today's worst-affected sectors and regions are not necessarily the same as they were six months ago. The relatively thin labour markets which characterise a country the size of Finland are easily imbalanced by various large-scale and demanding but short-term projects, such as in the house or yacht-building sectors.

The structural change in production currently taking place in Finland is profoundly affecting job matching, as reflected in the loss of industrial jobs and, conversely, in increasing numbers of open positions in the service sector. Such a development is somewhat aggravating labour shortage and job-matching problems. New, open positions require skills and work experience of the kind that few of the unemployed possess, creating challenges with respect to the regional mobility of workers.

On the other hand, the skills shortage is also due to the aging of the working population and the fact that a growing number of middle aged workers are more likely to enter (early) retirement. The need to replace these attritional losses is closely linked to skills shortages in sectors which are not growing as such, but where the average age of employees is high. Municipal employees are an example of this.

Although skills shortages and matching problems have yet to put a major brake on economic growth, for many reasons they could become more extensive and severe in the future. Firstly, if rapid economic growth continues and labour demand grows, tens of thousands of new workers may be required annually. Secondly, as the current structural change in production continues, this will move workers from jobs in industrial production to the service sector. Thirdly, in the future, globalisation is likely to require smoother, faster readjustments in production structures. Fourthly, apart from a higher rate of attrition, an aging population will result in a worsening domestic labour shortage, while diminishing the opportunities and incentives for those who are now part of the workforce to adapt to regional and vocational mobility.

On a slightly longer time-scale, the labour shortage can be alleviated by means of educational policies. With shrinking younger age groups and so-called pullfactors playing their part in steering educational choices, it will be difficult to find students for every sector. It is therefore obvious that the role of adult education will be emphasised in the future.

On the other hand, greater international mobility of workers can help in dealing with problems related to the labour shortage, so long as foreign workforce can be attracted to Finland. There are already clear signs of this in the building sector. On the other hand, growing mobility may also worsen the labour shortage if Finland is not an attractive place of work and residence in the eyes of workers whose input is most needed. In any case, it is evident that, in the future, growing attention should be paid to the analysis and follow-up of these problems, and the search for potentially preventive measures related to labour shortages.

This report focuses on examining questions regarding the availability of skilled labour in Finland. Particular focal points are the nature and extent of, and reasons for, the current mismatch problems. In addition, an attempt is made to propose certain chosen methods that might alleviate the stated problems. The study is broadly based on the results of three new research projects: a study of recruitment problems by Heikki Räisänen and Juha Tuomala, a study of occupational mobility by Ilkka Virjo, Simo Aho and Hannu Koponen and a study of labour supply incentives by Pertti Honkanen, Markus Jäntti and Jukka Pirttilä. In addition, complementary material is presented on recent developments in recruitment problems, regional labour mobility, challenges to the education system and the utilisation of foreign workers.

The structure of the report is as follows: Chapter 2 sets the stage by reviewing recent trends in employment, evaluating existing labour reserves and characterising current mismatch problems in the light of recent observations. Chapter 3 focuses on labour mobility as a potential remedy to mismatch problems, considering three aspects: occupational mobility, regional mobility and the use of foreign workforce. In Chapter 4, potential causes of immobility and the inadequate supply of skills are considered. First, general employment incentives are discussed in the light of the results of a micro-simulation study. Second, potential factors reducing regional mobility, such as inadequate housing supply, are discussed. Finally, challenges related to anticipating future skill needs are considered in brief. A summary of the key findings, as well as some tentative policy responses, are presented in Chapter 5.

2 EMPLOYMENT TRENDS AND LABOUR RESERVES

2.1 Employment trends after the economic slump

After the slump, the employment rate has developed fairly favourably in Finland at the level of the national economy. After the figures troughed in 1994, the number of employed persons had grown by almost 390,000 by 2006. During the equivalent period, the employment rate grew by 1.5% annually.

This general employment trend conceals remarkable structural changes e.g. in how jobs are distributed between various sectors. Job losses in primary production continued after the slump, while employment in the industrial, construction and service sectors grew at an annual rate of over 2% until 2002. After 2002, employment in the service sector continued on an upward path, while that in the industrial sector declined. Since the beginning of 2004, the development in employment rates has turned in a slightly positive direction, while structural change has continued. In 2005, the employment rate in the industry sector rose slightly compared to the previous year, but the majority of new jobs, around 75%, were generated in the service sector. In 2006, the employment rate continued to grow swiftly, remaining strongly concentrated in the service sector. The average employment rate increased in the industrial sector too, but development was uneven in its various sub-sectors.

After the slump, the number of citizens in the Finnish workforce (15–74 year olds) grew by over 120,000. Such growth was highest amongst the older age groups, increasing the average age of workers. The growth in the labour supply is based on the relatively evenly combined effect of both the growth in the number of workers of working age as well as more active labour market involvement in general.

However, the supply of labour has increased at a slower pace than labour demand (as measured in terms of employment) whereupon the number of jobless has shrunk. While, according to the statistics of the Labour Force Survey, there were 408,000 unemployed jobseekers in 1994, the related figure in 2006 was 204,000. Despite this, the number of unemployed persons is relatively high compared to the level before the slump. In 1980, there were approximately 120,000–130,000 unemployed.

Although there are still high numbers of unemployed, their share of the labour force is beginning to approach the equilibrium level of employment, based on empirical studies using the so-called NAIRU method (see e.g. Nickell, 2006). According to this theory, further growth in employment and efforts to push

unemployment under the equilibrium level – without structural changes – are difficult and merely lead to wage inflation.

There are also remarkable regional disparities in unemployment. Whereas the average level of unemployment in 2006 was 7.7%, it was only 5.5% in Itä-Uusimaa and 3.5% in Åland. In more troubled regions, the related figures were around 17% in Kainuu and some 12% in Lapland.

2.2 Potential labour reserves

The unemployed are not the only resource from which jobs can be filled. A significant number of people remain outside the labour force who could – with sufficient incentives of the right kind – join the labour force.

Figure 2.1 shows the distribution of 20–64 year old citizens, by major occupation, in 2006. The figure provides an illustrative picture of untapped labour reserves provided that we assume under 20 year-olds to be mainly at school or in the army, and therefore, in practice, outside the labour market.





Source: Statistics Finland.

Numerically speaking, the main group outside the labour force comprised sickness pension recipients, accounting for more than 200,000 persons in 2006. According to the Labour Force Survey, 175,000 people in this age group were unemployed. However, according to the statistics of the Ministry of Labour, the number of registered unemployed jobseekers in the equivalent age group reached almost 240,000.

Apart from sickness pension recipients, there were 125,000 pension recipients under the age of 65 and more than 120,000 students aged 20 or over. Again, aside from the retired and students, 200,000 people were outside the labour force, out of which almost half announced housework as their major occupation. Altogether, the number of citizens aged 20–64 placed outside the labour force reached 840,000 in 2006.

For many, participation in the labour market is partly limited by the inability to work. According to studies on this topic (e.g. Gould etc, 2006 and Holm etc, 2006) the majority of people outside the labour market are fully capable of working and only a minority suffers from total inability to work. It is estimated that around half of sickness pension recipients aged 50–64 are, to some extent, fit for work.

Figure 2.1 shows that a major number of people outside the labour market due to study are young, aged 30 or under. Respectively, disabled and other pensioners are concentrated in the older age groups, although not quite as drastically as students in the younger age groups. Half of those disabled or retired for other reasons are under the age of 60.

The unemployed are spread rather evenly between all age groups, although the average is higher in younger groups and lower in older groups. With respect to this issue, it should be pointed that the registered unemployed, as defined by the Ministry of Labour, are on average older than jobseekers based on the Labour Force Survey as presented in Figure 2.1.

After those studying or in retirement, the next biggest group outside the labour force is that of the 20–35 year olds, probably due to starting a family or compulsory military service. There are also a plenty of labour force outsiders in the 55–59 age group.

According to the definition applied by the Ministry of Labour, so-called structural unemployment consists of persons with uninterrupted unemployment of more than a year or whose terms of unemployment are repeated or interrupted by activation measures only. By the end of 2006, almost 140,000 persons were unemployables of this kind. Of this group, the share of long-term unemployed

was 60,000 persons i.e. less than half. This mainly concerned the 50–59 age group. In 2005, as many as 25% of the unemployable and almost 40% of the long-term unemployed were 55–59 years of age.

According to the Labour Force Survey, in addition to unemployed jobseekers, there were, on average, 99,000 labour market outsiders in 2006 who could have actively sought work but did not do so. A large part of these hidden unemployed persons experienced obstacles to employment due to health, study or child care. In order to increase the labour supply, public measures facilitating labour market entrance for these groups are very much needed.

The 60–64 year age group consists of 305,000 persons. While that of 55–59 year olds is one third larger (414,000 persons), by 2011 the number of retired and the share of 20–64 year olds will clearly rise unless the general age of retirement becomes substantially higher. According to Statistics Finland's population prognosis, the number of those currently on disability and other pensions will increase by 40,000 persons in five years time, whereas the number of people of working age will remain at roughly the current level.

Figure 2.2 presents a ten-year forecast of demographic trends with respect to citizens of working age (15–64 year olds) in light of the most recent population prognosis by Statistics Finland. According to the prognosis, the size of the working age population will grow until 2009, after which it will begin to shrink.¹ If the degree of participation in working life remains at its current levels in each 5-year age group, the labour force will begin to decrease earlier than that. The figure shows that, based on these expectations, the size of the labour force will lower by 100,000 from its current 2.6 million, by the year 2015.

According to this prognosis, the average age of citizens of working age will rise until 2010, after which there will be a downturn as the baby-boomers born after 1945 gradually begin to withdraw from the working age population. Despite the positive turn in sight, the average age of the working aged population is expected to be somewhat higher over the next twenty years than currently.

¹ Since net immigration has increased more than forecast during the last few years, the working age population has increased more quickly than forecast by the population prognosis.

Figure 2.2 Number of working age citizens (15–64 year olds) and the labour force prognosis until 2015 (under the assumption that the degree of participation of each 5-year age group remains at the 2006 level).



Source: Statistics Finland.

2.3 Job-matching in light of the research observations

The number of vacancies compared to the number of employed persons has been rising slightly since the beginning of 2005. However, in light of the figures published by Statistics Finland, this number cannot be regarded as exceptionally high. During the first two quarters of 2006, it was lower than the equivalent figure in 2002.

A more direct indication of labour shortage problems can be gained by observing the average duration of vacancies. Drawing conclusions based on this is made more complex by changes in the share of vacancies without predetermined deadlines, which possibly affects employee selection. By examining vacancies with ordinary deadlines only, we note that the average time to filling a vacancy has been rising steadily since 1999 and has almost doubled since then.

Figure 2.3 Open vacancies in comparison to labour force (%) by quarters I/2002–III/2006 and the corresponding four-quarter moving average.



Source: Statistics Finland.

By examining the statistics by sector, we can see that the duration has extended most in mining, construction, industry, transport, stockpiling and IT as well as electricity, gas and water services. Regional disparities in the duration of vacancies have grown faster and are greater than the differences between occupational sectors.

According to Statistics Finland, recruitment problems as reported by companies and the public sector have been steadily increasing since the end of 2005. During the third quarter of 2006, almost half (47%) of vacancies were difficult to fill.

According to a survey conducted by the Finnish Business and Policy Forum (EVA), the shortage of skilled labour became a more common hindrance to production growth during 2006, especially in the construction and service sectors. In light of statistics provided by the employment authorities, the development of the labour shortage has been more inconsistent and the rise is not as sharp as indicated by the EVA survey.

Figure 2.4 The share of vacancies that are difficult to fill by quarter I/2002– III/2006 and the proportional change compared to the situation a year earlier.



Source: Statistics Finland.

Figure 2.5 Lack of skilled labour restraining the growth of companies according to the survey of the Confederation of Finnish Industries, percentage of companies that participated in the survey.



Source: EK (2006).

All sources show that recruitment problems have grown, above all in the industrial sector, where the number of problems compared to the number of employed persons is greatest. With regard to other sectors, the picture is more disjointed and varies depending on the source of the statistics or type of classification by sector.

As far as the industrial sector is concerned, the problems are concentrated in technology and construction industries. In the service sector, real estate as well as social and health services are particularly problematic, and – in light of some data – so are transport as well as agriculture and forestry.

With regard to recruitment problems, there seem to be fewer regional disparities than there are between sectors. Also, the relative order of regions varies according to the data source or time of observation.

The general wage trend in Finland has been rather moderate during the last few years. Nor are there signs of any critical problems regarding labour supply when wages are examined by sector.

Figure 2.6 The single most important reason behind recruitment problems in companies belonging to the Confederation of Finnish Industries in 2004 and 2006.



According to the private sector, the main recruitment problem is the lack of work experience of the applicants. Other reasons are lack of education or specific skills. Recently, conflicting views regarding wages have also become more common.

Recruitment times are longer than average for vacancies that have formal education requirements or an element of entrepreneurship. A few continuously problematic professions apart, the detailed predictability of recruitment problems is rather weak.

Based on the observations of this research project, it would seem that recruitment problems and labour shortages are limited to certain sectors, occupational groups and regions. Instead of any actual, weaker labour supply, there seems to be a shortage of skilled labour possessing certain occupational skills and work experience. These problems are clearly of a dynamic nature and, viewed over a longer period, are not necessarily concentrated in the same sectors or regions. For this reason, obvious problem sectors and regions are hard to define. Exceptions to the rule are the construction and technology industries, where recruitment problems during recent years would appear to have been more severe on a continuous basis than in other sectors.

Nonetheless, there have been clear signs of a weakening labour supply during the year gone by. If economic growth continues at a relatively normal pace, the labour supply can also be expected to diminish progressively.

3 LABOUR MOBILITY: WHERE TO FIND THE NECESSARY LABOUR RESOURCES?

The labour shortage problems presented in the previous chapter highlight the need to allocate existing labour resources in a more flexible manner between various tasks and regions in order to minimise the probability and extent of mismatching problems. Bearing this in mind, it is worth discussing alternative channels to satisfying labour demand.

By definition, a vacancy can be filled by an applicant coming from another job, an unemployed jobseeker or an applicant coming from outside the labour force. All of these possibilities may or may not involve regional mobility: the applicant either already resides in the same place, commutes from another location, moves from another location or region domestically, or immigrates.

Perhaps the easiest way for a recruiting company would be to find a skilled, unemployed jobseeker locally that could start immediately. If such a person is not available, recruitment must be focused on those already working or those outside the labour market. The possible consequences of this are that the wage level must be raised and the time taken to fill the position lengthens. Alternatively, the search can be widened to regions outside the location of employment, which would imply higher recruitment costs and a possibly prolonged time taken to fill the vacancy.

If there is a nationwide labour shortage of skilled workers in a certain sector, demand can, in theory, be met via the education system or by recruiting skilled workers from abroad. The first option, in particular, would take a long time². Recruitment via adult and further education requires that individuals be willing to change job and be occupationally mobile. Among other things, recruitment from abroad is hampered by the language barrier as well as other circumstances which lower the demand for, and supply of, foreign labour³.

Shortage of labour can be particularly challenging for employers in a growing sector. In these kinds of situations, the number of skilled jobseekers with work experience from the sector is even lower than generally, among unemployed jobseekers. The first preference in these situations tends to be for recruiting

² In order to meet their demand for labour, larger companies in particular have benefited from organising skill-specific training in co-operation with the employment authorities. Another, similar option for easing recruitment problems is through apprenticeship contract training organised by the Ministry of Education.

³ In some EU countries, notably in United Kingdom and Ireland, the demand for skilled labour has, to a remarkable extent, been satisfied by labour recruited from the new Member States, particularly Poland.

labour with previous work experience from another sector - i.e. people who either have been, or currently are, employed. This kind of mobility from one sector to another, which possibly also involves a change of occupation or place of residence, is hereinafter termed *occupational mobility*.

The structural change in production towards more service-oriented jobs is increasing the probability of problems arising in the availability of labour and job-matching. New vacancies are positions for which most unemployed do not possess the required experience or vocational qualifications. The situation is complicated by the regional dimension: new vacancies are not necessarily created in the regions which are losing jobs⁴.

The concentration of job creation in the service sector and a simultaneous decline or only occasional slow growth of job creation in primary production and in manufacturing have contributed to a shift in the allocation of labour between main sectors, in favour of the service sectors. In principal, these shifts in labour force shares call for occupational mobility between sectors. On the other hand, the degree of occupational mobility depends on the extent to which people from shrinking sectors move into unemployment or completely exit the labour force (e.g. through retirement) and how many vacancies can be filled with applicants from the unemployed or outside the labour force (e.g. graduates, school leavers).

Reallocation of jobs as a result of structural change does not, in all cases, imply a change of duties. An IT expert may move from a company in the industrial sector to one in the service sector without a notable change in his or her job description or occupational requirements. It is also possible that, as a result of so-called outsourcing or other business arrangements, entire units move into another sector while their operations remain the same. In other cases, changing job requires a change of occupation and possible retraining: it is difficult to find similar tasks in another sector for a paper machine operator.

In any case, changes in structural production call for some changes in the structure of occupations. A rigid occupational structure and low occupational mobility reduce the economy's ability to adjust to structural change and aggravate the matching problem between demand for, and the supply of, labour. Conversely, it is true that workers' capability and preparedness to change profession and occupational sector diminish the problems related to structural change.

⁴ The current shifts in the production structure can be assumed to be a one-off transition period towards a more service-oriented production structure. On the other hand, it is widely accepted that globalisation permanently increases shifts in the production structure and hence the need for workers' occupational and regional mobility.

One possibility for satisfying future labour demand that has been considered even in Finland is increased use of foreign labour by expanding the number of work-related immigrants. In recent years, more weight has been placed on the importance of net population gain, especially with regards to the working age population. At the same time, integrating the immigrant population into Finnish labour markets has not been particularly successful so far. Employment rates have been lower and unemployment rates higher for the immigrant population than for the rest of the population⁵.

This chapter evaluates how well the fundamental mechanisms associated with occupational mobility in Finland function. The evaluation is based on recent domestic research and comparable international data. Chapter 3.1 focuses on occupational mobility and Chapter 3.2 on regional mobility. Chapter 3.3 examines the development of work-related immigration and the use of foreign labour in light of recent observations.

3.1 Occupational mobility

As stated earlier, the occupational mobility of workers is a central adjustment mechanism through which labour markets respond to changes in the structure of labour demand. Bearing this in mind, it would prove interesting to assess the level of occupational mobility in Finland and how it has changed in recent years.

Initially, this research project aimed to examine the changes in occupations that had actually taken place but, due to the limited data available, the main focus has been on mobility between sectors, which is a central form of occupational mobility. Apart from the mobility of the employed, the study provided information on the dimensions of occupational and regional mobility of the unemployed and other groups outside the labour force.

The research also examined how often people change jobs in general. In 2003, about 12% of the employed had changed jobs during the previous year. Changing jobs was increasingly frequent in the late 1990s, reaching its peak (13%) in 2001. In light of the available data, changing jobs was more common in Finland than in the EU on average. According to Eurostat, the share of employed changing jobs annually was 8.2% in 2003 (Eurostat, 2004).

⁵ The unemployment rate among immigrants was around 25% in May 2006. The weak position of immigrants in the labour market is partly due to the relatively high number of refugees. By definition, work-related emigration is characterised by voluntary departure from the country of origin and is based on finding employment in the target country.



Average number of jobs held (until the time of enquiry) in EU Figure 3.1 countries in 2005.

Source: EB (2006).

Finland also ranks high in international comparisons when measured by the average number of jobs per capita during the subject's working career so far. By this measurement, Finland ranks among the highest in the EU-25, in fourth place behind the Nordic countries and United Kingdom (Figure $3.1)^6$.

Some job-changers also change their sector of employment. The basic indicator used in the study when defining workers' occupational mobility between sectors is gross mobility of workers, which indicates the share of workers who have changed sectors and who have been in employment during the two previous consecutive years. Mobility is mainly reported using a 3-digit classification by sector, which covers a majority (about 90%) of the mobility which can most accurately be measured through a 5-digit classification.

⁶ Factors affecting the average number of jobs include the average age of the labour force – and, in the case of Finland - the slump of the 1990s, which is why caution must be exercised when analysing the results.

Gross mobility between sectors was 7% at the end of the sample period, in 2003, while mobility grew quite strongly from around 5.5% to 8% between 1996 and 2000. Finland can be considered to be on the average European level on the basis of the sparse international comparable data (Elmeskov, 2006, figure 3.2).



Figure 3.2 Workers' gross mobility between sectors vis-à-vis the entire labour force in some OECD countries in 2003.

Source: OECD.

Expressed as the number of persons, around 130,000 employed changed their occupational sector in 2003. Some 225,000 persons changed jobs and 190,000 entered the labour market from outside the labour force (the unemployed and groups outside the labour force).

In light of these results, changing occupational sector is perhaps surprisingly common. At the same time, a majority of workers' gross mobility comprises crosswise "churning". As a result of churning, a major part of gross mobility is neutralised by flows in the opposite direction, whereby the net effect on the employment structure remains relatively small.

Despite increasing gross mobility, its effect on net mobility between sectors during the inspection period has remained relatively stable (about 2%) vis-à-vis the employed. In other words 60–75% of gross mobility can be classified as churning. In years 2002 and 2003, net mobility turned slightly downwards along with gross mobility (figure 3.3).

While there have been remarkable net changes in the occupational structure of employment, it is evident that occupational mobility does not play a primary role in adjusting this occupational structure. In light of the results, it would appear that a majority of the structural change between sectors is caused by the flow from employment and outside the labour force into employment and vice versa.





Also, this kind of mobility is partly occupational mobility between sectors, in the sense that part of the unemployed and persons outside the labour force had previously worked in another sector. This suggests that both unemployment and temporary absence from the labour market cause a delayed effect on occupational mobility⁷. It should be borne in mind that the latter alternative possibly involves retraining for new tasks.

Occupational mobility in various population groups and regions

The study also examined the frequency of occupational mobility according to gender, age and educational level as well as geographic regions. There was little variation in gross mobility between the sexes. At the end of the 1990s, occupational mobility was slightly greater among men than women, but the gap

Source: Virjo etc. (2006).

⁷ Due to the approach taken in the analysis, part of occupational mobility between sectors may actually have taken place via unemployment that had lasted less than a year.

steadily diminished towards the beginning of the current decade. In 2002, the occupational mobility was even slightly greater among women than men while it was on an equal level in 2003.

Parents of young children are an exception to the rule. Being a parent of young children significantly decreases occupational mobility among women and, respectively, somewhat increases it among men. As a result, mobility is clearly lower among mothers than fathers parenting young children.

Occupational mobility slows down with age, which is consistent with the observations made in studies on other countries (Figure 3.4). Part of this phenomenon is explained by differences between generations but the aging of individuals is another genuine reason for lowered mobility. As a rule, aging can generally be expected to lower occupational mobility since the expected gains of retraining at a later age are necessarily smaller.





Source: Virjo etc. (2006).

The question of how education affects workers' mobility is more complicated. The picture is partly affected by the small but mobile group of those with a matriculation exam who are in part-time work alongside their studies.

When this group is excluded from the analysis, the results clearly suggest that graduates with a higher university degree are the most mobile group. The difference is particularly clear in the beginning of the period of analysis. On the other hand, graduates with a lower university degree (including polytechnic

degrees) seem to be less mobile than those possessing an intermediate level education or those without a degree altogether (figure 3.5).





The result concerning education contradicts previous foreign studies according to which mobility should decrease alongside more education. This negative correlation is explained by the greater specialisation of the more educated and greater human capital tied to the workplace, which is lost when an employee changes jobs (see e.g. Moscarini & Vella, 2002). A possible interpretation of the results with respect to Finland is that job or sector-specific human capital is relatively higher among polytechnic than university graduates.

From a regional perspective, occupational mobility is highest in the Uusimaa region⁸. Although this result partly involves population net gain from other regions, this alone does not explain higher mobility. Differences between other regions are minor (Figure 3.6).

⁸ When mobility between sectors includes regional mobility, the place of residence *after* moving has been recorded in this study.



Figure 3.6 Gross occupational mobility by region in the years 1995–2003.

Source: Virjo etc. (2006).

3.2 Regional mobility⁹

Besides occupational mobility, labour movement from high to low unemployment regions is an essential mechanism, with the help of which labour markets contribute to job-matching. *Regional mobility* can, in some senses, be considered an alternative to occupational mobility. From the point of view of an individual, getting a job requires either a change of profession or place of residence. However, more demanding cases may require both changes simultaneously.

Commuting from outside one's area of residence diminishes the need for regional mobility proper i.e. the need to move. While increased commuting expands travel-to-work areas, remote work is another way of bringing regionally diverse labour demand and supply together.

Migration after the slump of the early 1990s

After the deep economic crisis of the early 1990s, domestic migration has increased both in absolute terms and in relation to the working age population. Mobility grew strongly in 1994–2001, decreased slightly in 2002 and 2003, after which it again turned to slight growth in 2004 and 2005. In line with earlier

⁹ This section describes the main features of the development of regional mobility in Finland. In addition, mobility in Finland and in some other countries is compared. The links between migration and labour markets have been explained in more detail in an extensive statistical analysis by Myrskylä (2006).

observations, moving activity has therefore, to some extent, followed general economic cycles.

In 2005, 290,000 persons moved across municipal borders, which in proportion to the whole population translates into a 5.5% propensity to move. In 1993, there were 175,000 such moves and the consequent national propensity to move was 3.4%. This development is along the same lines in terms of migration between both NUTS 4 regions and between NUTS 3 regions. In the midst of the economic crisis, there were around 90,000 moves between NUTS 4 regions and 70,000 between NUTS 3 regions. In 2005, the migration between NUTS 4 regions had risen to over 170,000 persons and 125,000 between NUTS 3 regions.





The likelihood of a move had increased in all 5-year age groups. Quantitatively, migration has increased most in the 18–25 age group, which tends to be the most regionally mobile group in general. Migration frequency by age groups is explained by taking up studies and the first placement in the labour market afterwards, which often involves a change of location.

One of the fundamental reasons for increasing domestic migration has to do with studying and is clearly statistical. Following legislative changes in 1994, students are presently classified as residents in the location of their educational institution, whereas they previously remained on the books of their original place of residence. Instead, a greater inclination to move among older age groups is likely to reflect the new type of regional allocation of labour demand. In addition, it has been estimated that increased migration is also partly due to improved educational levels, migration-friendly attitudes being adopted at a younger age, remigration to regions of birth as well as permanent relocation to the region of one's summer residence (Myrskylä, 2006).

In addition to actual regional mobility, commuting i.e. travelling to work outside one's own area of residence has become more common. Throughout the country, major cities have become surrounded by geographically wide travel-towork areas where at least 10% of residents in the surrounding municipalities travel to the central municipality. In 2004, a third of those employed were commuting while the corresponding figure was 27% in 1994. Commuting is more common amongst young people and the highly educated. Compared by occupation, commuting across municipal boundaries was most common in the transport and IT sectors.





Source: Myrskylä (2006).

Despite growing mobility, the net effects of migration on the demographics of the municipalities, NUTS 4 and NUTS 3 regions have, in the short term, been fairly minor and have clearly diminished compared to the situation at the end of the 1990s (Myrskylä, 2006). A majority of domestic migration is crosswise. For example, in 2005 the migration of 290,000 persons only accounted for a surplus of 14,000 persons for municipalities that gained in population. The migration of 170,000 persons between NUTS 4 regions accounted for 9,000 people in regions that gained in population in the same year (figure 3.9). The corresponding figures at the NUTS 3 level were 6,000 out of 125,000.



Figure 3.9 Gross and net mobility between NUTS 4 regions in the years 1990–2006.

In many regions, population net gain originating from abroad improves the age structure of the population by adding to the number of people in the workforce. As a rule, immigration is concentrated in regions where labour demand is highest. On national level, immigration has increased and net immigration reached 10,000 in 2006. This means that, from the point of view of population growth in general, the significance of immigration is currently as great as the so-called natural population growth, i.e. the difference between birth and mortality rates.

Source: Statistics Finland.

Mobility as a response to labour market disparities

From point of view of balancing the labour markets, migration works in the right direction. People of working age tend to move from high net unemployment rate regions to regions which typically have low unemployment rates (Figure 3.10).



Figure 3.10 Unemployment rate and net migration between NUTS 4 regions in 2003.

Source: Statistics Finland/Myrskylä.

From point of view of labour reallocation, the ideal solution would be for the unemployed to find employment as a result of changing residence. Regional mobility is indeed greater among the unemployed than among workers. Despite this, a majority of movers of working age are other than unemployed; mainly being already employed or students. In 2003, half of the population of working age (15–64 year olds) who moved between NUTS 4 regions were employed, while a quarter were students and less than 12% were unemployed (Table 3.1).

	Total	Workers	Unemployed	Students	Pensioners (except those on unemployment pension)	Military service	Unemployment pension	Others
The whole country								
Altogether	133,254	65,523	15,437	34,173	4,406	3,406	514	8,659
% of all	100	49.2	11.6	25.6	3.3	2.6	0.4	6.5
Propensity to								
relocate, %**	3.8	2.9	5.1	8.6	1.5	19.0	0.9	5.1

Table 3.1Gross migration of 15–64 year olds between NUTS 4 regions by
labour market status* in 2003.

* Labour market status at the beginning of the year, ** per cent of the population.

Source: Statistics Finland/Myrskylä.

Migration from high to low unemployment regions naturally alleviates labour shortages and improves job-matching. However, other types of reallocation play a greater role in the overall picture.

As previously explained, changing job relatively rarely involves regional mobility. Only about 10% of those who changed from one sector to another also changed their place of residence within the same year. The figure is smaller still in the case of movers between NUTS 4 and NUTS 3 regions. Regional mobility is not only lower than job or sector-specific mobility but clearly a separate issue – few people change both their job and place of residence simultaneously¹⁰.

The significance of migration is manifested in the longer term, when the migration of students becomes the significant issue. For example, in Uusimaa region, students are the group causing the greatest population net gain. Conversely, students typically cause the greatest population net loss in regions which tend to lose residents (Table 3.2 and Myrskylä, 2006).

¹⁰ A majority (over 70%) of migration (from one location to another) observed in this data did not involve a change of job. This is thus classified as internal migration within the same travel-towork area.

					Pensioners			
					(except those on			
					unemployment	Military	Unemployment	
	Total	Workers	Unemployed	Students	pension)	service	pension	Others
Immigration								
Low unemployment rate								
Altogether	51,006	26,450	5,207	12.515	1,334	1.316	148	3,452
% of all	100	51.9	10.2	24.5	2.6	2.6	0.3	6.8
Propensity to relocate, %	3.4	2.5	5.4	8.0	1.2	19.2	0.8	4.3
High unemployment rate								
Altogether	14,157	6,324	2,140	3,616	729	248	68	945
% of all	100	44.7	15.1	25.5	5.1	1.8	0.5	6.7
Propensity to relocate, %	4.0	3.2	4.6	8.0	1.7	12.1	0.9	5.9
Emigration								
Low unemployment rate								
Altogether	47,944	27,624	4,257	9,845	1,638	835	204	3,055
% of all	100	57.6	8.9	20.5	3.4	1.7	0.4	6.4
Propensity to relocate, %	3.2	2.6	4.4	6.3	1.5	12.2	1.1	3.8
High unemployment rate								
Altogether	17,538	7,052	2,742	5,142	649	601	71	1,137
% of all	100	40.2	, 15.6	29.3	3.7	3.4	0.4	6.5
Propensity to relocate, %	4.9	3.6	5.9	11.4	1.5	29.2	0.9	7.1
Net migration								
Low unemployment rate								
Altogether	3,062	-1,174	950	2.670	-304	481	-56	397
% of all	100	-38.3	31.0	87.2	-9.9	15.7	-1.8	13.0
Propensity to relocate, %	0.2	-0.1	1.0	1.7	-0.3	7.0	-0.3	0.5
High unemployment rate								
Altogether	-3,381	-728	-602	-1,526	80	-353	-3	-192
% of all	100	21.5	17.8	45.1	-2.4	10.4	0.1	5.7
Propensity to relocate, %	-1.0	-0.4	-1.3	-3.4	0.2	-17.2	0.0	-1.2

Table 3.2Migration in high and low unemployment rate NUTS 4 regions* in
2003.

* 20 lowest and 20 highest NUTS 4 regions measured by unemployment rate.

Source: Statistics Finland/Myrskylä.

Regional mobility in an international perspective

Regional mobility in Finland is considered low or at most average in international comparison according to several analyses (OECD, 2006 and Elmeskov, 2006). However, comparing regional mobility internationally is problematic, since the classification of regions in different countries is not necessarily comparable from the point of view of labour markets. Comparisons based on the so-called NUTS 2 regions, which are typically used by the OECD, probably underestimate Finnish regional mobility compared to other European countries. The problem is that there are only five NUTS 2 regions in Finland. This type of classification does not take account of internal migration between travel-to-work areas within one
NUTS 2 region. There are many more NUTS 2 regions in other European countries which are geographically smaller than Finland. In these countries, registered migration better corresponds to actual mobility between labour market areas. The calculations performed by the OECD and those performed for us by Statistics Finland support this underestimation hypothesis.

Measured by NUTS 2 level, 1.7% of the population of working age moved from one region to another in 2003, which is on the average level of the compared countries (Figure 3.11). Migration between NUTS 3 regions (almost 3%) is on the top level of the compared countries. Migration between NUTS 4 regions is greater still (about 4% of the population of working age). The actual geographical areas of Finnish travel-to-work areas are probably somewhere between NUTS 4 and NUTS 3 regions. Assuming that the actual travel-to-work areas in other countries are geographically closer to NUTS 2 regions, regional mobility in Finland can be considered at least average in comparison to other countries.



Figure 3.11 Gross migration in some OECD countries in 2003.

Source: OECD/Laura Vartia and Statistics Finland/Pekka Myrskylä.

Also, recent studies of regional mobility based on surveys support the assumption that Finnish workers tend to be fairly mobile when compared

internationally. According to Eurobarometer (EB, 2006), Finns perceive moving even longer distances and changes of job more positively than the EU-25 average. However, attitudes in Finland are more reserved than in Sweden and Denmark, which top the EU-chart on both issues. An exception to this is willingness to move if made redundant: Finns are more willing than their Danish counterparts to move to another region in order to find a job¹¹, Figure 3.12.



Figure 3.12 The share of people who would be willing to relocate to another region or abroad in case of unemployment.

Source: EB 2006.

Moreover, according to Wasmer etc (2006), the willingness of the population of working age to move was, among EU countries, greatest in United Kingdom, Finland and Denmark (5.5–7.2%). When only work-related relocation is considered, willingness in France almost reaches the levels of United Kingdom

¹¹ This result can be explained by the small geographic size and high population density of Denmark, which is why moving after a job is less often necessary than in Finland and Sweden.

and Finland (2.4–2.7%) and overtakes that of Denmark. The results are based on panel data on European Union households. Internal regional mobility is the second highest in Finland after Sweden, according to Eurobarometer (EB, 2005).

3.3 Satisfying labour demand through immigration

The Finnish population has increased since the 1980s, in part due to migration from beyond its borders. In 2006, immigration exceeded emigration by around 10,000 persons. A significant amount of immigration consists of the remigration of persons with roots in Finland. When migration flows are examined by nationality, it is found that more Finns are moving out of than into the country (about 1,400 people in 2005) whereas the opposite applies to other nationalities. The share of foreigners in the Finnish population, about 2%, is one of the lowest in Europe.

The two most numerous nationalities to have immigrated to Finland are Russians and Estonians, both of which added 1,000–1,500 to the Finnish population in 2004 and 2005. During the same years, the equivalent number of immigrants with Asian origins was 1,600–2,100.

About as many immigrants came from EU-countries but, due to strong remigration, the population net gain from these countries remained clearly smaller, about 500–1,300 persons per year. On the contrary, the remigration of people with African roots took place on a relatively small scale, the population net gain being 750–950 persons annually.

Only a small share (5-10%) of immigration to Finland is work-related. The two major single reasons for settling in the country are family relations and remigration. Also, the share of refugees (15%) is higher than that of work related immigrants (OPM, 2006). The share of foreigners in the Finnish workforce is around 3% (TV, 2025).

The statistical data on immigrants' education indicates a fairly low average level of education among the immigrant population. Three out of four immigrants have only received a basic education. It is apparent, however, that for various reasons related to e.g. the difficulty of comparing qualifications, statistics probably underestimate the real education level of immigrants (Myrskylä, 2006). Nevertheless, it remains clear that a greater part of immigrants than of emigrating citizens lack education beyond the basic level.

Figure 3.13 Immigrants and emigrants over 15 years of age, by educational level in 2000–2005.



Source: Ministry of Labour.

Promoting adjustment and improving labour market qualifications as well as language skills are the fundamental aims of the programme directed at integration of immigrants to Finnish society. An individual plan is drawn up annually for about 3,500 immigrants, of whom 15–20% are analphabetic. Some 10,500 immigrants joined as newcomers to labour market training in 2005. (OPM, 2006)

Taking consideration of differences in educational and cultural backgrounds as well as recruitment costs, increasing immigration from Europe rather than other continents would in many respects be the most natural option. A recent study of the opinions of Europeans has outlined reasons which increase or decrease their willingness to emigrate to another country (PWC, 2006 and EB, 2006).

Behind positive decisions to migrate to a foreign country, there is often the wish to become acquainted with a new environment and culture as well as hopes of improved work conditions and earnings. The single most common obstacle to moving abroad is the fear of losing social contacts with family and friends. Also, fear of inadequate language skills often lies behind an abandoned plan to move. There seem to be systematic differences between new and old Member States with regards to reasons that deter immigration. Linguistic and financial aspects seem to play a greater role in new Member States such as the Baltic countries or Poland (PWC, 2006).

Alongside actual immigration, foreign labour reserves can also be utilised through cross-border commuting of various durations. In such cases, the employee does not change his or her place of residence, at least on a permanent basis. Through the use of new technology, it is increasingly possible for Finnish companies to offer remote work contracts for workers living outside Finland. However, in practice it is often probably more straightforward to buy related services from a foreign company.

So far, the only genuine possibilities for cross-border commuting on a daily basis are from Sweden and Norway in the Northern part of the country. However, for work lasting for a longer period at a time, it is also possible to commute from Estonia and Russia. On the other hand, in recent years Finland has received a growing number of temporary workers from even further afield on assignments that have typically lasted a few weeks, e.g. picking berries during the harvest period.

The available data suggests that, in recent years, the use of foreign labour in Finland has intensified. Due, among other things, to restrictions concerning the mobility of workers from the new Member States, the use of foreign labour has been realised partly via purchasing services rather than hiring workers directly. In these cases, in the main Estonians have worked in Finland while on a payroll managed by an Estonian company.

There have been encouraging experiences of arrangements in which the employer has hired and trained foreign labour to suit its own needs. This sort of model is probably best suited for the industrial and construction sectors – into which skilled workers can be recruited from neighbouring areas such as the former Eastern Block and Russia – rather than for sectors where language skills play a greater role, such as in the service sector.

According to a recent survey conducted by The Federation of Finnish Enterprises, just under 10% of Finnish companies hired foreign labour during recent years. Almost as great a fraction of the companies that responded to the survey reported that they had purchased services which had been produced by foreign workers residing in Finland. In either case, the use of foreign labour had been greater than average in the capital region, where the corresponding figures were $13-16\%^{12}$.

As expected, the use of foreign labour has been more common in larger companies. Of the companies that participated in the survey, 38% with more than 50 employees had directly hired foreign workers and 26% had purchased

¹² Hiring foreign labour has also been relatively common in the regions of Southwest Finland, Southern Karelia and Lapland, although the differences are not statistically significant.

services produced by foreign labour. Perhaps a little surprisingly, the use of foreign labour was more common in companies operating in the manufacturing and service sectors rather than construction. The survey does not take account of the number of foreign employees, which are probably more numerous in the construction sector in relation to the total workforce. According to the estimate of a spokesman for the construction sector, the share of foreign labour in these sectors currently fluctuates in the range of 9-10%.

Larger, expanding companies in particular believe that reducing restrictions on the mobility of foreign workers would strengthen the labour supply. Smaller companies are more reserved with regards to utilising foreign labour. The most optimistic expectations are found in the capital region and in manufacturing (SY, 2006). Companies have been critical, among other things, of current work permit practices, which make it more difficult and slower to recruit labour from countries outside the EU.

In the future, too, the need for foreign labour will probably greatly depend on the nature of work tasks. Domestic labour shortages may appear in fairly small sectors, depending on which sector happens to experience growth at any given time. From the viewpoint of the Finnish economy, the most harmful type of labour shortage is potentially that of skilled key personnel without whom production in Finland would be completely impossible. Such bottlenecks may prove problematic despite a positive net immigration rate if the net immigration of the most highly educated workforce continues to be negative.

Summary of the extent of mobility

Occupational mobility between industries and jobs became more frequent during the years immediately before and after the millennium, but experienced a downturn in 2002 and 2003. In the light of the available comparable data, the occupational mobility of Finns is on the average European level.

Excepting parents of young children, there are no major disparities between the sexes concerning occupational mobility between industries. On the other hand, mobility clearly decreases with age. The connection between education and mobility is not as obvious. In Finland, it seems that the most mobile are those with a university degree.

A major part of the gross mobility of workers between sectors comprises crosswise "churning", whereby the net effect on the industrial structure remains relatively small. Most structural change seems to be realised through a flow from outside the workforce and from unemployment to employment and vice versa. Regional mobility in the sense of migration within the country has developed in the same direction. Mobility clearly rose after the economic crisis of the early 1990s and dampened after 2002 and 2003, after which it has risen even further.

A major part of regional mobility is crosswise. For example, only 5% of those moving between NUTS 4 regions counted as net population gain for populationgaining regions in 2005. The majority of newly migrated were employed or students, whereas only about a tenth were unemployed.

Notwithstanding the common perception, regional mobility in Finland seems to be at least average, and probably even greater than that, by European wide comparison. However, comparisons are very tricky because it is difficult to restructure comparable regional units from the available statistical data.

Using foreign labour is still relatively uncommon in Finland compared to other countries. Only 5-10% of immigration is work-related and the average educational level of entrants is fairly low.

Apart from immigration, work assignments of various lengths are carried out in Finland, by workers mainly originating from neighbouring countries. The available data indicates that the use of foreign labour in Finland has increased during recent years. According to a recent survey, a little under 20% of companies have either hired or indirectly employed foreign workforce via an outsourcing service. In the construction sector, the share of foreign labourers is estimated to be a little under 10%.

4 EMPLOYMENT INCENTIVES, OBSTACLES TO MOBILITY AND CHALLENGES TO THE EDUCATION SYSTEM

In the previous chapters, the extent of, and recent developments in, tapping alternative sources of labour supply have been studied bearing workers' occupational and regional mobility in mind. This chapter will review various factors that can be considered to have an influence on the labour supply and mobility. Particular attention will be paid to employment incentives concerning tax and social security benefits. In addition, obstacles to regional mobility and the ability of the education system to respond to labour market needs will be examined.

Findings regarding occupational mobility suggest that a remarkable amount of occupational mobility dictated by changes in the production structure is patched up by workforce originating from unemployment or outside the labour force. This line of thinking places a great deal of emphasis on employment and educational incentives for the unemployed and labour market outsiders.

Considering the relatively high Finnish unemployment rate, a key issue here is the possibility of an unemployed person to find a job. On the one hand, the question is one of how the social security and taxation system affect incentives to entering employment. On the other, it is important to provide opportunities and incentives for the unemployed to update their vocational skills to match labour market demand.

Such questions are naturally relevant, even for the part of the population that, regardless of being of working age and able to work, remains completely outside the labour markets. In addition to this, a notable part of the population of working age has permanently moved beyond the labour force, attracted by various types of pension. A remarkable proportion of this group is physically able to work. Hereafter, it is of vital importance that we consider to what degree this group might have an incentive to participate in the labour market despite its actual retirement.

There have been positive developments in recent years with regards to labour force participation and employment rates amongst the older age groups. This can probably be explained by positive labour demand as well as the pension system reform and specific measures within the national programme designated for the elderly. Conversely, lengthening careers from the beginning i.e. motivating youth to enter the labour market earlier, has not advanced in the same way. For example, the average age at which a degree is completed has risen, despite the opposite ambition. Bearing this perspective in mind, a lot of weight is placed on the performance of the education system. An increase in educational levels tends to raise the average age of labour market entrance and weaken the labour force supply amongst the younger cohorts. On the other hand, the reasons behind recruitment problems – as explained earlier in this study – and the publicly voiced opinions of employers are suggesting that the current education structure does not fully meet the needs of working life or the demands of the labour market.

A central question, from the societal point of view, is whether the education system corresponds to labour market needs in such a way that skilled, employable labour graduates within a reasonable time frame. In a publicly financed education system, this objective can be pursued by e.g. influencing the educational structure by adjusting the number of starting positions as well as via other economic means of guidance directed at educational institutions.

However, educational decisions are ultimately individual choices guided not only by anticipated future earnings but also personal tastes and, in many cases, parental expectations. Bearing this in mind, it is vital that knowledge about the current situation and prospects of labour market demands be provided in the widest possible way through the whole of society.

When satisfying labour demand through education, it is also important that the returns on individual level are in relation to the educational needs on the labour market. This can be problematic if, for one reason or another, wage structures are rigid and wage dispersion relatively narrow, as in Finland. On the level of the whole population, the return on secondary and tertiary level education in particular has been high for individuals (OECD, 2006b). Important factors in this context have been the affordability of education for individuals as well as their high employability. Instead, it is harder to judge how profitable re-educating oneself at a relatively mature age turns out to be.

As the payback time for educational investments is often relatively short, especially with regards to adult education, it is important to ensure that there are enough educational incentives to enable vocational mobility. In part, this has been striven for by introducing the so-called transitional security package since mid 2005, in which re-educating oneself is not, however, the central focus.¹³

¹³ The transitional security package includes the possibility of a raised daily benefit during periods when the person participates in employment programme measures (training, work trial, labour policy related adult education).

The need for regional labour mobility is emphasised in countries like Finland, where local labour markets (travel-to-work areas) are often unavoidably thin and have a relatively one-sided business structure. In recent times, there have been efforts to take precise public measures in order to create improved conditions for regional mobility. For example, a discretionary moving benefit for the unemployed came into force at the beginning of 2007. A central factor indirectly affecting regional mobility is housing arrangements, which in a wider context derive from housing policy decisions.

In the following chapter, 4.1, the level and development of general employment incentives are examined in the light of recent research. Obstacles relating to regional mobility will be studied in Chapter 4.2. In Chapter 4.3, problems in directing educational supply are considered by comparing the labour market positions of recent graduates in various subjects and educational levels.

4.1 General employment incentives

In economic theory, job-matching and the creation of new jobs is described using the so-called *matching function*. Job creation is more successful, the better a match there is between vacancy descriptions and e.g. the vocational qualifications of the applicants. In addition, the location of the employment and applicants should match. Since an employment contract is made on a voluntarily basis, it requires not only a formal match but also an agreement on the employment conditions that satisfy both parties.

Naturally, a central factor defining employment terms is the pecuniary compensation paid for the work. To be economically viable, the employment relationship must provide a higher expected income than a continued job search would. When contemplating various alternatives, the person forms some *reservation wage* in his or her mind which must be exceeded if they are to accept the job offer. High reservation wages are one reason for potential employment relationships' failure to materialise. Therefore, a rise in reservation wages weakens job-matching, which is also demonstrated by the observed Beveridge curve moving upwards and to the right.

The reservation wage depends on many factors, which vary according to the labour market position of the person. The reservation wage of an unemployed person is distinctively defined by the social security benefits covering the unemployment period, which consist of unemployment benefit and other possible social security benefits¹⁴. It also depends on the appreciation of free-time and housework as well as the person's subjective understanding of his or her current labour market value.

In Finland, the minimum social security package for an unemployed person consists of the basic unemployment income, housing allowance and income support. The grounds for granting these benefits are interdependent in a rather complex manner¹⁵. As a baseline, it can be said that the minimum social security package for the unemployed has in recent years developed in a fairly moderate manner. The calculated minimum subsidies for a single person and a family of four were at a lower level in real terms at the beginning of 2006 than they were at the beginning of the 1990s (Honkanen, 2006).

As for job-seeking undertaken by people that are already employed, unemployment benefit does not affect the reservation wage, which in this case is mainly determined by the current wage and other terms of employment. However, the net gain associated with a potential new job is affected by induced changes in social security benefits and taxation, which therefore have an influence on the reservation wage when the person is considering changing job.

For the employed and the unemployed alike, the reservation wage tends to rise in proportion to potential cuts in social security benefits and potential tax rises caused by extra earnings. In practice, the interdependency of various benefits, e.g. through means testing, leaves potential increases in net income relatively futile, which weakens overall employment incentives. In recent years, this problem has been partly relieved through general tax cuts on labour income (Figure 4.1).

¹⁴ With regards to unemployment benefits, a situation is particularly problematic in which the earnings-related unemployment benefit based on previous employment is relatively high and, at the same time, there are no jobs available in the related profession or at the corresponding income level.

¹⁵ Basic unemployment income consists of either unemployment allowance or labour market support.

Figure 4.1 The difference in the taxation of unemployment allowance and equivalent wage income at various income levels 1990–2006. A bar on the positive scale denotes heavier taxation on benefits compared to wages.



Source: Kela/JUTTA-model.

A recent study by Honkanen et al (2007) examines how the net income level is expected to rise when a person who is unemployed or outside the labour market moves into the labour market or from unemployment into a job which is likely to be available. Instead of sample calculations, this research is based on the socalled micro-simulation technique that produces an estimation of the extent and commonness of incentive problems at the level of the whole economy.

Based on the research material, the extent and allocation of incentive problems are estimated, including regionally and in various socio-economic groups as well as at various income levels. The basic year of the research is 2004. The incentive levels are compared to the years 1995 and 2000, each of which are considered in accordance with their particular tax and social security laws. This manner of undertaking the research gives an overall picture of the effect of tax and social security reforms on the development of employment incentives during recent years.

The effective employment tax rates of the unemployed

In this research, the benefit of employing the unemployed is measured using the so-called *effective employment tax rate,* which describes, in a converse manner, the net economic gains of becoming employed when the combined effects of income transfers and taxation are accounted for. For example, an 80% employment tax rate means that when a person is hired, the after-tax total income of his or her household increases by a sum equivalent to 20% of the gross salary. If the effective employment tax rate is 100%, entering a job does not raise the income level at all.

According to the results, the effective employment tax rate in Finland was 64% on average in 2004. This means that, by entering full-time employment, the amount the person receives cash in hand grows by 36% of the gross salary. The rest of the salary is exhausted by increased tax payments and diminished social security benefits, i.e. it adds to the growth of net income transfers that are paid to the general government. In most cases, the single most important factor raising the effective employment tax rate is the loss of employment benefits associated with employment.

The amount of the effective employment tax rate fundamentally depends on the anticipated salaries of the unemployed. The research has striven as accurately as possible to assess the expected wage level of the unemployed by taking into consideration the various characteristics of the unemployed person such as age, education and duration of unemployment. In particular, the latter is a significant factor that lowers the expected wages. If the effective employment tax rate is calculated using the same data, presuming that the unemployed person would be hired for the same wages as those who are already employed, the average effective employment tax rate would remain at 55% instead of $64\%^{16}$.

With the help of a micro-simulation technique, the level of the effective employment tax rate has been determined for different socio-economic groups, income levels and various types of unemployment benefits, regions and sectors of employment that have been defined by the recipient's previous work experience. In addition to this, the effects of the reforms in taxation and income transfer systems on the effective employment tax rate have been compared for the years 1995, 2000 and 2004. The main findings are presented in Table 4.1.

¹⁶ A lower effective employment tax rate in the former case is a consequence of the fact that the value of foregone social security benefits relative to gross earnings is lower, when the expected wages are higher.

	Average ETR %	(%) share of those with ETR >80%	Number of persons with ETR>80 %
Altogether			
1995*	72.2	31.8	87,800
2000*	66.8	21.3	59,200
2004	64.2	17.3	48,400
Some groups in 2004			
Income level of the households			
1. quintile (lowest)	67.0	20.0	26,300
2. quintile	62.6	14.4	8,400
3. quintile	63.0	18.3	7,500
4. quintile	61.7	17.0	5,400
5. quintile (highest)	62.1	10.7	1,800
Family status			
Single parent	77.3	43.4	5,300
Other family with chlidren	68.6	26.5	15,700
Unemployment security			
Earnings related	68.3	22.1	21,800
Labour market support	59.6	11.7	14,400
Unemployment allowance	59.4	11.3	1,700
Sector			
Manufacturing	72.4	35.8	8,400
Construction	74.4	35.4	5,500
Recipients of child care benefit	53.6	1.9	100

Table 4.1Average effective employment tax rates (ETR) and the number of
people in the unemployment trap (ETR>80%) in 2004.

* The number of persons in an incentive trap in the years 1995 and 2000 has been calculated assuming that the size and structure of unemployment was identical to the year 2004.

For the years 1995 and 2000, the number of people in the unemployment trap is calculated based on the assumption that the extent and structure of unemployment would be equivalent to 2004.

As a result of tax and social security reforms, all effective employment tax rates have clearly declined during the last 10 years. Had the legislation not changed after 1995, the effective employment tax rate would have been much higher than it actually was in 2004 (72%). The decline in the effective employment tax rate is principally a result of changes in taxation (cf. Figure 4.1).

According to Immervoll et al (2007), the Finnish effective employment tax rates in 1998 were on the same average level of around 70% as in France, Germany and Belgium. Corresponding tax rates were clearly higher in Denmark and somewhat higher in Sweden. The lowest effective employment tax rates were found in the southern European countries and in United Kingdom (50–55%). It can be assumed that, subsequent to this, the relative position of Finland improved in international comparisons because of more substantial cuts in income taxation.

Higher effective employment tax rates mainly concern persons living in households with low incomes. The average effective employment tax rate in the lowest quintile was 67%. In this respect, the fluctuation is not very broad since the corresponding figure was 62% for households in the highest quintile. Regional disparities bore no great significance in light of the results.

The level of effective employment tax rates vary greatly between various family types. The rates are highest for child families – in particular single parent families – whose effective employment tax rate was on average 77% in 2004. For these groups, the high effective employment tax rate is a result not only of the loss of generous benefits (e.g. raised child care benefit during unemployment) but also lower anticipated wages.

The effective employment tax rate is also higher for those living on earningsrelated benefits rather than labour market support or unemployment allowance. This in an interesting discovery, as the expected earnings after being employed are higher for recipients of earnings-dependent benefits compared to recipients of labour market support. This means that the higher expected earnings of those living on earnings-related benefits are not sufficient to neutralise the negative effect which better unemployment benefit has on employment incentives.

Also, the previous sector of employment plays a remarkable role in the rate of effective employment tax, which is clearly above average for the unemployed in the manufacturing and construction sectors.¹⁷

In light of these results, what can be said of the incentives for accepting work from the point of view of an unemployed person? According to the research data, the average expected monthly wage of an unemployed person is around 1,600 euros. At this wage level, an effective employment tax rate of 64% means that, by accepting work, the monthly increase in cash in hand is 575 euros. In this case, 575 euros is the sum which the unemployed person compares to the net reservation wage when making a decision as to whether or not to accept a job offer.

¹⁷ The unemployed were classified into various occupational sectors according to the current situation at the time of the interviews. Normally, this classification is performed according to the most recent job. However, in some cases, when the person found employment during the same year, the sector of the new job was noted.

Unfortunately, since no direct information is available on the individual reservation wages, no certain estimate can be made of just how big an increase in net earnings is necessary for accepting an offer of work. Since working involves added expenses (travel to work, the value of lost free-time and housework etc.) these naturally add to the reservation wage. On the other hand, going to work might involve civil and social values that lower the required amount of monetary compensation. There are well-founded reasons why accepting work can be expected to lead to a positive development career- and earnings-wise, as a result of which future earnings are likely to rise above the immediate effect on income¹⁸.

Despite the above considerations, it is a widely accepted perception that becoming employed should be rewarding in terms of its immediate financial effects. From the point of view of employment, the situation is worst for those with an effective employment tax rate of over 100%, which means that getting a job does not lead to added net income. In 2004, this applied to only 4% of all unemployed, which is a fairly small share. It should be noted, however, that the equivalent figures for families with two parents or a single parent were 8% and 6.5% respectively.

Since free-time and housework should be given at least some value, it is justified to say that an effective employment tax rate much lower than 100% causes major disincentives to employment. Hereafter, 80% is considered such a borderline. In other words, a person is defined to be in an unemployment trap if the imminent financial benefits are less than 20% of gross earnings – or, conversely – the effective employment tax rate is over 80%.

At the average expected wage level of the unemployed, the effective employment tax rate of over 80% means that the net gain from accepting a job offer is, at most, 320 euros a month. According to the study, such effective employment tax rates mainly concern the lowest income classes¹⁹ so, in theory, the net profit of employment for those who are "trapped" will probably be lower than the said amount of euros. The minimum salaries as defined by collective labour agreements are around 1,300 euros a month. On this wage level, the effective employment tax rate of 80% would provide an additional 260 euros cash in hand.

An unemployment trap of the defined kind concerned 17% of the unemployed i.e. almost 50,000 persons in 2004. If we consider the 80% borderline to be a

¹⁸ This phenomenon is interlinked with an observation according to which wages are higher for those already in working life compared to the starting wages of the unemployed with similar qualifications.

¹⁹ In 2004, half of those in unemployment traps belonged to the lowest quintile of earnings.

sensible criterion for the trap, we can conclude that the main reasons for unemployment are other than the poor profitability of accepting work. Despite this, 50,000 persons being in the trap as defined is a significant problem from both the point of view of unemployment as well as labour supply.

Both the effective employment tax rates as well as the number of trapped people vary greatly between various groups. Of all examined groups, the biggest share of trapped people is among single parents. Of these, 43% were in an unemployment trap. The number of trapped single parents was roughly 5,000 in number i.e. one tenth of all those trapped. In addition, a fairly large proportion (26.5%) of other families experienced an incentive problem to the same extent, their number amounting to over 15,000, from which it is obvious that a remarkable proportion of the trapped are families with children.

From the point of view of labour force, it is interesting to examine the commonness of unemployment traps in different sectors. The relative shares in unemployment traps are particularly high in the manufacturing and construction sectors, around 35%. This is almost twice the average (Table 4.1, Figure 4.2).

Neither is the number of people in unemployment traps in the manufacturing and construction sectors – 8,500 and 5,500 respectively – insignificant. Although they only total 2% and 3.5% of the labour force in their respective sectors, they constitute a significant number compared to the changes in the labour force in recent years. For example, the number of labourers in the manufacturing sector increased by only 10,000 persons from 2002 to 2006. Bearing in mind the particularly severe recruitment problems in the manufacturing and in some construction sub-sectors, poor incentives can be expected to play a notable role in worsening the labour supply.

Another particularly interesting question from the labour market point of view is the respective shares of the trapped among those receiving earnings-related unemployment benefits and those receiving labour market support or unemployment allowances. It turns out that 22.1% of the recipients of earnings-related unemployment benefits are trapped while the figure is only 11–12% for those receiving other types of benefits (Table 4.1). The poor profitability of accepting work therefore affects those more who possess relatively recent work experience – and who are considered a "better" labour force by employers – than those who lack work experience altogether or suffer from long-term unemployment.

It is a well-known fact that finding work is more probable for recipients of earnings-related unemployment benefits compared to those living on labour market support or unemployment allowances, see e.g. Virjo etc. (2006a). This,

added to the weaker employment incentives of the first mentioned group, further supports the idea that incentive traps can hardly be considered the main cause of unemployment. Rather, it must be a question of a lack of necessary skills among the unemployed labour force vis-à-vis jobs that companies can offer at existing hiring costs.

The research also examined the financial employment incentives of people who are of working age but who remain completely outside the labour force. Nonexistent employment benefits provides a good starting point in making employment profitable for this group and the effective employment tax rates can be expected to be lower than for the unemployed.

Figure 4.2 Average effective employment tax rates (ETR) of unemployed persons and the share of persons in unemployment traps, by principal sectors of (previous) employment in 2004.



Possible exceptions to this rule are persons receiving child home care support. According to the results, their average effective employment tax rate remains at 54% in 2004, a clearly lower figure than that of the unemployed. In this research, only 2% of child home care support recipients were in an unemployment trap with an ETR higher than 80%, which equates to roughly 100 persons out of the whole population This is an interesting finding, as it is known that a greater part of children under the age of 3 are cared for at home

in Finland than in other Nordic countries, which do not have a similar system of publicly supported childcare at home (see Anttonen & Sointu, 2006 and Piekkola & Ruuskanen, 2006). A feasible explanation for this is that, although there would be economic incentives to work, childcare support recipients would rather stay at home caring for their children since the said benefit allows this option for a remarkable share of parents of young children.

Effective marginal tax rates

Alongside studying the incentives for becoming employed in the first place, the research also attempted to clarify incentives for earning extra income by calculating the so-called *effective marginal tax rates*²⁰. Like the effective employment tax rate, the effective marginal tax rate measures the amount of added cash in hand which is gained from extra earnings when the combined effects of taxation and social security are taken into account. A central observation here is that the average effective marginal tax rate on extra earnings is 42%, which is clearly lower than the previously described effective employment tax rates.

For example, calculated using average monthly earnings – 2,500 euros in 2004 – this would mean that an extra 25 euros would give 14.50 euros more cash in hand²¹. The effective employment tax rates normally grow alongside incomes. An exception to this rule is that the highest effective tax rates fall on the recipients of income support, which is strictly means tested relative to earned income. For their part, the effective marginal tax rates can rise up to 90–100% whereby the net gains of extra earnings remain almost non-existent. People in this kind of "income trap" accounted for around 5% in the data. Almost all of these were unemployed but had additional minor earnings during the examined year.

Earnings dependence has been eased somewhat since the launch of a trial in 2002 according to which part of additional earnings do not affect income support. The trial will be continued until the end of 2008. According to the related research, the trial has not substantially increased the earned incomes of those living on income support (Hiilamo etc, 2004). The legislation on the trial leaves room for interpretation, which in some cases has even lead to stricter earnings dependence.

²⁰ Effective marginal tax rates were calculated with a one percent rise in gross earnings. Along with the employed, unemployed people and pensioners who had work-related incomes during the year were included in the target group. For them, it is thus a question of the effective marginal tax rates on minor extra earnings instead of fulltime employment.

²¹ Since tax rates vary according to e.g. incomes and socio-economic status, the average income level does not necessarily reflect the average tax rate.

	Average MTR %	(%) share of those with MTR 50–90%	(%) share of those with MTR>90%	
Altogether				
1995*	53.4	59.9	6.4	
2000*	48.8	26.6	5.7	
2004	44.2	9.4	4.9	
Parameters for certain groups in 2004				
Family status				
Single	45.4	5.9	9.9	
A childless couple	41.1	7.1	2.1	
Single parent	52.9	20.4	13.2	
Other child families	46.5	14.9	3.3	
Others	41.5	9.1	1.4	
Household income level				
1. quintile (lowest)	51.9	8.7	28.8	
2. quintile	39.1	6.2	2.6	
3. quintile	40.5	3.9	0.4	
4. quintile	42.9	4.4	0.2	
5. quintile (highest)	46.5	20.1	0.2	

Table 4.2Effective marginal tax rates (MTR) on additional earnings in 2004.

* The number of persons in the incentive trap in the years 1995 and 2000 has been calculated assuming that the size and structure of unemployment was identical up to the year 2004.

Typical effective marginal tax rates are 40–50%, a category covering half of the data observations. A third of the data population has tax rates lower than 40% and about 15% pay over 50% tax. Tax rates over 60% are very rare, apart from the few exceptions mentioned earlier.

Like effective employment tax rates, effective marginal tax rates are higher than average for single parent households, averaging 53%. In addition, tax rates over 60% and income traps (an over 90% tax rate) are significantly more common for single parents than across the entire sample. Almost a quarter of single parents faced an effective marginal tax of over 60% on extra earnings in 2004.

Examined by age group, the effective marginal tax rates are exceptionally high in the youngest age group of under 20 year olds. Although the effective marginal tax rate does not differ greatly from the sample, average income traps were also relatively common in the age group of 21–25 years, where every fifth person was trapped. These observations can be explained by the fact that the share of income support recipients in these groups is higher than average. Apart from lowering the effective employment tax rates of the unemployed, reforms in tax legislation during the last ten years have also lowered the effective marginal tax rates. The effective marginal tax rate based on 1994 legislation would have averaged 53% i.e. 9% higher than currently.

Employment incentives and opportunities for the aged

The previous analysis did not particularly focus on employment incentives for the retired as a group. However, the retired were included in the group, whose effective marginal tax rate on extra incomes was examined. The results confirm the preconception that the effective marginal tax rates are relatively low and earning incentives are therefore high for those who are entitled to receive old age pensions.

Earned income does not affect the amount of pension in any way²². However, within a certain income bracket, pension income deductions have a sizeable effect that tends to increase the effective marginal tax rate. If pension incomes are small or large enough, the pension income deduction does not have such an effect. On the other hand, earned income deductions and expense allowances lower the effective employment tax rates for the retired too.

Rather than labour market participation by those already retired, a more important question is that of when workers at the end of their careers plan to retire. As stated earlier, those retiring before the age of 65 represent a remarkable labour reserve. Labour market participation among over 50 year olds is clearly lower in Finland than in the other Nordic countries; see e.g. Hytti (2006).

Much attention has been paid to employing and keeping older workers in the labour market. New reforms have been aimed at creating better incentives. The most important of these is the pension reform that was implemented since the beginning of 2005. Along with this reform, the lower age limit for an unemployed person to become entitled to a prolonged benefit period – i.e. the so called unemployment pipeline – has been raised: first from 53 to 55 and later to 57 years of age. Furthermore, individual early retirement has been abolished completely. At the same time, several projects have been launched to maintain the ability to work as well as for the education of the least educated aged workers in particular.

²² Unemployment and disability pensions, on the other hand, have a set income limit which must not be exceeded if the person wishes to preserve his/her right to a pension.

The employment rates of aged workers have improved rapidly. In 2006 in particular, the employment levels of both the 55–59 and 60–64 age groups clearly rose. This supports the notion that the implemented reforms have had the desired effect. However, it is still too early to say to what extent the change is due to improved pension system incentives. It must be borne in mind that economic growth has simultaneously continued very strongly and that the demand for labour has been very high. Since the beginning of 2006, employers' social security contributions have been lowered for aged workers in low wage jobs. In these kinds of circumstances, a higher employment rate among the elderly can be expected. Nevertheless, the effect of the implemented incentives has at least partly changed the labour supply of the more aged. This effect is most noticeable in the shifting of the lower age limit of the so-called unemployment pipeline; see e.g. Kyyrä and Wilke (2006).

Despite the reforms, there are grounds for suspecting that at least the early retirement system may still encourage fairly early retirement. The OECD has evaluated the implicit tax rates of remaining in the labour market in various countries when various early retirement schemes are in place, i.e. to what extent such favourable schemes lower workers' incentives to keep on working. According to the OECD calculation, this kind of a tax rate was much higher in Finland compared to the other Nordic countries (Figure 4.3). Also, Börch-Supan (2005) has noticed the adverse incentives of Finnish early retirement systems. This may partly explain the degree of participation and employment degrees of the aged, which continues to be low in comparison with the other Nordic countries.

Alongside employee incentives, employer incentives are also important. There is evidence that, for example, the financial risk borne by employers related to unemployment pensions affects the probability of redundancies. Alongside the reform implemented in 2006, the level of this risk was raised for some companies and their eagerness to make people redundant was lowered (Hakola & Uusitalo, 2005).

Another essential question for elderly workers is that of their physical and mental ability to work. Half of 50–64 year olds are on disability pension. There is no doubt that this reflects deficiencies relating to health and disabilities, effects which can be diminished mainly by improving public health. Fresh studies on the topic highlight – alongside improving public health – the possibility to affect one's ability to work by developing favourable conditions in working life (Gould etc, 2006 and Ilmarinen, 2006). For example, support at work as well as independent and challenging work itself tend to promote the ability to work.





Source: OECD.

Survey information is available on the most important reasons for continued working careers. A list of such motives include a good and well-functioning working environment, the general working atmosphere, interesting and challenging tasks, the ability to affect one's own work, good management as well as social relations. Those who have continued to work seem to value these more than a higher pension in the future (Tela, 2006). Piekkola and Ruuskanen (2006) estimate that, in keeping employees at work, financial incentives are particularly important for those with a lower level of education.

The great significance of how people experience these "softer" values does not undo the effects of material incentives. For example, Hytti (2006) points out that the higher employment rates among the aged in other Nordic countries are linked to a greater number of part-time jobs. Reducing the work contribution partially as the years go by seems natural since the ability to work can be expected to diminish gradually in turn. In these countries, working part-time seems to be more compatible with pension and other social security systems than in Finland.

4.2 Obstacles to regional mobility

Despite reasonable regional mobility, there are significant and very persistent regional disparities in rates of unemployment. This suggests that balancing labour markets in different travel-to-work areas with the help of regional mobility has not been very effective or far-reaching enough, relative to need. In the following, possible reasons for this dilemma are pondered.

One natural explanation could be that people move on a relatively small scale because of various obstacles to regional mobility. Finland has, in many studies, been considered a country in which workers' mobility is low. As previously pointed out in Chapter 3, a closer inspection does not fully support this view. Workers' regional mobility would appear to be at least average if not higher compared to many other European countries.

Even remarkable regional mobility might be insufficient to satisfy the needs of the labour market, especially if, for one reason or another, the economic structure requires mobility on a large scale. Regional mobility in European countries is generally considered as insufficient and therefore provides a modest yardstick. Furthermore, the travel-to-work areas in Finland are small when measured by the number of jobs they typically provide. For this reason, it is less likely in Finland than in other countries that new jobs would be created in the same areas where there have been job losses. Therefore, the need for regional mobility in Finland is probably greater than in many other countries, where travel-to-work areas are larger in terms of population.

On the other hand, as has previously been made apparent, moving from one region to another is very common compared to net transitions of the population. In 2005, of migration between NUTS 4 regions, 95% was crosswise and only 5% contributed to population growth in growing regions. This suggests that the problem does not lie in the scale of mobility as such. It seems that, in this respect, the direction and structure of workers' mobility plays a more important role.

A further possibility is that the areas where labour demand has grown strongest and the unemployment rate is low suffer from specific obstacles to receiving labour force. High living expenses and the poor availability of housing in the capital region and in some other growth centres are remarkable potential obstacles to regional mobility. For scarcity reasons, housing expenses are naturally higher in densely than in sparsely populated areas. In part, this variation in housing prices reflects greater productivity in concentration areas gained through agglomerate advantages. Greater productivity is reflected in wage levels and other production costs, and greater purchasing power raises the price of land when there is a limited supply. Income per capita and housing costs correlate positively, for example in the NUTS 4 data (Figure 4.4).



Figure 4.4 Housing prices and earned incomes in NUTS 4 regions in 2004.

If housing prices in population centres were simply higher in proportion to income levels than elsewhere, they would hardly present a remarkable obstacle to regional mobility. However, this is not the case. Housing expenses in the capital region in particular – measured by average price per flat square meter relative to the country-wide average – are clearly higher than the ratio of the levels of income in the capital region and elsewhere in the country. The regional mobility of workers is made even more complicated by the fact that the relative income level within the same profession lags even further behind than the relative level of housing prices.²³ In light of the existing comparable data, house prices in the Tampere region are also relatively high compared to the local income level. (Figure 4.5)

The conclusion that housing markets are an obstacle to workers' mobility is also supported by another, more detailed empirical study. In the relatively recent empirical analysis on Finland by Hämäläinen and Böckerman (2004), the conclusion was arrived at that inward migration negatively correlates with housing prices and the amount of owned housing in the area, while outward migration has no such dependency. This result suggests that the problem lies,

²³ In Figure 4.5 the relative wages of *engineers* have been compared in various regions, since sound regional data is available. The situation is probably similar for many other professions.

above all, in insufficient housing supply – in particular with regards to rented housing – in growth areas. $^{\rm 24}$



Figure 4.5 House prices and purchasing power in certain regions.

From the view point of narrowing regional discrepancies in unemployment rates, the structure of migration is also problematic. Even in regions with high unemployment rates, a majority of departing movers are other than unemployed, although the eagerness of the unemployed to depart is somewhat higher and the eagerness to immigrate somewhat lower than on average (Table 4.2). The fact that mobility is concentrated on students and those with jobs further weakens the ability of these regions to even out unemployment rates through migration. On a short time scale, unemployment does not ease as a result of this kind of migration unless the departed employed workers leave behind vacancies for the unemployed to fill. This is not necessarily easy due to skill requirements and, in any case, it does not happen automatically.

²⁴ It is an interesting observation that the negative effect of owned housing only applies to *inbound* moving, which implicitly refers to insufficient supply of rented housing in growth areas. A possible explanation for this is that potential movers see the immediate purchase of owner-occupied housing as a risky option when they consider moving. On the other hand, the share of owned housing in the region of departure does not affect the decision to move away. It therefore seems that commitment to owner-occupied housing presents no great obstacle to moving.

On a longer time scale, the migration of the young educated population in particular weakens the economy of the departure region, not only because purchasing power is weakened but also because the region's attractiveness as a production location will be diminished since there will be less skilled workforce available. As a result, the ability of such a region to provide jobs weakens instead of improving, while the growth possibilities improve further in the receiving regions. ²⁵ This kind of dynamic further weakens the emigration areas which already suffer from a lowered ability to create jobs. For this reason, even a large-scale net emigration that concentrates on the young and well-educated does not lower unemployment rates in the departure areas, although it helps to meet labour market needs in the receiving regions.

In order to even out regional disparities in unemployment rates, it would be particularly important that the unemployed move from high to low unemployment regions, rather than just moving in general. As previously stated, the unemployed are more mobile than the employed and, by moving, become employed more often than they would by staying put. In 2003, 37% of the total 9,500 unemployed aged 20–49 found a job during the same year after relocation. A successful job hunt often ends up with a new address in a growth region. For example, 50% of unemployed immigrants to the Uusimaa region (surrounding the capital) found a job in 2003 (Myrskylä, 2006).

The reason for low mobility amongst the unemployed, even from the high unemployment areas, is probably that the expected gains from removal are lower than the benefits of staying in the region. Apart from various imminent financial and social costs, a natural explanation is the earlier stated high housing costs in the best labour market regions. The unemployment benefit in a low living cost area may well generate an equally high or even higher disposable income (after housing costs) than an attainable wage in a region of high housing costs.

An essential factor constraining the relocation of the unemployed may be the fact that there are already many unemployed in the target region. Relocation in order to look for a job is not an attractive option for most unemployed. Relocation is worthwhile only for the selected few who have already found work or who, due to their personal qualities, can expect to compete with the local unemployed.

²⁵ Laakso (1998) points out that the emigration of students and young people in general rapidly strengthens growth in the region and consequently weakens the growth prerequisites in the emigration regions. In their study of regional variations in earnings, Pekkala and Kangasharju (1998) conclude that, on a short time scale, regional mobility narrows income levels but on a long time scale it is likely to increase them.

Tervo (2002) emphasises the importance of this kind of selection. According to his research on individual data, the relocation of an unemployed person does not per se improve the likelihood of employment when individual qualities are taken into account. According to this point of view, the better than average employment of those unemployed who relocate are merely due to the fact that those who opt to become leavers are more employable than the norm. These people would probably be just as employable in their own region.

If Tervo's conclusion is valid, higher mobility would only move unemployment from one region to the next. If mobility was directed at low unemployment regions, regional disparities would narrow but the national rate would remain unchanged. However, this study was conducted with rather old data. It is difficult to regard such a pessimistic view of relocation as credible, especially when one considers the fairly good employment results following relocation in recent years.

Regardless of region, the probability of finding employment is low and the expected wage can turn out to be fairly moderate for the long term unemployed. Since the willingness of the aged to relocate is lower because of social relations and other reasons related to their current living environment, low, insecure and possibly short-term extra earnings would not necessarily compensate for the immaterial cons of relocation.

Adjusting wages is one market mechanism that might lower regional disparities in unemployment. Small regional wage dispersion does not help even out regional disparities (Johansson, 2006), diminishing labour demand in high unemployment regions and increasing it in high demand regions *in comparison to wages reflecting regional demand-supply differences.*

Regional disparities can be expected to narrow in the future as a result of the aging of the population. There are relatively many aged unemployed, particularly in high unemployment regions. When they retire, the number of unemployed citizens will lower most in these regions. Naturally, regional disparities in labour demand affect gaps in unemployment rates.

Although the possibilities for job creation are generally weaker than average in areas of high unemployment, the anticipated movement of large cohorts of the labour force into retirement in the near future will open up more vacancies there, since the employed will be older in these regions just as elsewhere. Therefore, the narrowing of regional unemployment rate gaps is probable, although it may take some time.

4.3 Challenges to the education system from the labour market perspective

From the labour market perspective, fundamental challenges to the education system involve both persuading younger cohorts to join the labour market earlier and easing the demand and supply mismatch. The aim of youth education is to encourage youngsters to complete their studies within a reasonable time and to match labour market requirements as well as possible, both quantity and quality-wise. Occupational retraining of the adult population as well as active labour market measures are vital means of matching demand and supply and promoting occupational mobility.

The Finnish education system has various strengths that have been recognised internationally. However, despite its numerous strong points, the Finnish educational situation and the functioning of the system also have weaknesses such as the low level of education among the older generations, the commonness of interrupted studies and overly long study times. Partly related to the latter issue, the share of youth attending education is exceptionally high in Finland (40%) whereas the OECD average is $16\%^{26}$.

In the future, the development of the Finnish education system will be fundamentally restricted by the diminishing cohorts of native young and great regional variations in their size. On the basis of demographic trends alone, the number of students can be expected to shrink from 450,000 to 390,000 during the next decade. At the same time, there will be notable attrition rates, especially in posts that require higher education, and personnel will need to be replaced in greater numbers.

Occupational adult education is at relatively high levels in Finland. More than half of the adult population takes part in some sort of adult education each year. One of the aims of the current government is to raise this figure to 80% by 2008. In the 25–64 age group, the expected time spent in work related training which does not lead to a degree is among the highest in the OECD countries (OECD, 2006b)²⁷.

In Finland, publicly organised occupational training for adults is divided into voluntary adult education and educational active labour market measures. On top of this, companies organise personnel training that may well be publicly

²⁶ The number of youths in higher education is in accordance with the aims of Finnish educational policy and therefore cannot be considered a particular problem as such.

²⁷ When comparing the time spent in education which leads to a degree, the placing is more modest: Finland ranks 22nd.

organised or financed, or be subject to public subsidies. The latter of these three is the most significant in terms of the number of participants.

In the public sector, the responsibility to organise and fund adult education is divided between the Ministry of Education and Ministry of Labour so that the first-mentioned is responsible for voluntary adult education and the latter for active labour market measures. This may well be the fundamental reason for the problems in orderliness and efficiency which are surfacing in the form e.g. of overlapping qualifications and the uneven division of educational opportunities. There are a wide range of study grants available for adult education, but the terms and levels of grants vary considerably (OPM, 2006).

During recent years, one of the central development projects in adult education has been the NOSTE-programme, which aims at the further education of 30–59 year olds who do not possess a formal vocational degree. This programme also aims to develop sound and supporting practises that boost the completion of studies among the adult population.

All in all, 600,000 persons out of the adult population lack a vocational qualification, which makes the target group rather extensive. The NOSTE-programme has not reached all of its set goals and has progressed more slowly than planned. By the end of mid-2006, less than half of the anticipated students of roughly 30,000 had joined the programme²⁸. There are also great regional differences in the implementation of the programme. Its flexible funding arrangement allows for the continuation of the programme until 2009.

Demand-supply mismatch

Because of the delay involved, the prediction of future labour market needs is important for labour demand and supply alike. It is often difficult for individuals, companies and even for the public sector to make long-term educational investments merely based on current market information. The prediction of future educational needs is very challenging, for example because of the relatively long time spent in education and the difficulty of predicting future labour market demand (see e.g. Haskel & Holt, 1999).

Many countries have ceased measuring the starting positions in educational institutions along the lines of long-term labour demand prognoses because of the many unpredictable factors involved (Cörvers, 2006). In these cases, an alternative strategy has comprised intensified efforts in communicating news in

At the same time, many in the target group had taken part in active labour market measures. For example, in 2005, more than 8,000 persons aged 30–59 without a vocational degree had participated in active labour market measures.

the form of e.g. early warnings to the educational institutions and to the individuals making educational choices. In addition, increased (cross-border) mobility has been considered a factor that partly diminishes the need for labour market-based educational planning (Vogler-Ludwig, 2006). On the other hand, shrinking labour resources due to an aging population have, in recent times, caused growing international attention to be drawn to anticipating educational needs.

At regular intervals, the Finnish ministries of employment and education have aimed to assess labour demand and supply and have thereby pinpointed educational needs on a mid-range time scale. The education and research plan for 2007–2012 was prepared as part of the "Educational supply in 2012" project. Unlike many other countries, educational supply in Finland has also administratively – although loosely – been linked to the number of starting positions in educational establishments (OPM, 2005).

However, the guidance measures of the public sector are limited. By controlling the number of starting positions in youth education, the distribution of starting positions between various subjects can be influenced. Individual educational establishments have considerable say in the allocation of starting positions between various subjects. Nor can students be forced to study subjects which lack sufficient attraction. Adult education could perhaps be more directly adjusted to accommodate labour market demand both with regards to educational content as well as the number of students. Even concerning this particular field, problems have been identified in Finland and recent efforts have been made to improve the anticipation of future skill needs in the field of adult education (OPM, 2006).

One way of adjusting to the insecurity of educational needs would be to try to broaden the content of tuition to embrace general competencies instead of organising skills-specific tuition. This kind of strategy would leave acquiring work-specific skills to in-house training or further education. In Finland, such a model would probably require a change of attitude among employers who currently value – and probably also expect to be able to hire – workforce with specific skills or work experience from the relevant field (cf. reasons behind recruitment problems reported above in ch. 2).

As part of the overall evaluation of the functioning of the Finnish labour market, a small-scale empirical assessment was made by the Secretariat of the Economic Council of the connection between educational supply and labour market demand in light of recent developments (Ahti, 2006). Among other things, this aimed to assess the extent to which the anticipation of educational needs has been successful in view of the labour markets. The labour market positions of recent graduates in six educational subjects and at three different educational levels (vocational school, higher vocational level, university) were analysed for the years 1998–2004²⁹. The unemployment rates of recent graduates were, on average, a few percent higher than amongst the entire workforce. However, there were great variations in this respect between the different educational subjects.

The highest unemployment rates of recent graduates were to be found among those who had studied tourism and catering, technical science, transport and culture, for whom unemployment rates varied between 15-20% in 2001–2004. In the same time frame, the rates for graduates from the humanities, teaching, commerce and administration as well as social and health care varied between 5-10%.

If observed during the entire assessment period, humanities and teachers' education were the only ones out of the six assessed subjects which had a lower than average unemployment rate among recent graduates in comparison to the entire workforce. Measured against the unemployment rate, the market position during the three-year period improved most for social and health care graduates.

When the unemployment rate was studied by educational level, a strong negative correlation was discovered between unemployment rates and educational levels. While the unemployment rate for higher vocational level graduates more or less equalled the national average, it was lower than that, at about 5%, for university graduates during the entire period. The rate was clearly higher for vocational school graduates than for others, settling at around 17% in the first years of the 21^{st} century.

In light of these observations, it is obvious that the different market positions of graduates from various subjects are a reflection of educational levels. For example, few graduates in the humanities have a merely vocational education, which lowers the average unemployment rate among them. There are good reasons why the placement of graduates into labour markets should therefore be examined by educational level.

When examining the placement of graduates into labour markets by educational level, the relative positions of various subjects change and vary between levels. Figure 4.6 presents the 2004 unemployment situation of graduates from 2001–

²⁹ Recent graduates were classified as those who had graduated within one year. For data reasons, adult education graduates were included.

2003³⁰. The figure shows that the lowest unemployment rates are among graduates in technology and transport as well as social and health care and physical education to whom full employment applies in practice. Apart from the cultural sector, the unemployment rate remains at a fairly satisfactory level (at around 5% or under) even for university graduates from other fields of study.



Figure 4.6 The unemployment rate of 2001–2003 graduates from various subjects and educational levels in 2004.

Source: Statistics Finland.

Also, at the level of higher vocational education, unemployment rates remain at around 5% for graduates in social and health care studies and physical education, technical science, transport, the biosciences as well as the social sciences. In the following subjects, graduate unemployment is under the national average for the whole workforce (8.8% in 2004): the humanities, teaching and tourism, and catering. In contrast, the unemployment rates among graduates of natural reserves and environmental science as well as culture rose to 10%, and even up to 15% for the latter.

Although the unemployment rate for a student of social and health care studies at the level of higher vocational education is only 5%, the probability of unemployment is still five times higher compared to university graduates in the

³⁰ When the definition of a recent graduate is widened to include graduates not only from the previous year but also from the two preceding years, the picture of placements into labour markets becomes slightly more positive. For example, the unemployment rate of graduates from the preceding year in 2004 was 12.3% whereas the equivalent figure for graduates from the three preceding years was 10.3%.

same subject. In the subjects of technical science, transport, natural reserves and environmental science, the probability of unemployment is twice as high as for university graduates in the same field of study.

At the level of vocational education (basic level in Figure 4.6) in 2004, all graduates faced an unemployment rate of over 10% while the average was 15%. One in five graduates from the field of culture, which amounted to 5% of all graduates in vocational education, had no luck in their job hunt.

From the point of view of anticipating educational needs, it is interesting to examine the relationship between the number of recent graduates in various subjects and levels and their labour market positions. As a starting point, it would be desirable if education concentrated on sectors where the labour market situation is favourable. Figure 4.7 illustrates a composition where the vertical axis shows the unemployment rate of recent graduates in various subjects and at various educational levels in the years 2001–2003. The horizontal axis shows the share of various subjects among the graduates of the three educational levels cited. In other words, the figure provides a simple illustration of the demand-supply dependency of various educational subjects.

In view of this picture, the relative supply of the various educational subjects does not clearly reflect the variation in labour market demand. The picture shows only a slightly negative correlation i.e. the number of graduates in subjects with a high level of unemployment has, on average, been low and vice versa. This correlation is partly weakened by one clear exception: more than a third of vocational school graduates majored in technology and transport despite the high unemployment rate in the sector $(17\%)^{31}$.

³¹ Figure 4.7 comes with several reservations. First, it is possible that the unemployment rate in a certain field of study is partly caused by the high number of graduates in that field i.e. the causality moves in the opposite direction to that assumed above. On the other hand, a more systematic analysis would require the inspection of alternative delay structures, among other things.

Figure 4.7 The relation between the share among graduates of educational subjects and the unemployment rates by subject. The share of educational subjects (horizontal axis) is defined as the share of a particular subject among graduates at the three educational levels in the years 2001–2003. The vertical axis shows the unemployment rate at the corresponding subject and educational level in 2004.



Share of graduates at various educational levels in 2001-03

The equivalence between education and duties

Merely examining observed variations in employment rates may give too onesided a picture of the supremacy of various educational alternatives. For example, according to a study that followed labour market placements and the early careers of recent graduates, a third of youngsters with higher education worked in tasks that were fully or partly unrelated to their education (Korhonen & Sainio, 2006). Over the course of five years, the study examined the labour market placements of university and vocational high school graduates in various disciplines.

Although relatively few graduates (4%) were placed in jobs completely incompatible with their educational *level* there were major discrepancies between various subjects in this respect. Whereas the level was next to zero for graduates of medicine, dentistry, veterinary medicine and psychology, the equivalent figure for graduates from the faculty of agriculture and forestry as well as theology reached almost 10%.

Source: Statistics Finland.

The gaps between studies and duties can also be linked to the studied subjects. When examined using this criterion, 7% of the sample considered their jobs to be completely unrelated to their major subjects. The job and the subject studied matched most often with respect to graduates in dentistry, medicine, veterinary medicine and pharmacy. Graduates in the humanities, social science, theology and the arts worked outside their area of specialisation more often than others (Korhonen & Sainio, 2006).

Generally speaking, duties corresponded to the level and subject of study most satisfactorily among graduates from study programmes that prepared for a certain, clearly defined profession. However, when interpreting these results it should be noted that a majority of graduates that worked in unrelated tasks had voluntarily chosen the particular job, perhaps out of personal interest, due to the further education they had received, better salary or better working conditions. Only a fifth of graduates that worked in fully or partly unrelated tasks reported that they had not found jobs that corresponded to their education.

Summary

In recent years, tax and social security related employment incentives have developed in a positive direction. The average effective employment tax rate was 64% in 2004, which in light of existing comparable international data can be estimated as being near the mid-range on a European level. The decline in effective employment tax rates is mainly a result of reduced income tax, which has made wage income more lucrative compared to social security benefits.

Serious incentive traps are a relatively rare phenomenon. Around 17% of the unemployed are in an incentive trap when this is defined as facing an effective employment tax rate of 80% or higher. Above all, incentive traps of this kind concern families with children, particularly single parents. In addition, those receiving earnings-related unemployment benefits are more likely to find themselves in an incentive trap.

Analysed by sector, severe incentive problems were experienced above all by those with work experience from the manufacturing and construction sectors. With recruitment problems being worst in construction and some manufacturing sub-sectors, incentive problems can be expected to play a role in explaining the observed pattern of labour shortage by sectors.

Also, the marginal tax rate directed at additional wage earnings has decreased. The effective marginal tax rate for additional earnings is 40–50%, while the average was 44% in 2004. These tax rates are higher for families with children.
Problematic tax rates of over 90% mainly concern recipients of means-tested income support.

The biggest problem with respect to regional mobility does not seem to be lack of mobility as such, but its ability to balance regional labour markets and diminish regional differences in unemployment rates in particular. Because travel-to-work areas in Finland are relatively small in terms of their population, the need for regional mobility is probably greater than in many other countries.

The narrowing of regional differences in unemployment rates through migration takes a great deal of time. The unemployed still move – although more than the employed – to a fairly modest extent from high to low unemployment areas. On top of this, the most frequent movers from high unemployment areas tend to be the youngest and the most educated part of the workforce. As a result, the inability of such areas to attract production facilities will reduce the prerequisites for growth. In turn, this will further weaken efforts to balance regional disparities in unemployment rates.

High living expenses and the poor availability of accommodation in the capital region and in some other growth centres are major potential obstacles to workers' regional mobility. In particular, the living expenses in the capital region – measured by average price per housing square meter – are clearly higher relative to the rest of the country than average income levels in the capital region relative to elsewhere in the country.

From the labour supply perspective, fundamental challenges to the education system involve both getting younger cohorts to join the labour market earlier and alleviating the demand and supply mismatch. Despite its numerous strengths, the Finnish education system also has weaknesses such as the low level of education of older generations, the commonness of interrupted studies and overly long study times.

The extent of vocational education for adults is on a relatively high level in Finland. However, the system is incoherent and there are organisational and effectiveness problems which relate, for example, to the overlapping of qualifications and a fragmented study grant system.

Internationally, the narrowing of labour resources due to the aging of the population has increased the focus on anticipating educational needs. In Finland, the authorities have aimed at broadly assessing future developments in labour force supply and demand as well as subsequent occupational educational needs in the medium term. Assessments of educational needs have influenced

the number of starting positions in youth education. The accuracy of the assessments has, as yet, not been systematically examined.

The unemployment rates of graduates– and thereby their labour market demand – varies greatly, depending on the subject and level of education. Higher education – the cultural sector apart – seems to provide a relatively low unemployment risk although a considerable proportion of graduate jobs are at least partly unrelated to their education. On the basis of a simple analysis, it would seem that the number of graduates has not very clearly responded to market demand.

Conclusions of Chapter 4

At present, severe incentive problems among the unemployed are relatively rare. Of those receiving labour market or basic allowance support, only one out of ten can be considered to be in an unemployment trap. From this point of view, incentive traps cannot be seen as the most common obstacle to employment. The problem with respect to the long-term unemployed or those unemployed and lacking a work history is rather lack of demand: at current hiring costs, no jobs are available that would match their skills.

In addition to this, it is possible that the long-term unemployed are suffering from a deeper kind of incentive problem: the unemployed may well have adjusted themselves to a modest material livelihood and – considering the various efforts employment would introduce, such as educating oneself and other requirements for personal activity – fail to see how getting a job would improve their current living conditions.

Recipients of earnings-related benefits are almost twice as likely to fall into an incentive trap compared to the unemployed, who receive other types of social security benefits. There are relatively many recipients of earnings-related benefits, and employers' tend to consider them as more employable workforce compared to the unemployed living on other benefits. It is therefore evident that, with regard to short-term labour supply, the incentive problems of this group are likely to be of the most harmful kind. This view is particularly emphasised in the industrial and construction sectors, where incentive traps are most common.

The nature of the remaining, severe incentive traps indicates that reduced taxation is an insufficient incentive for some problem groups. Apparently, eliminating traps concerning single parents, child families and recipients of income support would require changes in the grounds on which social security benefits are granted.

Since a major part of the unemployed do not seem to fall into an incentive trap of the defined kind, along with easing off incentive traps, attention should be paid to further enhancing the employability of those that are difficult to employ. In addition, employers' expenses that will occur with respect to hiring such labour force should be moderated. Whereas employed labour hired in this manner would not solve the labour shortage as such, it might indirectly ease labour supply by freeing up those already working in more demanding tasks.

The greatest obstacles to occupational mobility are probably related to acquiring skills required in potentially new professional tasks. We should perhaps question whether the current system of supplementary and re-education – although extensive – functions efficiently enough. For example, the so-called NOSTE-programme, which is aimed at educating those with least education, has not achieved its goals in terms of the number of students.

The greatest obstacles to regional mobility are closely linked to the availability of suitable and reasonably-priced accommodation in regions where new jobs are being created fastest. In this context, streamlining housing policy would probably benefit regional mobility most. Special attention should be paid to providing the jobless with opportunities and incentives to become regionally mobile.

In Finland, travel-to-work areas are often both specialised and small in terms of labour force, which is why rapid and large-scale changes in labour demand create considerable demands with respect to both occupational and regional mobility. Since changing profession and moving involve costs for both the individual as well as the public sector, it would be beneficial if travel-to-work areas could be further enlarged geographically. This would improve workers' chances of finding new jobs as well as employers' chances of finding labour force meeting their demand. Adjusting to job losses becomes easier, the better industrial, innovation and employment policies there are in support of growth potential in the area.

5 CONCLUSIONS

Assessment of the current situation

Alongside an increasing number of job vacancies, especially during 2006, problems in finding suitable labour force have clearly intensified. So far, such problems are concentrated in certain sectors as well as certain job descriptions, and vary from one region to another. From the employers' point of view, recruitment problems arise above all in potential candidates' lack of occupational skills, education and work experience. However, there appears to be no general labour shortage that would affect several sectors and regions simultaneously.

If the general preconditions for economic growth remain favourable, the situation in the Finnish labour market will become increasingly stringent as time passes. As the so-called baby boomers born after World War II gradually retire and are replaced by younger cohorts smaller in size, the supply of labour force will begin to diminish. This development will inevitably increase problems in acquiring workforce. At the same time, unemployment can be expected to ease since many of those who fell into recurring or long-term unemployment after the economic slump at the beginning of the nineties will soon reach retirement age. How demographic changes will affect unemployment strongly depends on future possibilities and incentives that allow people to move from unemployment into work.

This kind of situation emphasises the need to be able to utilise existing labour resources more efficiently in the future than has so far been the case. It would be particularly important to steer the unemployed more effectively into work that meets market demands. In the future, more attention must be paid to utilising the domestic reserves currently outside workforce. To ease bottlenecks, there is also growing pressure to increase the use of foreign labour force.

Problematic areas

Key factors that influence the steering of labour force resources into work for which there is genuine demand include occupational and regional mobility on the one hand and, on the other, opportunities and incentives for the jobless and others outside the labour force to join the labour market.

There is relatively little information on actual **occupational mobility** i.e. people changing from one profession to another. A lack of reliable data relating to people's change of occupation is making analysis more difficult. Covering this topic would call for further research and the development of a statistical basis. In any case, changing jobs is relatively common in Finland compared to many

other European countries. According to the information that is available, occupational mobility from one sector to another is greater than ten years ago (although slightly less than at the end of 1990s), which means that Finland ranks at the average level internationally. Occupational mobility is far greater than regional mobility. Furthermore, a simultaneous change of both occupational sector and living area is fairly rare. The central preconditions for occupational mobility lie in the opportunities and incentives for employees to update their vocational qualifications: the education system needs to be developed to facilitate the updating of employees' vocational skills.

The regional mobility of the working age population has clearly risen in the last ten years, both with regards to actual moving as well as commuting. Contrary to the oft-stated common impression, regional mobility in Finland is at least average in international comparisons, and probably greater. Despite this, regional differences in unemployment rates seem to be rather stable. This is probably due to the fact that the average population of travel-to-work areas is relatively small, creating a great need for regional mobility in Finland.

On the one hand, mobility concentrates mainly on the employed and those outside the labour force whose change of location would not even out variations in unemployment rates between areas. Taking indirect factors into account, this might even increase the differences in the long term. Although the unemployed move more often than the employed, their overall mobility from high to low unemployment areas is surprisingly low. Regional job-matching is probably weakened mainly by the high costs of living and lack of suitable accommodation in areas where demand for labour force is growing fastest.

For the unemployed and those placed outside the workforce, the **preconditions of accepting employment** (in their own region and line of work) depend on work experience and the suitability of their education vis-à-vis the available jobs. These are the major factors employers cite as being problematic in recruitment. Although employers expectations may at least to some extent be unrealistically high, it is evident that the education system has done too little too late in terms of offering the fast changing skills required in modern working life.

Income tax reductions in the mid 1990s have clearly diminished **incentive problems related to taxation and income transfers**. In 2004, 17% of the unemployed were in a so-called unemployment trap. Most incentive traps concerned low income earners and child families, particularly single parent families. Over a fifth of income-related unemployment benefit recipients were in an unemployment trap, whereas this was the case for only a tenth of those receiving ordinary unemployment benefit or daily allowance. Incentive traps are

probably most common among workers with work experience from the industry and construction sectors.

Incentive problems do exist, but in the light of the results of this analysis they can hardly be seen as the main causes of the labour shortage or unemployment in general. A remarkable number of the unemployed apparently face a situation where their skills do not match the jobs that employers want to offer on current wages. In other words, their skills are not in demand despite the widespread labour shortage. On top of this, it is reasonable to assume that some of the unemployed have an incentive problem of a deeper kind, i.e. various psychological and social factors which make it difficult to sustain the activity required in employment.

As for **people outside the labour force,** accurate information is available on incentive traps affecting only two specific groups: those receiving child care support and, to a lesser extent, those who have already retired. In both of these groups, incentive problems are far fewer than for the unemployed. Very few child care support recipients are in the defined incentive trap. In comparison to other Nordic countries, many mothers in Finland stay at home to look after their young children. This does not reflect the fact that working would not be profitable, but rather it is an indication that this type of benefit makes child care at home possible on a large scale. From the labour market point of view, the problem could mainly be that long-term absence from work can weaken skills, which consequently decreases the probability of employment following the absence from work.

Key issues in utilising the labour input of those currently outside the labour force are linked to the speed at which younger generations enter the workforce from schools and how soon people retire from the labour force. In recent years, the elderly section of the workforce has clearly extended its stay on the job market whereas there are no signs of shortened study times or young people entering higher education at an earlier age. On the other hand, the employment rate for the more mature workforce is relatively low in Finland, especially when compared to other Nordic countries. According to the OECD's calculations, financial incentives to retire early are fairly good in Finland, in international comparisons.

Using foreign workforce in order to patch up skills shortages is still relatively uncommon in Finland. However, immigration has increased, especially over the last few years. Furthermore, there is evidence that more foreigners than before are temporarily employed in Finland although there is little precise information on this phenomenon. With regards to the emigration and immigration of those with a higher education, the balance remains unfavourable to Finland.

What should be done?

It is clear that the overall **education system** holds a key position with regards to the more effective exploitation of the domestic labour reserve. By developing it one can

- Influence the entrance of youth into the labour market and thus help satisfy the demand for labour caused by the sizeable attrition of the post-war generations
- Achieve a better correlation between the education system and demand in the labour market. Currently, the labour market position of graduates varies considerably depending on the field and level of education
- Develop and maintain the know-how of the adult population so that it better corresponds to the needs of the labour market and enables occupational mobility.

A set of common observations on how the education system could be improved is presented in the recent globalisation report published by the Secretariat of the Economic Council (VNK, 2006b). Apart from the observations presented in the report, attention should be paid to at least the following:

- A system for forecasting and managing educational needs should be further developed. Also, information on the labour market's needs should be widely available. Thresholds between various educational programmes should be lowered so that choosing a particular line would not overly restrict the choice available for further studies.
- The current adult education system in Finland is complicated and complex. It would be advisable to review the whole system without delay and if this proves unattainable for some reason at least define the major points that require renewal over a short time scale. As part of this renewal:
- The adult education system and further education should be developed through co-operation between the public and private sectors, in order to support the recruitment of both domestic and foreign labour force as required. In particular, arrangements should be made to ensure that even small companies could better train their staff.

- Private companies must be supported and encouraged to bear greater responsibility in educating workforce in task-specific specialist skills – this could be done by developing and expanding a system of so-called shared acquisition as well as in-service training.
- We should contemplate the means through which expenses and risks with respect to educational investments could be shared so that educating oneself is made more attractive, even in adulthood. One way of aiming at this goal would be to develop the current system of financial support for adult students and possibly even consider models where job security for a fixed period could be guaranteed to those who have retrained themselves.
- The existing package of social benefits aimed at safeguarding employees in the case of large-scale dismissals should be developed further to provide stronger incentives for vocational retraining and mobility than are currently available.
- The so-called NOSTE-programme³² should be applied more widely across the country. There are well-founded reasons for continuing the programme once the current financing period expires.
- Retraining the workforce with a higher education should more clearly form part of the curriculum of the universities and higher vocational schools than is currently the case.
- A natural way of attracting high calibre foreign workforce into the country would involve taking more foreign students into universities and higher vocational schools. Another reason for this lies in the diminishing numbers of those belonging to the younger age groups entering higher education in Finland, due to current demographic trends. Attracting foreign students would require broad, high-quality tuition that can hardly be maintained without new kinds of funding arrangements within educational institutions.

Reducing **obstacles to regional mobility further** would be worthwhile. In particular, action should be taken in order to ensure the availability of reasonably priced accommodation that accords with the wants and needs of people in areas where most new jobs are created. Apart from reducing obstacles to moving, expanding travel-to-work areas by facilitating commuting and remote work would be justified. Such measures would be most important in sparsely populated remote areas which face difficulties in offering suitable jobs to both

³² The aim of the Programme, which will be implemented from 2003 to 2009, is to improve poorly trained adults' career prospects and job satisfaction, relieve labour shortages due to the exit from the labour market of the large post-war age groups and to raise the employment rate. http://www.noste-ohjelma.fi

spouses in the same living area. From the point of view of improving regional job-matching, the most important measure would be to improve the opportunities and incentives of the unemployed to move when they find jobs outside their own living area.

- The supply of accommodation must be increased in areas where more jobs are created. However, merely increasing the number of flats would be insufficient. It would be equally important that such flats respond to the needs and wants of people. From the point of view of increasing mobility, it would be more important to increase the number of rented rather than owner-occupier flats. Similarly, *inbetween housing ownership arrangements* could be enhanced where the risk of changing flat are not as great as in owner-occupied housing. Yet this type of housing should offer more security and occupant influence than traditional rented housing.
- Without delay, it would be advisable to analyse the effects of the discretionary moving benefit introduced for the unemployed in the beginning of 2007. Such an analysis would provide a better basis for judging whether this benefit could also be offered, for example, to employed persons who temporarily need to move from one area to another due to their work.
- There are sound reasons for ensuring that the obligation of the unemployed to accept work outside their area of residence is implemented in the same manner in all job centres around the country. It should also be considered whether this obligation should be made more binding to closer match the practise of other Nordic countries.
- Additional subjects for analysis are the effects of the recently extended rights to tax deductions on commuting expenses. It would be of the utmost importance to ensure proper traffic connections in order to create favourable conditions for commuting. Special attention must be paid to the efficient use of the public transport network. This could involve various types of further support directed at providers or users of public transport.
- It would be advisable to improve existing opportunities further and develop the prerequisites for remote work and so-called *mobile flexiwork*, i.e. work done during commuting. The most important public sector task with respect to this issue would be to ensure that telecommunications links and networks are working properly, even in sparsely populated remote areas. It could also be contemplated whether the purchase of equipment required for remote work might be subject to public subsidies.

Further **improving the social security system and taxation** is important in order to increase both recruitment and employment incentives.

- It would be beneficial to reduce income tax further in order to minimise the incentive trap for those entering the labour force and to lower recruitment thresholds. In this context bearing in mind who the current incentive traps concern the potential gains of reducing tax in general would be fairly limited compared to subsequent losses in tax income.
- Therefore, apart from incentives, decisions concerning changed tax rates should be based on careful consideration of the implications for the sustainability of public finance and, among other issues, for wage agreements and business cycles.
- The largest gains from reduced tax rates could probably be achieved at the two ends of the income distribution. The lowest earners find themselves in incentive traps that prevent them from joining the labour market whereas the highest earners are usually the most mobile internationally. Both of these notions come with reservations, however: although income tax reduction would relieve incentive traps for the unemployed that can achieve the lowest salary levels, for a remarkable number of the jobless employment prospects would hardly improve since obstructions also consist in lack of demand for their skills or in their marginalisation from society. As for the highest earners, the tax reduction would have to be hefty to impact on the choice of country of residence. This is problematic from both the fiscal and distributional perspective.
- Rather than tax issues, the main incentive problems concern various social security transfers. This is why it would be more important to develop them rather than change taxation grounds. Since Finnish social security benefits at large are rather modest in Nordic comparisons, preliminary solutions could probably consist in relieving the linkage between earned income and income transfers.
- From the point of view of labour force shortages, income-related unemployment benefit is perhaps the most problematic social security benefit as it restrains the recruitment of the most employable workforce amongst the unemployed. In turbulent conditions, there are good reasons to develop labour market mechanisms further towards a flex-security model without weakening the level of income-related unemployment benefit relative to wages. Reducing negative incentives would then require that the obligation to accept work be implemented strictly and consistently throughout the country.

- Although there are no major incentive traps attached to home care support, various forms of support aimed at families with children such as parental leave and home care support should be developed in such a way that they could be more easily combined with part-time work. This would diminish long-term absence from working life which has potentially negative effects on employability and mainly affects women. All other reforms that even out the unequal participation of mothers and fathers in home care would have similar, positive effects.
- Since large incentive traps mainly concern single parents who seem to represent an upward trend these days – particular attention should be paid to ways of making participation in working life more attractive, even for this population group.
- A recent trial of relieving means test of income support recipients at least to some extent reduced incentive problems while, for example, removing the 100% effective marginal tax rate that fell on the recipients' modest work-related incomes. For these reasons, it is worth considering whether this relief could be made permanent. Furthermore, a follow-up is needed to ensure that the law will be consistently interpreted to the benefit of the individual in all municipalities.
- Since a major part of the unemployed do not appear to be in an incentive trap, it would be important to boost their preparedness and qualifications for joining the labour market. In addition, ways of lightening employers costs when hiring unemployed people should be further considered.
- Lack of work experience is a major reason for recruitment problems and makes it harder, particularly for young persons, to enter employment. For this reason, it would be worth considering whether the employability of inexperienced jobseekers could be supported by temporarily lowering employers' hiring costs. By means of public sector involvement, this could be done by e.g. relieving the employer's social security contributions.
- Keeping mature employees longer at work and supporting their wellbeing should be further developed by improving existing programmes which have proved to function well and which have provided a sound basis. Also, all other measures that improve public health in general are important in order to secure the ability to work, especially with regards to more aged workers. On the other hand, it is worth revising incentives for exiting working life before actual retirement age, particularly with respect to the so-called "unemployment pipeline".

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