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**Immigration and Labour Shortages : Evaluation of Needs and Limits of
Selection Policies in the Recruitment of Foreign Labour**

by
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SUMMARY

This document presents the result of studies recently carried out in a range of OECD Member countries on labour shortages and the role that migration can play to alleviate labour shortages. In spite of the methodological problems, that may be involved in assessing labour shortages, all the available data and research confirm that labour markets are tight in several OECD Member countries, principally in the areas of advanced technology, but also relating to some unskilled occupations. However, factors such as the amount of pressure on the market, the type of shortages involved (absolute/relative, short/long term), their key features (sectors/skill levels affected) and their determinants (skills mismatch, inadequate labour supply, persistent labour-market rigidities) all vary markedly across countries. There are labour reserves but they vary in size across countries and cannot always be readily tapped.

There is now keener competition among OECD countries to attract the human resources that they lack and retain those who might emigrate. Many countries amended their legislation in the late 1990s to facilitate the entry of skilled foreign workers. Most of them merely introduce more flexibility into their existing migration policies, but some also launched more specific programmes. These developments have not been called into question by the recent economic down-turn. The programme introduced, although generally very selective, are not all identical (recruitment may be temporary or permanent, general or occupation-specific, or target certain parts of the world). Whatever the type of programme, selective employment-related immigration policies will be effective only within limits and will require more in-depth analysis to develop appropriate policies.

IMMIGRATION AND LABOUR SHORTAGES: EVALUATION OF NEEDS AND LIMITS TO SELECTION POLICIES IN THE RECRUITMENT OF FOREIGN LABOUR

by
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Introduction

The recent phase of economic growth, compounded by growing concern about ageing populations, has prompted many OECD Member countries to consider stepping up immigration to alleviate labour shortages, in particular for skilled workers. Demographic developments in OECD countries imply an ageing workforce and ultimately result in declining population of working age. The possibility that these developments also results in labour shortages has added an extra dimension to discussions on the need for immigrants.

In several OECD countries; employers started to experience difficulties in filling vacant posts, concerns about the availability of labour on domestic markets arose and the first calls for immigrant labour were heard. The recent economic downturn has muted some of these calls but has not solved the issue. There are labour reserves but they vary across countries and cannot always readily tapped.

The aim of this report is first to show how a number of OECD countries estimate and identify the current and forecast labour shortages and the needs for immigrants. Then the report highlights the extent to which immigration can help to alleviate labour shortages, subjects to the limits to the use of selective employment-based immigration policies.

PART I: LABOUR SHORTAGES AND THE NEEDS FOR THE RECRUITMENT OF FOREIGN LABOUR

1. A tighter labour market?

Compared with 2000, the economic climate in the second semester of 2001 and in 2002 was less favourable. Employer reports of tight labour markets appear less frequently in the media and many companies have reorganised, resulting in layoffs. Employment growth continues but has weakened (total employment growth in the Euro area fell from 1.7 percentage points in 2001 to 0.8 percentage points in 2002, second quarter), and the unemployment rate has started to rise again (for the Euro area from 8.0% in 2001 to 8.3% in 2002, third quarter). This indicates that on average labour market tightness is less severe than it was two years ago. Does this also mean that the labour shortages that caused such intense debates on recruitment difficulties and labour immigration have disappeared? It may well be that many employers have stopped reporting labour shortfalls, because they based their manpower need estimates on overly optimistic production prospects or because they attach greater importance to current business prospects than to imminent labour shortages. However, as a recent OECD study¹ has shown, labour shortages are not necessarily a cyclical phenomenon; their causes are varied and depend on many factors that are insensitive to short term economic cycles. Thus, labour shortages may still be there, even if they no longer feature prominently in the media.

Labour Shortages are not necessarily a cyclical phenomenon...

Although shortages are not simply a cyclical phenomenon, they can be aggravated by an economic boom. A good example of this is the tightness in the labour market for all professions of the ICT sector. In general, however, shortages can be caused by a variety of factors.

For example, the French employer organisation *MEDEF* have argued that the number of graduates is not growing as fast as the number of new jobs created in the economy, particularly in construction and ICT industries [MEDEF 2000]. However, the *Chambre de Commerce et d'industrie de Paris* finds that recruitment problems cannot be explained by a shortfall in supply only, but are in large part the result of mismatches between labour demand and supply [CCIP 2000, Deneuve 2002]. It argues that whilst labour supply is in principle sufficient to meet labour demand, it is not well enough trained and not sufficiently mobile. The *Commissariat Général du Plan*, on the other hand, claims that employers – being used to selecting ideal candidates from a large pool of unemployed – are not prepared to accept less than ideal candidates, thus leaving vacancies unfilled [CGP 2001]. Klaver and Visser [1999] find for different sectors in the Dutch economy that the image of some occupations is not good enough to attract a sufficient number of workers at the going wage rate, even if supply is abundant. Among the other important factors explaining labour shortages are insufficient mobility on the part of the workers, demographic factors, rapid technological progress and the resulting change in employment structure towards highly skilled labour, cyclical variations in demand, rigid wage structures and collective agreements.

...and persist in different sectors of the economy...

Regular job vacancy surveys in many countries confirm that labour shortages are experienced all over the economy and in all kinds of jobs. The sectors hit hardest by labour market tightness also vary from one country to another. In Europe on average, the most frequently quoted difficulties as a result of labour shortages are in firms in the service sector and in education [EC 2001a]. In Germany, consumer and commercial services report serious recruitment difficulties [Magvas and Spitznagel 2001], whereas in the Netherlands mainly non-commercial services and small businesses face increasing tightness [CBS 2002]. Not less than 85% of all employers in the French construction industry reported recruitment difficulties [DARES 2001]. But in Austria it is the ICT sector where most recruitment difficulties occur [BMW 2001]. Hardest hit in Sweden are education and health and social services [Statistics Sweden 2001]. In Australia significant seasonal shortages occurred in the harvesting sector [ACCI 2002].

The most recent labour market statistics indicate that the labour shortages that have built up in recent years may have remained in spite of the economic downturn of 2002. In Germany, for example, almost all of the fall in employment that started in 2002 can be explained by a decline in employment in manufacturing industry; and apparently the labour market remained tight for the service industry. In the Netherlands, although the unemployment rate started to go up as of 2002, employment growth continued in both industry (including construction) and commercial services. In Austria, total employment continued growing in spite of a fall in industry; employment in the services sector grew throughout 2001 and the first 7 months of 2002. In Sweden, evidence of a fall in employment can only be found in manufacturing industries, not in the sectors that struggle with shortages. The integration of the new Member States into the EU single market is likely to benefit the service sector [EC 2002]. Hence, some of the sectors where labour markets were tight in 2000 are likely to remain tight in the foreseeable future.

...for high as well as for low qualified jobs.

Labour market tightness has grown over recent years as OECD economies have experienced the longest continuous period of economic growth in decades. Jobs have been created in all sectors of the economy and in all OECD countries. By 2001, the tightness in the labour market for ICT professionals appeared to be world-wide [WITSA, 2001] and is expected to continue. But shortages in the supply of workers have also developed outside the ICT sectors according to many employer surveys [HRDC 2001]. Employers in many different sectors and branches have reported serious difficulties in finding a sufficient number of workers to seize economic opportunities, to keep up with market growth, to replace departing workers or to adapt to newly developed technologies (see Box 1). The closest to an internationally comparable approach are the Joint Harmonised Labour Market Surveys into views of employers on skill mismatches and the consequences for business expansion² carried out by the European Commission [EC 2001a]. During the period from the second quarter of 1999 until the 3rd quarter of 2000, employers increasingly complained that shortfalls in the supply of qualified labour caused limits to their production. Increasing difficulties related to labour shortages were reported by employers in Belgium, France, Italy, the Netherlands, Austria, Portugal and the UK. Employers also report on tightness not only in labour markets for professionals with knowledge of and experience with the latest technologies, but also for personnel with low and medium level qualifications. In Belgium, for example, employer organisations confirm the existence of labour shortages, but report that the most urgent situation exists for low- and unskilled jobs [Feld 2002, VBO 2001a and b]. In the Netherlands, 50% of all hard-to-fill vacancies were in the category of low-skilled personnel [MKB 2001, CPB 2001]. In Norway, increasing tightness is expected in low-skilled occupations in agriculture, fisheries, hotels and restaurants [AETAT 2001]. In Canada, 50% of all hard-to-fill vacancies were found outside the high tech sectors, being in retail trade and consumer services [HRDC 2001].

Box 1: Germany: how many ICT specialists are lacking?

One of the elements in the migration debate in Germany is what is often referred to as the Green Card scheme. Green Cards can be awarded to eligible immigrants to work in the ICT sector in Germany. They are part of a wider scheme formulated to secure the supply of workers for the ICT sector. Foreign workers on five-year permits can meet short-term excess labour demand, while the measures to improve the professional education are taking effect.

Estimates of the size of the shortfall in labour supply were based on employment projections on the one hand, that forecast the need for 250 000 employees in the ICT sector by 2005, and an extended survey of ICT employers, showing as many as 75 000 unfilled vacancies. To remove this obstacle to economic expansion, the Green Card scheme was created; the ICT sector would be able to employ 20 000 foreign workers on five-year permits between 2000 and 2005.

The first evaluation of the scheme showed that after a year, applications had been made for only half of the available permits [BMA 2001]. Several reasons have been put forward to explain this shortfall. It may be that foreign workers chose alternative destinations in order to avoid going to a country where their legal stay was capped at five years. In addition, the 20 000 places may also have been a gross overestimation, because too much weight was put on the opinion of employers. This is not to say that the scheme has failed, because it has been a great success, if only because it has helped put the question of labour immigration prominently on the political agenda.

In general, labour shortages are hard to forecast ...

Employers may be biased in their assessment of labour market tightness and vacancy statistics may only give a partial picture. In addition, if they adjust their production or recruitment standards to the lack in the supply of qualified workers, they may not even report on shortages and file vacancies. Labour market tightness may be better measured by comparing actual unemployment rates with structural rates of

unemployment, as frictional and structural labour market rigidities can be a cause of persisting unemployment combined with wage inflation. Because structural rates of unemployment are not readily available, unemployment rates are sometimes given in relation to the vacancy rates for a specific occupation (defined as ratio of the number of vacancies and the number of employed in that occupation). For Germany, Zimmerman *et al* [2001] have calculated Beveridge curves for 1980-1995 for 40 occupational groups.³ They found indications of shortages in the early 1990s for engineers, stone masons and technicians, and persisting until 1995 for health-related occupations. In France, the occupational job-seekers ratio -defined as the ratio of the number of job-seekers in a specific occupation to the total of job-seekers and employed workers in that occupation - provides a disaggregated measure of the tightness in the labour market. It indicates increasing tightness in the labour market in construction and mechanical industries [DARES 2001].⁴ The United States Bureau of Labour Statistics has just started a Job Openings and Labour Turnover Survey (JOLTS) to measure labour market tightness and labour market (matching) efficiency, but has as yet not analysed the issue of labour shortages [BLS 2002].

...but will be aggravated by demographic developments.

Demographic developments in OECD countries imply an ageing workforce and will ultimately result in a declining population of working age. In the medium term, as early as 2015 for some countries, the increasing number of retiring baby-boomers will in some occupations lead to a replacement demand that may be hard to fill from domestic labour supplies. The situation is not the same in every OECD country, however. Some countries face a much more rapid ageing process and an earlier decline in the size of the working age population than others do [Council of Europe 2000]. Some countries with low labour force participation rates may be able to use their large labour reserves, whilst in others the scope for increasing participation rates and mobilising the existing pools of labour reserves is limited.

Policy makers have various instruments available to prepare for the decline in the population of working age. Increasing participation rates, postponing retirement ages, stimulating the labour market participation of women and immigrants are among those instruments. Increased immigration has the advantage of having an immediate effect on the age and composition of the population because of the younger age structure of net migration. In addition, fertility rates of immigrant women are often relatively high, which can boost fertility and hence long-term population growth. However, the role of migration policies in addressing these challenges can only be complementary to other policies and is subject to a number of practical and political constraints [OECD 1991]. One of the more important constraints is that it would require unrealistically high levels of immigration to reduce population ageing (for example, [UN 2000]).

However, it has been demonstrated that immigration can help in postponing the time when the working age population will begin to decline. Feld [2001], for example, estimates for 15 EU countries that policies influencing participation rates, retirement age and the size of the school going population can compensate for demographic trends in Denmark, France, the Netherlands and the United Kingdom, although not in the other countries. In Finland, immigration is widely considered as an answer to the shrinking labour force [EIR 2002]. The Nordic Council of Labour Ministers also finds that increased migration might contribute to shifting the trend of an ageing workforce, and recommends a number of actions to deal with the expected decline in the size of the labour force. First and foremost, these concern the mobilisation of the ageing population; inactive and unemployed youth; inactive adults and the immigrant population. There is particular concern that the immigration of people with low qualifications might cause integration difficulties [Nordic Council 2000].

2. Availability and use of Labour Reserves

The arguments in favour of attracting immigrant workers to solve labour shortages rest partly on the assumption that the resident labour supply is insufficient, or of inferior quality, to meet labour demand. But if the number of resident unemployed and inactive people can largely fill labour demand in quantitative terms, then why not proceed by promoting greater employment from these groups? The possible answers to this add considerably to the sensitivity of the issue of labour migration.

The need for immigrant labour depends in large part on a country's initial situation. Countries with low unemployment rates and high activity rates might sooner exhaust opportunities to retrain unemployed workers and inactive people than countries with a more abundant stock of people not in work. However, there are a number of obstacles to mobilising the resident potential labour supply, which consists mainly of the unemployed and not participating (inactive) persons.⁵ Labour shortages and recruitment difficulties are concentrated in high-qualified occupations. However, most unemployed people are low-qualified and the majority of inactive persons have less than intermediary qualifications.

A host of other factors also play a role: the willingness to live and work in another region; care-giving tasks within the family; the duration of inactivity; etc. Some of the available reports include explicit attempts to estimate the size of the resident potential labour supply [ROA 2001a, Munz and Ochel 2001]. Work of this kind is also underway within the OECD Secretariat. Initial results indicate that on average for the OECD slightly more than 55 percent of the working age population is in full-time employment. The remainder, 45 percent, is either (partly) unemployed or (partly) inactive and – in theory - represents the latent labour supply [OECD 2001a].

Some research argues that for some countries like the Netherlands [Tweede Kamer 2001a and 2001b] and Belgium [Feld 2002] latent labour supplies are such that general labour shortages are not likely to develop. However, experience shows that it will be very difficult to say anything with any accuracy about the success of any of the attempts to mobilise the unused resident labour force. While the potential value represented by the unemployed and discouraged workers has increased since tightness started to appear in various parts of the labour market, policies to increase the activity rates of both unemployed and inactive people are by no means a recent invention. A considerable volume of work has dealt with this issue, including from within the OECD [OECD 2001b].

3. Evaluating the need for the recruitment of foreign labour

Faced with the urgent need to meet a growing demand for workers with specific skills in certain sectors or regions, some countries have already started to facilitate labour market access for skilled immigrant workers. These are not only the OECD European countries where labour migration has been strongly reduced since the Oil Crises, but include for example, through its rapidly expanding HB-1 visa system the United States. At the same time, and especially with the recent economic downturn, there are popular concerns that labour immigration is harmful to the position of resident workers. The Irish Employment and Training Authority (FÁS), for example, recently claimed that youth unemployment may be rising due to employers' preference for work permit recruits; the FÁS said the number of permits being issued was too high and needed to be reduced when long-term unemployment starts to rise again. Irish labour immigration law has subsequently been toughened. Immigration has also been a major theme in many of the recent election campaigns in European countries. Hence, the policy relevance of considering the alternative solutions as well as the advantages and limits of selective labour immigration.

A number of countries have commissioned macro-level studies to evaluate current labour shortages, and to estimate the availability of unused labour among native and immigrant inactive and

unemployed people, and the remaining long-term need for immigrant workers. Among other findings, they conclude that immigration can have long-term welfare-enhancing effects. They also have in common the high priority they give to mobilising the resident labour supply and to the integration of the foreign population. In Germany, an entirely new immigration law has been defined on the basis of the study of the Süssmuth Commission⁶ [Süssmuth 2001], but the implementation of this law is still subject to heavy debate.⁷ The law includes an adjustable selection mechanism that rewards human capital as well as including measures for attracting highly skilled workers.

The Norwegian government has observed that with the already near-full utilisation of Norwegian domestic labour supplies, present shortages are likely to persist although they may well shift from one sector to another. Their concern is focused on the integration of immigrants. Early reports recommend high skilled migration as most easily reconcilable with existing migration laws [Kommunal- og Regionaldepartementet 1999]. The government has declared that recent changes to the regulations are not sufficient to solve labour shortages. They are now developing a proposal for presentation to Parliament for recruiting low skilled workers from abroad, in particular from the EU-accession countries, in view of the persistent shortages for low-qualified workers, the low unemployment rate and the high participation rates.

Studies in other countries have not – unlike what happened in Germany – focused on the need to facilitate selective immigration through legislation. They do, however, depart from the notion that immigration might help in alleviating labour market tightness. The United Kingdom Home Office, for example, uses existing surveys and data to identify and evaluate current and future labour market bottlenecks, and ultimately to assess labour demand and skill needs [Glover *et al*, 2001, DFES 2001c; Haskel and Holt 1999]. At the same time, the UK relies on documenting proof of labour market tightness to decide for which occupations immigration should be facilitated. In the Netherlands, where the high population density may cause much more serious congestion effects than elsewhere, it is recommended that policy should facilitate the integration of immigrants [Roodenburg and Van den Boom, 2000]. It has been argued that the government should consider international labour migration as a form of international labour participation, stimulate intra-EU labour movements and simplify bureaucratic procedures for selective and temporary labour migration [SER 2001, WRR 2001a]. Here too, as in many other countries, the immigration of high skilled immigrants is being facilitated for occupations where the national labour market cannot readily provide.

While these macro-economic studies may establish the positive overall effects of migration, the consequences of ageing and the effect of raising participation rates and lowering retirement ages on labour supply, they cannot explain how many immigrants could and should be recruited to meet labour market needs, and for how long these needs can be expected to last. Yet these questions are important against the background of the general tendency, particularly in European and Scandinavian countries, to call for restrictions on migration. Analyses of labour market developments at the level of sectors or specific occupations might provide the answers. Some of these studies aim to indicate how severe labour tightness currently is and how it might develop in the near future. Various studies on shortages in the ICT sector are examples for this. Some refer to demographic developments and the effects on the actual ICT workforce [USDOC 1999a and 2000] or by general educational level [Topiol 2001a and 2001b; Duchamp and Amar 2001]. Others give rough quantitative estimates based on economic growth assumptions for the sector as a whole [CIE 2001, BMA 2001]. Table 1 gives an overview of a number of different evaluations of labour demand and supply, labour market tensions and labour shortages. It should be noted that these studies, apart from those discussed in this text, do not evaluate the need for labour migration or refer to migration policies in other ways.

Occupational level projections are much more detailed. These can be distinguished broadly in two groups. First, there are a significant number of studies that project employment growth either two, five or ten years ahead, but give no indication of labour shortages. The United States, for example, annually

publishes the *Occupational Outlook Handbook*. [BLS 2002]. This projects growth rates to be faster, on average, for occupations requiring at least an associate degree than for occupations requiring less training. However, the largest *volume* of job creation will be in occupations requiring less formal education or training. The large number of employees in these occupations means that even though employment growth rates in these occupations are below average, the total number of jobs to be created is significant.

Second, studies exist that provide advice and information on labour market prospects to graduates. These are useful in forecasting labour market tightness, because the mirror image of good labour market prospects for a certain occupation is the difficulties that employers are expected to have in recruiting workers for that specific occupation. The supply of labour for a specific occupation consists of first-time labour market entrants, unemployed people, people who move jobs, and suitable people temporarily outside the labour market. One example of a study of the labour market prospects of graduates is the regular employment projections for the Netherlands (see Box 2). The numbers of people moving into the labour market and separating from the labour market are forecast for specific future time periods. The demand for labour consists of the demand to replace departing workers and the demand to realise business expansion - estimated with an economic model. A systematic comparison with labour demand by type of education results in a summary of the labour market prospects for new entrants by type of education, and the future possible recruitment difficulties by type of education. Based on a similar methodology, a number of studies have been produced on the labour market for highly skilled workers with explicit references to the need for immigration on the labour market [ROA 2001b, 2002a, 2002b]. Comparable institutions can be found, for example, in the United Kingdom and in Austria [DFES 2001b and 2001c, BMWA 2001].

Box 2. The Netherlands: Regular employment projections

“A skills shortage is the difference between the skills actually available and the skills that would have been available if all persons had developed their skills optimally – from a macro point of view – by education, training and experience” [Borghans, De Grip and Van Smoorenburg 1998]. In this line of reasoning, the labour shortages reported by employers may be only part of the real problem. Employers often adopt the least costly solution, which is often not to train the potential workforce, but to adjust the organisation or location of their production to the availability of the workforce.

The Research Centre for Education and the Labour Market [ROA 2001a] carries out regular employment projections for a total of 207 occupational groups and 104 different education types. The numbers of people moving into the labour market and separating from the labour market are forecast for specific future time periods and compared to the demand for replacing departing workers and realising business expansion. Labour demand for business expansion is estimated on the basis of economic modelling. The result is a summary measure of the labour market prospects for new entrants by type of education. The value of the *Indicator Future Labour market perspectives* (ITA) shows for which types of education a future mismatch between supply and demand can be expected. The indicator takes the values “Mediocre”, “Good”, “Very Good” or “Fair” for the 2000-2005 period.

As a result, labour market tightness is not expressed as a shortage in the number of workers in a specific profession. Instead, labour market prospects for a certain occupation show the difficulties that employers are expected to have in recruiting workers for that specific occupation, thereby forecasting labour market tightness for a number of years. Thus, the indicator can give guidance to students in making the most optimal career or training choice.

A different approach to determining the recruitment need for foreign labour is to calculate yearly immigration quota. Italy and Spain [Zanfrini 2002] calculate a total quota, and differentiate between the different regions and industries. These estimates take account of economic forecasts, consultations with social partners, employer reports and regional unemployment rates. Attempts to estimate the annual foreign recruitment need on the basis of econometric modelling and consultations with employers are also taking place in Portugal [Carneiro *et al* 2001].

Australia and Canada produce occupational outlooks and differentiate the outlooks by geographic region [DEWR 2002, HRDC 2002]. Australia links the indicators of regional labour market tightness directly to immigration policy through facilitating immigration to the regions for occupations in short supply. In addition, it attempts to match foreign job seekers with Australian employers through the *Skills Matching Database* (see Box 3). On the one hand, it assists State and Territory governments and employers to attract skilled migrants to areas of Australia that wish to increase their skilled migration intake and help regional employers where they cannot fill skilled positions from the local labour market. On the other hand, it aims to assist independent skilled migrants by creating potential links with employers and employment opportunities throughout Australia [DIMA 2002].

Box 3. Australia: Regional Labour Market Information

The *Job Outlook Report*, which highlights occupations with good prospects, is a guide for first-time labour market entrants to the skills projected to be in demand in the future. Nearly 400 occupations are listed with an indication of the career prospects they offer to first-time labour market entrants with details about earning prospects, expected job growth and job turnover. Current prognoses apply to the 2001-2006 period. The Australian Job Outlook publishes job prospects with a rating - “Good”, “Average” and “Limited” – reminiscent of the work published in the Netherlands [DEWR 2002]. The accessible report, updated on the Internet, also gives the reasons why the prospects for certain jobs are good or bad. For example, the “job turnover” indicator provides most job openings for almost all occupations and is typically higher in less skilled occupations. Even for occupations where employment is declining, job turnover provides openings for job seekers to find work in that occupation. However, few occupations on the list have nil or negative employment growth and employment prospects remain good. The fact that a high number of persons no longer working in the occupation for which they were trained (“occupational wastage”) is important in explaining some skill shortages, such as for nurses and trades-persons.

These outlooks are based on lists of skills in shortage. What distinguishes Australia is the way these lists are drawn up for the regions on the basis of research and analysis by the regional labour offices. They provide information about the extent of shortages, that is whether they are state wide, regional or metropolitan. When shortages exist in a number of states or the three main metropolitan areas, they are marked as national. It even is possible to identify sectors or regions where employers report recruitment difficulties although a broader skills shortage is not evident.

The *Migration Occupations in Demand List (MODL)* is linked to the above Report. The MODL is used in several parts of Australia’s migration arrangements. Skilled points-tested migration applicants whose occupation is identified on the MODL are awarded an additional 5 or 10 points. For employers nominating a person for immigration, labour market testing can be waived if the nominated occupation is on the MODL.

4. Labour market needs and their implications for immigration policies

OECD Member countries determine labour market needs, as illustrated above, in many different ways. Shortages may be experienced in one sector of the economy, or for specific occupations whilst unemployment is high elsewhere. Employer reports and surveys from all over the OECD confirm that shortages occur in specific occupations and are not confined to high qualified jobs. However, employer judgements have to be treated with caution, as they report on recruitment difficulties but not on labour shortages per se. Sector-level and occupation specific studies are much more precise but illustrate at the same time the difficulty of predicting economic expansion and the related labour demand with any accuracy.

Although it is hard to gauge the nature and size of current and future labour shortages in the OECD area, research in several Member countries stresses the need for skilled and in some cases unskilled labour. These shortages could be alleviated if more could be done to tap existing labour reserves. Assuming that they would suffice, however, it would be difficult to do this rapidly and ensure they match

the immediate needs of the labour market. Furthermore, ageing populations might put a strain on labour-force renewal, limiting the amount of of labour available in such reserves in the medium to the long term.

Germany, Austria, Norway and the Netherlands, for example, have undertaken one or a series of studies specifically to answer the question whether labour migration can play a role in alleviating current and future labour shortages. These studies agree that immigration can contribute in a significant way to welfare and economic growth, but show no uniformity about the causes of labour shortages. In fact, the way in which labour shortages are defined differs in each. This means that labour shortages are not easy to measure, but it also implies that the need for labour migration cannot be expressed in terms of precise numbers of people with specific skills for a well-defined time period. Migration policies in several OECD countries tend to facilitate the recruitment of foreign workers but to what extent immigration can help to alleviate labour shortages and what are the limits to selective employment-based immigration policies.

PART II LABOUR MIGRATION POLICIES FOR ALLEVIATING LABOUR SHORTAGES: POTENTIALITIES AND LIMITS

Following the labour market developments previously described, selective migration policies for employment have once more gained interest in several Member countries. Labour force reserves do exist, but it is not clear if they can respond to labour markets needs in the short or medium term. This is particularly true when the skills in demand are not immediately available (absolute labour shortage)⁸.

Using selective migration policies as a means to alleviate labour shortages and/or to ensure sustained economic growth is not a new phenomenon. Even without referring to the premise of the great transatlantic migration movements (Hatton and Williamson -1998; Stalker -1994), one can identify several experiences of this type since World War II. To what extent can the lessons learned from these experiences shed light on the benefits and limits of migration policies in this field?

Selective employment-related immigration policies recently implemented by OECD member countries assume many shapes and sizes, which are determined to differing degrees by the source of the needs faced by each country. Moreover, the characteristics of these policies are dependent on the philosophy of the whole migration system, which in turn is determined by economic, historical, legal and institutional considerations (Moulier-Boutang and Papademetriou -1994). In addition to the intrinsic problems associated with the definition and quantification of needs, several types of problems can limit the reach and efficacy to be expected from active labour recruitment policies. These difficulties are related, among other things, to the restrictions limiting the selection process and possible contradictions with other aspects of migration and employment policies. Furthermore, many OECD Member countries are confronted with similar needs and may compete for highly qualified migrants.

After discussing the development of these policies, the paper evaluates the employment role and limits of selective migration policies. What are the major limits of selective employment-related immigration policies? Under what conditions can these programmes contribute to the short-, medium- or long-term balance in the labour market?

1. History and the current scene of migration policies for employment

In Europe, the “Trente Glorieuses” marked the creation of numerous programmes recruiting foreign labour, particularly for manufacturing and construction (Guestworker Programmes). In the beginning of the 1940s, the United States developed a special agricultural programme (Bracero Programme) These programmes depended on bilateral agreements signed with sending countries⁹ and mainly involved unskilled labour. The selection of immigration candidates was made by recruiters in the sending country or by co-option, whereby settled immigrants would be considered as some sort of guarantor for newly arrived immigrants. Given the characteristics of the required labour force, selection criteria were based less on the initial training than on the motivation and physical capacity of immigrants.

The United States Bracero programme alone attracted more than 4.6 million Mexican agricultural workers between 1942 and 1964. The European Guestworker programmes largely contributed to net immigration in Western Europe, estimated between 1950 and 1973 to be more than 10 million people. Foreign workers welcomed under these categories were mostly given a temporary status.

During this period, employment-related immigration responded to the needs of the labour market and helped support the burgeoning economic activity and to reduce inflationary pressure. Moreover, it favoured employment mobility of nationals towards other sectors where competencies were better compensated. In this manner, American agriculture developed by benefiting from the access to a cheap labour force. This is also true in Europe, notably in the construction, steel industry, chemical industry and automotive sectors.¹⁰

One of the principal lessons learned from these experiences appeared at the end of these programmes: temporary workers remained in the host country and the host country’s economic dependence on foreign workers increased. Certain researchers have concluded that: *“there is nothing more permanent than temporary labour immigration”* (Martin -2001). After the first oil crisis, most European countries suspended the immigration of new foreign workers; but many of the existing immigrants unexpectedly did not return to their home country.¹¹ Indeed, the economic situation in their home country also had declined and many immigrants feared not being able to re-enter their host country. The foreign population continued to increase with the combined result of natural population growth and increasing family reunification flows (see OECD 2001c).

These experiences demonstrate the difficulty countries can face in adjusting migration policies during an economic downturn. As shown below, this question continues to strain the effectiveness of certain types of labour migration policies.

Highly skilled workers wanted!

The OECD Member countries currently face quite different situations compared to those prevailing just after the Second World War. Specifically, the structure of employment by level of qualification has slowly changed towards highly qualified jobs. By the end of the 1990s, the ICT sector had developed at an impressive pace, further reinforcing this trend. Furthermore, population ageing may imply that the demand for highly qualified workers will not decrease, especially for medical professionals. Detailed analysis in the first part of this document indeed confirms that the most intense labour shortages that OECD Members countries will have to face in the next 20 years or so are in skilled and highly skilled jobs.

In this context, many countries have amended their legislation to facilitate the entry of skilled foreign workers (see OECD 2002). Most merely introduced more flexibility into existing migration

policies, but some also launched more specific programmes. These developments have not yet been questioned as a result of the economic downturn observed since the second semester of 2001.

In the case of France, Ireland, the Netherlands and the United Kingdom, foreign labour recruitment is based on decisions taken largely at national or regional levels to meet labour market demand. The application of labour market testing criteria remains the basic rule, as does the requirement that wages for foreign workers must be comparable with those paid to nationals with similar skills employed in the relevant occupation¹². However, the recruitment procedures for some occupations currently in demand in labour markets in these countries have been simplified to exclude “labour-market testing”. These include IT specialists, highly skilled workers and in some cases biotechnology, medicine, healthcare and education professionals (see box 4).

Box 4. Immigration for employment in the United-Kingdom

Immigrants originating outside of the European Economic Area need a work permit to obtain paid employment in the United Kingdom. The basic procedures for granting a work permit were revised in the 1980s and were based essentially on labour market needs. Employers who wish to hire non-European foreign workers must make a request to the Home Office. They must substantiate that no other EU citizen is available for the vacancy. The delivered work permit must be attached to a specific person and specific post. Labour shortages are acknowledged for certain types of occupations, as listed in the “shortage occupation list” and, in those cases, the procedure is simplified. Typically, the list refers to a number of skilled posts in the fields of healthcare, education, biotechnology and information and communication technologies. The list was established by British authorities on the basis of informal conversations with social partners and of studies, notably those surveying employers, regularly published by the Department of Education and Skills (e.g., DfES –2002). In 2002, given the economic downturn of the information technology sector, IT specialists were removed from the list (<http://www.workpermits.gov.uk/>).

A recent study conducted by the Home Office and the Department of Trade and Industry (Home Office and DTI – 2002) on work permit holders in information technology, healthcare, finance and biotechnology found that the immigrants were very satisfied with the system, especially with the speed with which visas were granted (theoretically less than one week¹³). A consequence of this immigration track is that more than 46% of surveyed respondents declared that they wished to prolong their stay or remain indefinitely in the United Kingdom. Among nationals from developing countries, 76% said that they were “very” or “rather” inclined to request British nationality. Despite the fact that these results relate only to highly skilled workers, it appears that immigrant workers, even if they only hold a temporary permit, tend to settle and integrate in the host country.

Germany has also opened its labour market to foreign IT specialists. Some 10 000 have been recruited since August 2000 and the same number could be hired by the end of 2003. In 2002 the German authorities also adopted a major reform of their immigration laws to facilitate the entry of highly skilled workers with job offers exceeding an annual salary of €75 000. A second entry channel selects skilled workers using a points system based on the Canadian model. This second channel will, unlike the first, be subject to quotas but arranged employment will not be a pre-requisite.

The United States, where family preference is the cornerstone of permanent immigration policy, still allows in a large number of highly skilled foreign professionals on renewable three-year visas (H-1B)¹⁴. This temporary immigration is subject to an annual quota which has been raised from 115 000 to 195 000 until 2003¹⁵. In other host countries, i.e., Australia, Canada and New Zealand, permanent immigration is subject to a point system with an emphasis on the immigrant’s employability (age, education, skills, work experience). These countries have facilitated the temporary immigration of skilled labour in recent years.

In Japan and Korea, most foreign worker flows consist of migrants with short-stay work permits. Both countries share a determination to limit immigration to skilled workers, although they have introduced schemes allowing trainees, mainly in low-skilled jobs, to change their employment status under

certain conditions as part of Japan's technical training programme or Korea's industrial and technical training programme.

Several OECD countries have also amended their legislation to enable foreign students to change their status upon completion of training and enter the labour market (see OECD -2001c). While most of the new measures concern skilled workers, some Member countries have also brought in unskilled foreign labour, mainly in agriculture, building and civil engineering, and domestic services. They include Italy, Spain, Portugal, Greece and to a lesser extent the United States. A point worth noting is that visas for seasonal workers are very common and on the rise in several Member countries, including Germany, Switzerland and the United States.

A great variety of objectives and types of procedure for recruiting foreign workers

Most OECD countries have faced similar needs in terms of human resources (i.e., mainly within the new technologies and medical occupations) and have relaxed or changed their migration policies to facilitate foreign labour recruitment. Despite this, numerous differences persist among the goals of and conditions for recruiting foreign labour.

Table 2 classifies employment-related migration policies. First, it distinguishes permanent immigration programmes with a long-term economic development goal from temporary migration policies aimed at responding mostly to short-term labour market needs. It then distinguishes between programmes with selection processes, which are controlled by public authorities from those managed mostly by employers. The table also separates out programmes according to their regulation method (i.e., quota or market-based). Finally, it marks the difference between programmes with selection criteria that are based on immigrant skills, salaries or to a set of criteria based on point systems.¹⁶

Permanent immigration policies, such as those implemented in Australia, Canada, New Zealand, and soon Germany, apply selection procedures using criteria pre-established by authorities and aim to identify candidates likely to contribute actively to economic development and population growth in the host country. One of the basic principles and essential conditions of success is granting access to social benefits and services (in some cases after a waiting period) as well as to the labour market to new immigrants and their accompanying family members. Other countries have established permanent immigration programmes, such as the Green Card system in the United States, which are more specifically directed to labour market needs.

In the European countries of the OECD, and in Korea and Japan, employment-related migration generally has a temporary legal character and goals ascribed to this category of migration policies necessarily stand alone. Goals are based on the realities of labour market needs and aim by all means to respond to labour demands, which cannot be met locally.¹⁷ Recruiting conditions can vary significantly depending on countries and programmes. France and Germany require minimum salary and education levels. In Ireland and the United Kingdom, the authorities have created shortage occupation lists, which indicate occupations with facilitated work permit processes. In Switzerland and the United States, skilled migrant workers are limited by quotas. This is also the case in Italy and Spain where mostly non-skilled workers in agriculture, construction, public works and industry are targeted.

Nevertheless, the goals associated with temporary labour migration can be adjusted with regard to an economic downturn, but can also be part of a long-term strategy. Programmes targeting specific occupations aim to alleviate short-term imbalances in the labour market.¹⁸ At the other extreme are more general programmes, which tend to favour the mobility of highly skilled workers (*outstanding persons*). These are consistent with viewpoints that go beyond short-term needs and acknowledge the globalisation

of the labour market for highly-skilled jobs. This is also the case, for example, for the mobility of employees within multinational firms or for business investors.

From this general view two principal observations can be made. The first relates to the diversity of recruitment policies of foreign workers and the persistence of temporary labour migration, mostly in European OECD countries. The second observation is linked to the fact that, in most of the cases considered, migration policies remain highly selective. Nevertheless, selectivity is inscribed in a context that is fundamentally different in European countries as compared to those applying in Australia, Canada and New Zealand in the context of permanent recruitment of immigrants.

2. Evaluating the role of selective migration policies for employment

Whatever their type, programmes that tackle labour market shortages through immigration have their limits. Those limits are either (i) internal, when they are linked to the selection process itself, or (ii) external, for instance, if they are due to specific agreements on international mobility. As a matter of fact, the significance and the efficiency of the programmes for recruiting foreign labour can only be assessed with regard to their main objectives.

Identifying and selecting the 'right' candidates'

Identifying and selecting from a host of potential immigrants those who will best meet a country's migration policy objectives requires quantifiable criteria to choose the "right candidates" and to assess the information provided by the immigrants themselves. This is not always easy, particularly when the purpose of the migration policy is to support the long-term development of the labour market. Canadian authorities, as well as Australian ones, for example have recently chosen to modify their points system in order to better take into account skills which are most important for the long-term integration in the labour market and into the society as a whole (linguistic capacity, age, job experience...). However, this happened to the detriment of skills more directly associated to the short term needs of the labour market (occupations), which may fluctuate with economic downturns(see box 5).

The more detailed the selection criteria, the more costly the procedure in terms of human and financial resources and recruitment time. Hence the need for cost-time/efficiency trade-offs, as with any other targeted measure. For those countries using a point system, public authorities must devote significant human resources to process the applications and initial interviews¹⁹, especially to test linguistic abilities. They also need to develop relevant statistical tools in order to monitor the effectiveness of the selection criteria. In this regard, it is quite notable that the three main settlement countries (Australia, Canada and New Zealand) possess longitudinal surveys dedicated to analyse the integration process of new immigrants²⁰.

Box 5. Permanent Immigration to Canada

Acquisition of permanent residence status is possible under three main classes of entry: i) the “family class” who enter on the basis of having close relatives in Canada; ii) those entering for employment and business reasons, the “skilled worker and business classes”; and iii) those entering as refugees. There are no numerical limits or other mechanisms for capping the number of permanent immigrants, the source of control being solely through the rules of entry. By November 1 of each year, the Minister responsible for Citizenship and Immigration Canada issues a statement on the “planned” migration intake for the following year, which is based on an assessment of the numbers who are likely to enter under the existing set of regulations.

Entry under the skilled worker class is based on a selection test consisting of criteria against which points are awarded to determine whether persons can become successfully established in Canada. The mix of specific selection criteria and their weighting pattern are designed to reflect what is needed to succeed in Canada’s labour market in the short and medium-long term. Only the principal applicant is assessed. Entry under the business class (investors, entrepreneurs and self-employed) is based on a requirement to make a minimum investment in a Canadian business or a requirement to establish, purchase or invest in a designated business that will create employment opportunities for others.

It is difficult to establish the impact of the selection process on the performance of new immigrants. One issue is that some studies have measured the success of employment-related immigration in Canada on the basis of migrants’ occupations rather than by their skills (Reitz -1998). Comparative studies also show that the average education level of immigrants (excluding nationals from Latin America) to the United States is comparable to that in Australia and Canada even though these countries select immigrants based on employment criteria (Antecol, Cobb-Clark and Trejo -2001)²¹. The results of these studies coupled with the fact that immigrants arriving in the 1990s (i.e., during an economic recession) faced important and lasting difficulties in integration (Abdurahman -2002 ; Green and Worswick -2002) have recently motivated Canadian authorities to revise their point system. The new system attributes points that highlight individual characteristics, such as education level or linguistic abilities, and which are likely to lead to successful integration both in the labour market and within society as a whole in the long term.

When employment-related immigration policies are largely aimed at facilitating short-term labour-market adjustment, as in European and Asian OECD countries for instance, some other difficulties associated with the selection process should be mentioned. It is vital, in this case, to have rapid and adaptable selection procedures. However, it takes time to validate qualifications and work experience and to assess language skills. It may therefore be tempting to cut back on controls and relax the selection criteria, which would reduce accordingly the efficiency of the selection process.

To tackle this issue, some countries prefer to delegate responsibility for part of the selection process (generally skill validation) to employers, but retain their own role in defining the basic criteria. This has the dual advantage of ensuring that recruitment is theoretically more closely geared to corporate needs and significantly reducing processing time. But when employers (or private recruitment agencies) are left in charge of the selection procedure, problems of moral hazard may arise. This is because the implicit contract between the government and firms responsible for selecting candidates does not always cover the indirect costs incurred by recruiters (e.g., return to sending country, social costs of job loss) whenever the wrong candidate is chosen, needs are overestimated or an economic downturn occurs. The problems are compounded when migrants have to shoulder the administrative costs of the immigration procedure.

Another related question is whether one can adapt selection criteria based on changes in the labour market. The preceding sections have stressed the difficulties in objectively evaluating labour shortages, which are normally observed after the event and are particularly difficult to anticipate. Therefore, an effective migration policy should be updated regularly using studies and information on the state of the labour market. Unfortunately, this is not always the case. It is necessary, moreover, to put in place institutional mechanisms that allow for the rapid revision of selection criteria for certain occupations during economic slowdowns. The case of IT specialists is indicative of this situation. During the first semester of 2001, all OECD countries were wondering what measures to implement in order to recruit a

greater number of foreign IT specialists and to retain those likely to emigrate. The second semester of 2001, however, saw an abrupt reversal revealing an available surplus of labour, even among foreigners already recruited. The United Kingdom provides, however, an example of a reactive employment migration policy: it was one of the first European countries to ease the entrance of foreign IT specialists and also to retract this possibility as soon as the economic situation deteriorated during 2000 (see above, Box 4).

Finally, labour shortages are not only visible across certain occupations, but are equally relevant in specific regions. As a result, migration policies must respond to regional needs. One instrument used by several countries, including Switzerland (see Box 6) and more recently Italy and Spain, consists of defining regional immigration quotas by sector or employment type. In theory, this system has the advantage of remaining relatively flexible and of taking into consideration the regional dimension of labour shortages, while maintaining an active assessment of inflows. In practice, though, the quota system faces difficulties caused by, on the one hand, the difficulty in forecasting from year to year the precise needs of the labour market and, on the other hand, the political dimension of annually posting quota levels. Other countries, following the likes of France and the Netherlands, prefer to allow the decentralised offices of their ministry of employment to control the real needs on a local level, while employers pursue foreign labour recruitment.

Box 6. The Swiss quota system

Following an attempt during the 1960s to limit immigration based on foreign labour force ceilings allowed per company, Swiss authorities developed a quota system in the 1970s. The quotas, which are revised annually, initially were based on the corresponding levels of exits, deaths and naturalisation rates of foreign workers in such a way as to stabilise the total foreign population in Switzerland.²² As noted by Pigué and Mahnig (2000), the goal first and foremost was to find a balance between the labour force needs of the Swiss economy, actively controlled by employers, and the political pressure from opponents of any liberal migration policy.

In fact, annual quotas on work permits were based on advice from cantons and social partners. Quotas are delivered through a relatively complicated three-tier process: first, the Federal Department of the Economy directly grants a share of authorisations to companies and cantons that face a labour shortage and requested assistance from the Swiss Confederacy. The second tier is divided among cantons which, in turn, distributes the quota either to companies or cities. The cantonal level of distribution is generally made by commissions representing all government levels. This policy was accompanied by the gradual relaxation of the right to transform seasonal permits to residency permits, first for Italian nationals (1972), then for Spanish (1988) and Portuguese (1990) workers. As a result, in the beginning of the 1990s, Swiss authorities introduced a distinction among immigrants depending on their national origin, by a so-called three (EFTA, then United States, Canada and some Central European Countries, and finally the other countries), then two circle policy. Today, only highly-skilled foreign workers can eventually obtain a yearly work permit and the government is considering a point system.

The quota system was efficient during the 1970s and contributed temporarily to the positive reinforcement of the role of employment-related migration in the development of the Swiss economy. Nonetheless, several studies have underscored the difficulties in using quota-based immigration to support certain sectors of the economy in peripheral regions (Pigué and Mahnig –2000, Golder and Straubharr –1999). In conclusion, the Swiss experience demonstrates that relationships between the sending countries and internal constraints can weigh heavily on the possibility of adjusting migration policies to labour market fluctuations, while trying to manage the total foreign population. The fact that these global quota restrictions stayed stable between 1991 and 2001 indirectly illustrates this observation.²³

Ensuring that selective immigration policies are effective

Apart from the problems involved in actually selecting candidates, other constraints affect the design and implementation of selective employment-related immigration policies:

- Experience shows that migration policies have a definite impact on the number and characteristics of immigrant worker inflows, but little effect on outflows (including nationals). It is therefore hard to control the size or characteristics of the migration balance. There is evidence, for instance, that a significant proportion of migrants entering the country with temporary status settle permanently in the host country (Martin, 2001), by either applying for a change of status, renewing their permits regularly or staying on illegally. Furthermore, inflows of skilled foreign workers do not necessarily offset the outflow of nationals (Birrell et al, 2001) and there is evidence that some skilled immigrants re-emigrate soon after their arrival (De Voretz and Zhongdong, 2001).
- Another factor beyond control is internal mobility, and in addition immigrants are likely to change their behaviour patterns once in the host country. This goes beyond fertility rates, which tend to fall in line with the national rate, but extends to labour-force participation and even occupational specialisation. Longstanding immigrants gradually leave arduous or insecure jobs, and new waves of immigrants are constantly required to alleviate the shortage of labour for unpopular types of work.
- Migration policy is not aimed solely at labour market objectives but must also meet multilateral commitments (e.g. areas with free movement of labour; multinational staff mobility) and humanitarian commitments (including family reunion). These other objectives tend to restrict the scope of selective employment-related immigration procedures in that workers entering the country via these “alternative channels” account for a large share of overall migration flows and generally have access to the labour market. The persistence of undocumented entries and the illegal employment of foreigners show how hard it is to maintain full control over migration flows.
- Finally, most OECD countries have similar demographic and economic patterns and the bulk of immigrants would have to come from outside the OECD area, if the issues of skill shortages and population ageing are to be effectively addressed. As developing countries have a relatively a limited human capital resource base, large outflows of skilled workers might undermine their economic development potential and increase the incentive for unskilled workers to emigrate. This raises problems of consistency between development and migration policies. A brain drain may affect the long-term growth of developing countries and in the long run make it hard to control overall migration flows (OECD, 2000).

Against a background of keener competition between the OECD countries, skilled migrant workers are in a position to compare the terms on offer in potential host countries. Those may relate to working conditions and remuneration but also to non-wage benefits (extra-professional environment, accommodation, provision for families). This has prompted several OECD countries to amend their legislation recently, extending the validity of work permits for skilled workers or giving family members access to the labour market. In fact all of these arrangements bend the rules and reveal that selection procedures are not always as strict as they are made out to be.

While labour market imbalances stem from the fact that many unfilled vacancies are not very attractive (insecure working conditions, unpopular occupations or poor pay), employment-related immigration may limit improvement in working conditions in such jobs. Indeed, one common rule among all OECD countries is to pay foreign workers on the same basis as nationals for similar activities. If, for example, labour supply cannot meet demand under those terms and foreign labour is systematically used as a stopgap on the labour market, there is little chance of seeing wages increase to encourage more people to work in or train for these low-profile jobs. Consequently labour market imbalances may persist in the

medium or long term and the need for immigrant labour may grow, making most OECD countries even more dependent on renewed inflows of foreign workers.

Conclusion

Although it is hard to gauge the nature and size of current and future labour shortages in the OECD area, research in several Member countries stresses the need for skilled and in some cases unskilled labour. These shortages could be alleviated if more could be done to tap existing labour reserves. Assuming that they would suffice, however, it would be difficult to do this rapidly and ensure they match the immediate needs of the labour market. Furthermore, ageing populations might put a strain on labour force renewal, limiting the amount of labour available in such reserves in the medium to long term.

Past experiences in migration policies for the recruitment of foreign labour demonstrate the positive role that can be played by foreign workers, especially during periods of strong economic growth. But experience also can identify the limits to such policies. First, the efficacy of implemented policies must be assessed according to the stated goals which, in reality, differ significantly by country and programme. In any case, the experience of 1970s “Guestworker” programs showed that employment-related migration was generally inconsistent with the temporary nature of the initial recruitment, thereby prompting selection processes to take into consideration other criteria than the short-term needs of the labour market. Furthermore, migrants recruited for employment purposes tend to allocate their resources to their advantage: this is especially true when they acquire after a certain period of stay the possibility to move freely across the host country, even emigrate to another country or return to their country. Finally, the recruitment of foreign workers implies total economic costs, including social costs that go beyond the simple cost of recruitment per se. To be truly effective, programmes must be accompanied by sustained and concerted efforts in terms of collecting statistical information on changes in the labour market and on the integration of new immigrants.

It is important to underscore that OECD countries, on the whole, are facing similar needs and are thereby competing for the same highly qualified human resources. This trend could have important consequences for some developing countries if the capacity for sharing benefits related to the international mobility of highly-skilled workers is not guaranteed. Globalisation of the skilled labour market prompts consideration of the possibilities of reinforcing coherence between development and migration policies, so as to encourage international co-operation efforts in the recruitment of skilled workers in less developed countries.

Recourse to foreign workers is not a new decision for most OECD countries. Immigration has long been used to meet labour market demand, and in some countries has played a large part in population growth and economic development. Nevertheless, substantial research has shown that migration alone could not alleviate the impact of population ageing, particularly on the financial viability of pension schemes (Blanchet, 2001; Coppel, Dumont, Visco (2001)). Recent measures implemented in several OECD Member countries tend to facilitate the recruitment of foreign workers, particularly the more qualified, in an effort to meet these shortages. However, immigration alone will not resolve labour market failures. Indeed, as stated above, selective employment related immigration policies will be effective only within limits, and it will require more in-depth analysis to develop appropriate policies. Current efforts to introduce a raft of measures to tap existing labour reserves should therefore be encouraged and pursued. It is also important to improve the way present and future generations are prepared and trained to meet the needs of the labour market.

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NOTES

¹ See the special chapter on ‘*Labour shortages and the need for immigrants: a review of recent studies*’ in the 2002 edition of the OECD annual report, *Trends in International Migration*.

² The EC Joint Harmonised Labour Market Surveys have limited coverage in the service sector. The most recent survey covers the period 1996-2001.

³ The Beveridge curve describes the relation between unemployment rates and vacancy rates and offers a theoretical explanation of co-existing unemployment and unfilled job vacancies for a specific occupation in a situation of labour market equilibrium.

⁴ However, the quoted surveys cover only construction and industry.

⁵ There also is potential labour supply among people who are employed involuntarily in a part-time job; this may be significant in some countries such as Belgium and the Netherlands [OECD 2001a].

⁶ Following a federal effort to meet the excess demand for professionals in the ICT sector, also known as the Green Card Scheme [BMA 2001].

⁷ A decision was under way at the time of writing.

⁸ We speak about labour shortages when demand for labour exceeds labour supply at a specific wage level. The shortage is said to be ‘relative’ if the imbalance can be fixed by a change in prices (wage or reservation wage). Otherwise the shortage is said to be ‘absolute’. Absolute labour shortages thus reflect the impossibility to find, among the working age population, a worker with the adequate skills (without transferring him from a similar post).

⁹ The Bracero programme began in 1942 and was cancelled in 1964. It depended on a bilateral agreement between the United States and Mexico authorising the Mexican labour force to work in the agricultural sector in the United States. The recruitment conditions were formalised in 1951 by the Law 76. Programmes for guest workers were also implemented in numerous European countries between 1950 and the middle of the 1970s. Germany signed multiple bilateral agreements to recruit labour with Italy (1955), Greece and Spain (1960), Turkey (1961), Morocco (1963), Portugal (1964), Tunisia (1965) and Yugoslavia (1968). Switzerland signed an agreement with Italy in 1948, then with Spain and Portugal. France mainly received nationals from Africa and the United Kingdom from India and Pakistan. In the past, beginning in 1916, the French government has taken control of recruiting migrants from Greece, Portugal and Spain. Numerous bilateral agreements were signed, mainly with Italy in 1904, 1906 and 1909 as well as with Poland in 1919 and Czechoslovakia in 1921 in the reconstruction framework. An important part of those immigration would be deported during the 1930s crisis.

¹⁰ See ILO (1978) for France and Hagmann (1966) for Switzerland.

¹¹ More than 70% of Turkish immigrants living in Germany today have been residents for more than 15 years.

¹² This exigency is common to all OECD countries.

¹³ The Home Office website writes that: “*We aim to decide 90% of complete applications containing the required information within one day of receipt and 90% of all applications within one week. Applications for people already in this country and where we have to request additional information from you may take longer. We will try to keep delays to a minimum but there will be some cases where for example, we need to ask you or other Government Departments for extra information. Also, application for people already in this country require approval from the Initial Consideration Unit at the Home Office after our decision and this can take more time.*”

14 .There is also a visa for persons of outstanding ability or achievement (O visa). In 1999 there were some 16 000 entries in this category.

15 Work-permit exemptions have also been extended to several categories of highly skilled workers, including those employed in higher education.

¹⁶ See McLaughlan and Salt (2002) and OECD (2002) for a thorough review of policies implemented by OECD Member countries on highly-skilled workers.

¹⁷ In certain cases, temporary immigration can be an implicit form of selection processes where the timeline corresponds to the long term integration into the host country by the means of visa extensions and renewals.

¹⁸ This is also true for programmes seeking to ease the movement of persons among multinational corporations. Such programmes exist in all OECD countries and involve an increasing number of persons.

¹⁹ Canada maintains more than 77 visa offices all around the world with more than 270 visa officers (including in Canada). Almost 15 % of all permanent residency applications are proceeded from abroad. Québec maintains for its part 7 centres abroad (Argentina, Belgium, Syria, France, Hong-Kong, Mexico, United-States, Austria).

²⁰ Germany also has such a survey. To our knowledge, among others OECD countries, only Sweden has implemented a longitudinal survey for monitoring new immigrants' integration process.

²¹ In the case of Australia, Miller (1999) demonstrates that immigrants selected on labour criteria are relatively more successful in the labour market than other categories, with the exception of immigrants sponsored by an employer and who succeed at least as well.

²² Following the implementation of this policy, the Federal Office of Foreigners created at the end of 1973 a computerised population registry which included a list of all foreign workers benefiting from seasonal, yearly or permanent stay permits.

²³ Between 1991 and 2001, approximately 17 000 one-year and 22 000 short-term residence permits were granted each year (to which one should add 88 000 seasonal permits). These quotas were increased respectively by 5 000 and 6 000 in May 2001 to meet alleviate high-skilled labour shortages, especially in the information and communications technology sectors. In October 2001, the Federal Council renewed quotas for short and seasonal residence permits for 2002, but reduced the number of permanent residence permits (19 000).

Table 1: Projections of occupational labour demand in OECD countries

Country	Model	Detail	Projection Period	Outcomes	Sources
Australia	1. Job Prospects Matrix – economic model	1. 400 occupations	1. 2001-2006	1. Occupations with good prospects are generally more highly skilled	DEWR 2002
Austria	WIFO projections – employer survey and economic model	1. data on 300 000 employers; forecasts on 6 educational levels	1999 – 2005	an economic expansion between 1999 and 2005 will hardly be restrained by a shortfall in labour supply; only in the IT sector problems might occur	Biffi and Kratena 2001;
Canada	1. Job Futures 2000 – economic model 2. Occupational Projection System	1. Prospects by occupation, field of study for each Province 2. 512 occupations and 62 sectors on provincial and national levels	1. one year 2. one year	Good prospects mainly in IT and technical but also in hospitality occupations	HRDC 2002
EU	ROA Labour Market Forecasting Model	4 broad S&T fields in 14 EU countries	1998 - 2002	Considerable shortages in one or more fields in all countries except Belgium, Greece, Spain, Finland and the UK	Marey <i>et al</i> 2001
Finland	Ministry of Labour Shortage lists: surveys and economic model	Outcomes on sector level	20 years	In the base scenario, where employment will vary between 2 100 000 and 2 200 000 jobs, the study forecasts some drastic changes in the structure of employment.	Tiainen 1999
France	Flip-Fap economic model	22 sectors and 55 occupations	5 years	Over the 2000-2005 period, employment growth is strongest for the very qualified (16%)	Duchamp and Amar 2001
Germany	1. IFO study – employer survey and economic model 2. IAB/Prognos – economic model	1. 22 sectors; 21 occupations; 11 educational levels 2. forecasts on sector level	1. 15 years 2. 1998 – 2010	1. Most employment creation in occupations requiring technical college training or higher degrees (Health/social; Socio-cultural jobs; Technical jobs; Construction Administrative) 2. Labour demand in the primary sector, the processing industries and in the trade sector are expected to decline by 2010. Commercial and non-commercial services and trade are expected to grow while banking, and public administration are expected to remain stable	1. Munz & Ochel 2001 2. IAB 1999
Italy	Excelsior – economic model	Regional and occupational labour shortages	One year	To establish yearly immigration quota: 2002 quotas total 80 000 persons	Zanfrini 2002

**Table 1: Projections of occupational labour demand in OECD countries
(Continued)**

Country	Model	Detail	Projection Period	Outcomes	Sources
Netherlands	ROA – CPB economic model	207 occupational groups; 104 different educational types	2001-2006	Prospects are excellent for university graduates, good for people with post-secondary education, reasonable for the low skilled and mediocre for other groups – big occupational variations	ROA 2001a
New Zealand	Labour Market Skills Shortage Lists	Nation wide	4 months	Qualified aircraft engineers, technicians, auto electricians and mechanics and bakers are on top of the list	New Zealand Immigration Service 2002
Portugal	Attempts underway	Occupational labour shortage projections	1 year	Will serve to establish yearly immigration quota	Carneiro et al/2001
United Kingdom	1. Projections of Occupations and Qualifications – economic model and surveys 2. Skill Shortage Lists	1. 17 sectors, 79 occupations 2. Nation wide	2000 - 2010 1 year	1. The strongest job growth caused by expansion demand will occur in professional services and to a lesser extent in distribution hotels and catering. 2. exhaustive list of skill deficiencies and skills demand by employers	DFES 2001c
United States	Bureau of Labor Statistics economic model	82 occupations, 24 sectors, 53 education types on 5 levels	2 years	1. growing skills deficit especially in the IT sector	Fullerton 1999; Hecker 2001

Table 2: Main types of work-related immigration program in OECD countries

Type of program	Sub-categories	Selected programs in some OECD countries	Main objective of the program	Quota	Main selection criteria			Regulator of the selection process (excluding verification of minimum criteria)
					Point system	Minimum wage imposed	Education professional experience	
Permanent immigration	Multidimensional selection with a point system	Canada, Australia, New Zealand (<i>Independent Skilled Workers</i>), Germany (2003 law)	Economic development and population growth	No	All		Public authorities : Federal authorities or provincial government	
	Programs oriented towards labour market needs	Australia (<i>Employer Sponsored or Skill Matching programs</i>), Korea, USA (<i>Green card program</i>) - Germany (2003 law - <i>highly skilled workers</i>)	Economic development	Yes in the United States		Korea, USA, Australia	Employer (job offer needed)	
Temporary immigration for employment associated with labour shortages	Specific programs for the ICT sector	Germany (<i>IT Green Card</i>), France, Japan, Netherlands	Labour Market (Short term)	No		Netherlands, Japan	Employer (job offer needed)	
	Multi-sectoral programs	Australia (<i>temporary economic stream</i>), France (<i>Highly skilled workers</i>), United-Kingdom and Ireland (<i>Fast-Track Work Permit</i>), Switzerland (<i>contingents</i>), USA (<i>H1B</i>)	Labour Market (Short term)	Yes in Switzerland (by region and occupation) and in the United States		Yes in general	Employer (job offer needed)	
Temporary immigration (other cases)	Seasonal workers and trainees	Most OECD countries	Labour Market (Short term)	Variable	No specific criteria		Usually regulated according to bilateral agreements by public authorities or employer	
	Investor	Australia, Canada, United Kingdom	Economic development	No	Some minimum criteria may be considered but the main criteria is associated to financial resources		Public authorities : Federal authorities or provincial government	
	Temporary permit to seek employment	Norway, United Kingdom	Economic development	Yes in Norway No in the United Kingdom	United Kingdom	Norway	Public authorities	
Temporary immigration associated with international agreements	GATS (e.g. intra-company transferees)	Most OECD countries	International trade development	No	Key personnel for the multinational firm		No regulator	
	Other multilateral agreements that include international mobility of workers	NAFTA, European Union, <i>Trans-Tasman Agreement</i> , <i>Nordic Passport Free Area</i> ...	Regional integration	Yes for Mexicans in the United States within NAFTA	Criteria in terms of occupation in the case of NAFTA but no criteria in the other cases		Employer (job offer needed) for NAFTA, otherwise no regulator	