



# LABOUR SHORTAGES AND MIGRATION POLICY



IOM International Organization for Migration

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# INTRODUCTION

Labour markets across the European Union are characterized by varied regulatory frameworks, but every Member State faces the challenges of shortages of workers with relevant qualifications or interested to take up certain occupations. A clear consensus exists on the EU level and among the Member States on the need to address labour market shortages exacerbated by the deepening demographic crisis and skill mismatch. Europe's response should aim at wider goals of promoting the region's global competitiveness and fostering economic recovery followed by inclusive and sustainable growth.

Proposed in 2010, the Europe 2020 strategy stated that the EC will work "to promote forward-looking and comprehensive migration policy which will respond in a flexible way to the priorities and needs of labour markets". The notion of labour and skill shortages is central to many national labour immigration policies in Europe and elsewhere. Yet it is a matter of debate as to how labour market needs are to be defined, determined, and reflected in the migrant admissions' procedures. The European Migration Network Report (EMN, 2011) on *Satisfying Labour Demand through Migration* undertaken by 23 EMN National Contact Points (out of 27) established that 'most EU Member States have incorporated migration into their overall vision and strategic thinking on how to combat current and future shortages in labour.' However, the extent to which such vision has been specified and implemented in the policymaking cycle varies to a significant extent across the EU.

The EC Communication on Migration released on 4 May 2011 announced a Green Paper on *Addressing Labour Shortages through Migration in the EU Member States* to be released in 2012. This will serve as an opportunity to further deepen and consolidate reflections of various stakeholders on assessing labour shortages and designing comprehensive policy responses, including through migration.



# OBJECTIVES AND METHODOLOGY

In December 2010 – June 2011 the Independent Network of Labour Migration and Integration Experts (LINET)<sup>1</sup> run by the International Organization for Migration (IOM) with the support of DG Employment, Social Affairs and Equal Opportunities of the European Commission carried out a study on *Labour Shortages and Migration Policy*.

The purpose of the study is to investigate and assess the existing pathways for identification of labour and skill shortages, as well as linking labour market needs and labour immigration policy development based on the experience within and outside the European Union (EU). The study aims at placing migration within a broader strategic economic and employment policy discourse and overall aims of boosting growth and competitiveness.

The publication addresses three main research questions:

- How can policymakers assess current and anticipate future skills and labour shortages?
- When are these shortages to be addressed through labour immigration?
- Whether and how can labour market analysis be linked to the development of labour immigration policy to ensure timely, accurate and relevant reflection of labour market needs in admission regulations for the economic migrants?

In order to investigate these issues, IOM LINET conducted seven country case studies intended to capture the various strategies and lessons learnt in Australia, Canada, Germany, Spain, Sweden, the United Kingdom and the United States. In addition, IOM carried out a desk review of other available data and studies, including synthesis and the country reports of the European Migration Network (EMN) study on *Satisfying Labour Demand through Migration* (2011). The study therefore intends to build on the EMN analysis by further conceptualizing the most pertinent aspects of reflecting labour market needs in immigrant admission policies.

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<sup>1</sup> LINET was created by the International Organization for Migration (IOM) in 2009 to provide DG for Employment, Social Affairs and Equal Opportunities of the European Commission with expert analysis and advice on economic migration and labour market integration of migrants. The network unites experts from 27 Member States of the European Union, Croatia, Norway and Turkey. Further information on LINET and its studies is available at <http://labourmigration.eu>.



# SUMMARY OF FINDINGS

## 1. Analytical Framework: Labour and Skill Shortages

Despite the frequent use of the notion of labour and skill shortages in the current global policy discourse, there is no universally accepted definition of these terms. In general, shortages occur when demand for a particular type of labour exceeds the available supply at the current wage and conditions of employment, and in particular location. The detailed understanding of the type of labour needed can differ depending on the source of information. To this end, employers tend to report on recruitment difficulties, but not on labour shortages per se (OECD, 2002). Hence, labour market shortages and skills are ambiguous concepts that are hard to measure and to reflect accurately in policy measures.

Shortages emerge as a result of the lack of workers available or interest in accepting a job at the current conditions (labour shortages) and the lack of workers with the relevant skills (skill shortages). For the purpose of this study, both terms are used to reflect various angles of the debate. The notion of labour shortages is increasingly relevant when discussing labour market needs for workers with lower levels of qualification in jobs with less attractive working conditions. Scarcity of particular skills is in turn the driving force behind increasing global competition for highly, but also semi-skilled workers. In the context of changing and evolving labour markets also less skilled occupations often require capacities and knowledge that could be in deficit for various reasons, including deficiencies of vocational training systems. Many new jobs created in Europe generate a need for a continuously widening skill base as a result of the skill-intensive economic and technological change (CEDEFOP, 2010).

Both labour and skill shortages are shaped by the intricate relationships that exist between patterns of production and employment, social factors and government policies, including labour market regulation, welfare provision, and human resource development through education and training. Labour market and labour relations are hard to analyze within the pure logic of economic theory, as its workings are bound by the patterns of social behaviour. Low level of attractiveness of specific jobs for native workers could for instance stem, in addition to the offered working conditions, from the cultural image of the profession, which in turn impacts on the wage setting. Patterns of labour market participation of various groups of native workers, for instance women, also have a role in determining the available pool of labour, but also impact on the demand for domestic workers and caregivers. In addition, labour mobility is imperfect, as workers are not perfect substitutes within the same industry, occupation, skill level

or geographical location. Matching labour is therefore a complex and time-consuming task that also depends on the quality of labour market information systems.

Admission of migrants is to be considered as part of a wider policy mix to address both the existence and the root causes of labour and skill shortages. Possible other interventions on the part of employers and/or policymakers would include increasing wages, improving working conditions, labour market activation of the current residents of native and foreign background, in particular women, investing in or reforming education and training facilities, changing production processes or increasing imports. However, some sectors could not be replaced by imports, such as construction, health and social care, hospitality (Martin and Ruhs, 2011).

Employers could also be precluded from a possibility to raise wages by consumer sensitivity to prices or competition from other producers at home or abroad. Particularly problematic are occupations that are considered socially valuable (teachers, nurses, but also agricultural workers due to concerns over food security), but must be financed by taxpayers and price-sensitive consumers who are not willing or able to pay the price necessary to attract more workers (or more qualified workers into occupation) (Sumption, Country Report US, IOM 2011). Finally, persisting demographic challenges cannot be addressed without including immigration in the set of solutions.

Many of the abovementioned interventions require considerable time to be implemented, while migrants could be brought in relatively quickly in comparison to changes in the labour market or education system. Migration could therefore ensure timely response to the labour market needs and offer employers and policymakers a chance to introduce other adjustments in the meantime. Highly skilled immigration in particular, could have additional positive spillover effects on innovation, productivity and business creation. However, migration could also contribute to entrenching labour-intensive and low-cost production methods, and discourage investments in worker training by eliminating motivation for other types of adjustments. Additional concerns include absorption capacity of services pertaining to healthcare, education, housing and are hence linked to longer-term integration considerations.

In selecting and prioritizing alternative solutions to shortages, including admission of migrants, policymakers inevitably attempt to balance the priorities of various stakeholders, including employers, consumers, workers with the interests of the economy and the society as a whole.

## 2. Assessing Labour Market Needs

The present analysis is primarily focused on the possibilities for linking migration policy development to labour market needs, and not on the detailed exploration of tools for identification of labour market shortages. Nevertheless, it is useful to consider the wealth of approaches and their implications for data quality.

Existing methodologies for labour market needs analysis include and combine macro-level model-based projections, sectoral and occupational studies, stakeholder surveys, scenario development and other instruments. Labour market analysis plays an important role in determining potential areas for policy intervention. Sufficiently disaggregated employment outlooks support individuals in making better informed

decisions on human capital investments, guide policy-makers and alert companies of upcoming skill shortages (Neurgart and Schomann, 2002).

Policymakers increasingly make use of sets of macro- and micro-level indicators that attempt to maximize the accuracy of findings by taking a broad range of factors into consideration. However, data from these two levels could potentially lead to different assessments on the existence of labour shortages, which would require developing additional analytical framework (MAC, 2008). Nevertheless, experience of countries discussed in the present study points towards additional benefits of bottom-up detailed data analysis by stakeholder engagement thus enabling transparency and acceptance of policies developed on the basis of labour market analysis.

Such approaches do provide insights into various facets of the labour market development, but could nevertheless be subjective and limited in the capacity to capture needs within the necessary timeframe and the level of detail. For example, occupational analysis only covers general types of jobs in the labour market, while ignoring the specific skills that could be crucial for a particular vacancy. In addition, forecasts of the future labour market trends are rarely able to gauge the variety of influencing factors, such as economic cycle, technological developments, cross-border outsourcing, shifts in education and training patterns, as well as changes in production organization, wages and working conditions (Riddell et al., Country Report Canada, IOM 2011).

Notably, data collection and analysis can also prove a costly exercise, especially if carried out sufficiently frequently to provide a credible basis for actual recruitment. For these reasons, some countries, such the United States, do not perform systematic analysis of occupational skill needs for migration policy purposes (Sumption, Country Report US, IOM 2011). The following table presents advantages and disadvantages of various existing assessment methods of labour market needs.

**Table 1: Methods for labour market needs assessment and their advantages and disadvantages**

Method	Advantages	Disadvantages
Formal, national-level, quantitative model-based projections	Comprehensive Consistent Transparent Quantitative	Data demanding Costly Not everything can be quantified May give a misleading impression of precision
In-depth sectoral or occupational studies (using a variety of quantitative (model-based) and qualitative methods)	Strong on sectoral specifics	Partial Can be inconsistent across sectors
Surveys of employers or other groups, asking questions of fact and opinion about skills, skill deficiencies and skill gaps	Direct 'user/customer' involvement	Can be very subjective Inconsistent Can too easily focus on the margins (i.e. current vacancies) rather than skill needs within the whole workforce
Focus groups, round tables Observatories Delphi-style methods Scenario development Foresight	Holistic Less demanding data requirements Direct 'user/customer' involvement	Non-systematic Can be inconsistent Can be subjective

Source: Wilson et al., 2004.

## 3. Linking Migration Policies to Labour Market Needs

### 3.1. Reflecting Labour Market Analysis in Labour Immigration Policies

Even in conditions of excellent labour market data and the use of a combination of approaches to establishing shortage areas, there are serious challenges to successful practical incorporation of the findings of this analysis into the immigrant admission policies. Indeed, some governments prioritize admitting skilled workforce with the potential to adjust to changing labour market conditions instead of micro-managing admission in accordance to detailed analysis of labour market needs.

Riddell et al. (Country Report Canada, IOM 2011) summarize the difficulties in using immigration in response to perceived labour shortages in specific occupations, including:

- Accurately identifying the shortage;
- Accurately predicting business cycle effects or adjustments in wages, firms' input mix, technology, process innovation, or labour sources that will influence the shortage;
- Developing an immigrant selection mechanism that will succeed in selecting the immigrants desired;
- Altering immigration flows quickly in order to respond to the shortage in a timely manner;
- Getting the immigrants to the region experiencing shortage;
- Ensuring that the credentials of the immigrants are accepted in the receiving country labour market. (Riddell et al., Country Report Canada, IOM, 2011)

Based on various country experiences, one could add to the last point considerations of ensuring that the receiving country creates conditions conducive to successful immigrant integration, including stringent enforcement of anti-discrimination policies.

Labour immigrant admission policies differ with regard to who makes the decision on hiring a foreign worker. In purely demand-driven systems, this decision is delegated to employers. However, in reality employer decisions are often further assessed and restricted against the backdrop of the labour market analysis and the national labour standards. On the other hand, human capital immigration model prioritizes government-led selection of foreign skilled workforce with the potential to adjust to changing labour market conditions.

Various policy options exist both within human capital or demand-driven immigration systems to adapt admission frameworks with the aim to improve a match between migration and the labour market. Irrespective of their labour immigration system, all countries analysed in this study have undertaken such measures. These adjustments often took place initiated and supported by continuous monitoring and evaluation of the outcomes of the immigrant admission policies, including through stakeholder consultations.



Some countries, including Canada and the UK have shifted in recent years towards combining elements of both models:

- Aiming at attracting skilled migrants with characteristics that will both place them in a favourable position for labour market insertion, and generate spillover effects on growth and innovation, and
- Devising employer-led schemes that allow responding in a timely manner to growing temporary and long-term labour demand in certain areas, including in the low-skilled occupations.

For instance, migrants seeking employment in shortage occupations could be granted more admission points, or employers seeking to hire such migrants could be granted exemptions from the procedure or its parts.

However, occupation is not an innate characteristic, and as such is often unreliable if used as a single determining factor in decisions on migrant admission. Experience shows that focusing solely on shortage occupations may affect behaviour of prospective migrants and despite rigorous underlying labour market analysis, result in disproportionate skewing of inflows in favour of specific occupations thus precluding other migrants from entering.

Micro-managing immigration policy in accordance with perceived labour market requirements, even if based on comprehensive analysis imminently faces challenges and risks creating further labour market mismatches. The difficulties lie not only in ensuring accurate labour market forecasting, but also in limiting the number of foreign workers entering particular occupations. The outcomes of occupation-led admission decisions are further complicated by the often observed eventual discrepancies between immigrants' intended and actual occupations.

Some countries have resorted to imposing caps on immigrant employment in specific occupations or in some cases on the total number of entering economic migrants. However, assigning a concrete number on a cap or a quota is essentially a political decision, which may not reflect the actual future demand. This can result, for instance, in rejection of most qualified applicants should a particular numerical limit be exhausted for the specific time period.

As a response to difficulties in accurately predicting future needs and trends, countries with a human capital immigration model, such as Australia and Canada now place higher emphasis on the adaptability criteria, including previous study or work experience in the country of destination, arranged employment upon arrival, existence of networks, such as relatives residing in the receiving country, as well as the level of education of the spouse. Capacity to adapt and re-skill if necessary is crucial in ensuring long-term positive labour market effects. Such approach recognizes the potential evolution of workers' skills and knowledge, which can be upgraded through education, training and professional experience while staying in the country of destination, and supports occupational mobility.

Difficulties in providing swift access to the global pools of labour were behind policy changes in a range of countries, which included introduction of temporary admission channels for various skill levels. Attention has also been paid to creating pathways from temporary to permanent employment and residence based on clear rules and conditions,

including for lesser skilled migrants. These measures reflect the difficulty in forecasting the duration of demand for particular types of labour, and the capacity and motivation of individual workers to succeed in their economic and societal integration. They also recognize the important role that clear and transparent prospects towards permanent residence and potentially citizenship play in attracting skilled migrants in particular.

Timeliness of response is crucial for ensuring relevance of policy measures to the actual labour market needs. Even the best labour market analysis systems take time to deliver an updated picture of labour shortages. Many countries, such as Sweden and the United States therefore exert clear preference for a predominantly employer-led system due to its quick reaction to the changing labour market conditions and demand, and avoiding the costly and flawed process of analyzing occupational shortages and applying them to immigration policy.

In demand-driven immigration models, the recruitment decision is delegated to employers who are deemed to be in the best position to anticipate labour and skill needs. The benefits of such approach, including the higher probability of capturing demand for a variety of skills and qualifications, may outweigh the fact that needs declared by employers do not represent a fully accurate assessment of the labour market context. The governments then focus on checking that the employer need is genuine, ensuring that the potential foreign employee possesses the necessary skills and qualifications, and that immigrant recruitment does not compromise the national salary level and labour protection standards.

Nevertheless, also predominantly employer-led immigration systems increasingly incorporate elements of labour market analysis or considerations of the significant potential of highly skilled migrants to contribute to growth. Shortage lists can serve as a basis for facilitating specific procedures, such as priority handling or allowing application for a work permit without leaving the country of destination following an interview. Certain categories of migrants, such as highly skilled workers could be exempt from labour market tests in recognition of their disproportionately high contribution to growth and competitiveness.

In the majority of analysed countries continuous and formalized stakeholder involvement, including employers and trade unions plays a crucial role both in terms of data collection, and validation of findings for the purpose of policy making. More rigorous and transparent use of labour market analysis in policy-making, in particular when combined with stakeholder dialogue, has been found to contribute to depoliticization of decision-making in the field of migration.

Regional and local levels of government play an essential role in identifying labour and skill shortages in many destination countries, including Spain and Sweden. Migrant receiving states struggle with the challenge of concentration of population in certain urban centres and growing regional shortages. In recent years immigration has increasingly been considered as part of the solution to the geographical mismatches in the labour market. However, category of entry is a primary determinant of the extent to which a migrant can decide on location in the receiving country, and in many cases immigration authorities can hardly influence this decision (OECD, 2010). Country experience of Australia and Canada reflected in the present study indicates that regions admitting migrants through such specialized admission programmes have difficulties

in retaining foreign workers in the long-term. This further highlights the relevance of general regional and urban development policies in combating depopulation and meeting regional labour shortages, including through attracting migrants.

In addition, attempts have been made to promote circularity of migration flows through general provisions on immigrant employment and residence in order further adapt immigration to the economic cycle and the respective changes in demand, as well as foster economic and personal links with the countries of origin. These provisions can range from the possibility to leave the country of destination for certain periods of time without losses of the pathway to permanent residency to the dual citizenship policy.

### **3.2. Fostering Labour Market Participation of Non-economic Immigrants**

In a significant number of countries labour migrants constitute only a relatively small share of immigrant stocks, with considerable numbers of foreign nationals entering for family reunification, to study or for humanitarian reasons. Country case studies in this publication showcase measures to improve the links between labour demand and non-economic immigrant inflows, including facilitating labour market access for family (however, mostly for highly skilled/long-term), humanitarian migrants, foreign students and holiday-makers.

Many of these migrants are of working age, and as such constitute potential workforce. Notably, in many EU Member States there are significant populations of family and humanitarian migrants that fare worse in the labour markets than native workers, EU nationals, but also in comparison to third country nationals that entered as economic migrants. Their labour market integration remains a crucial challenge and one of the potential responses to the labour shortages in all skill levels.

Furthermore, the current approach towards limiting family migration, including in some EU Member States could discourage potential highly skilled migrants from considering the EU as a migration destination. In addition, family members of highly skilled migrants are often highly skilled themselves and could provide further contribution to the host economies should adequate conditions be in place.

Facilitating independent access to the labour market for all categories of migrants is essential in order to improve levels of integration, especially of female migrants. Family migrants often face restrictions in their access to employment, in many cases having to reside in the host country for a certain period of time before being allowed to work. Such provisions hamper their future chances of successful integration, facilitate brain waste, and increase their dependency on the sponsor migrant. On a positive note, in recent years some EU countries have amended their legislation to grant immediate access to the labour market to migrants entering on family reunification.

Retaining foreign students also moved up on the agenda of skilled migration policy, albeit alongside ensuring rigorous control over student enrolment policies and the quality of education. Students are often better placed to overcome integration barriers that face other newcomer migrants, such as language proficiency, recognition of qualifications, knowledge of the labour market context in the country of destination, accessibility of professional and personal networks. However, given very high youth

unemployment levels across the EU, including among the recent graduates, caution needs to be exercised with respect to potential of young graduates of foreign origin to overcome these structural barriers without emergence of wider preconditions for successful transition from education systems into jobs.

### 3.3. Immigration, Labour Shortages and Skills

Significant challenges remain with respect to realistic reflection of labour market needs through migration remain, not least due to difficulties to define and capture skills necessary for jobs in modern labour markets. Admission systems tend to focus on the past achievements as a proxy for the future outcomes. Such approach comprises the risk to overlook talent, including potential for entrepreneurial success, which often is not determined by formal qualifications, and can only be realized when in the country of destination.

The current immigrant selection techniques do not capture directly the full range of skills required for jobs sought by employers, such as interpersonal, networking and teamworking skills, problem solving, time management, or the ability to learn. The growing importance of these competences may suggest reconsidering the traditional distinction between highly and lesser skilled occupations, as these are often crucial for workers at all levels of qualifications.

Incorporation of such considerations into admission frameworks is a subject of continuous debate and adaptation, and positive practices are only emerging. Clearly, these challenges are best addressed by employer decisions who are likely to have the best understanding of their needs and requirements (Collett and Zuleeg, 2008). Private recruitment agencies and large businesses in particular, already have a considerable range of assessment techniques in place, which could also be reviewed to boost further reflections on adapting admission frameworks. However, it is also evident that small and medium-sized enterprises (SMEs), experience difficulties and lack resources and expertise necessary to conduct recruitment, particularly of skilled foreign workers, and to manage diversity in the workplace.

Irrespective of the abovementioned considerations of evolving complexity of skills required for jobs at all levels of qualifications, migration policies often differentiate sharply in approaches between highly skilled and less skilled workers or admitting foreigners for employment in less skilled occupations.

At the same time, despite growing resident immigrant population, many EU Member States struggle with attracting skilled migrants, as in addition to facilitated admission they offer comparatively few incentives in terms of pathways to long-term residency and career prospects, work and education opportunities for family members, support in language acquisition, and the overall tolerant societal environment that values diversity. Concerted efforts via a wide range of policy areas, including business facilitation and promoting innovation would be necessary to create economies and societies that are attractive to talented individuals.

Furthermore, low-skilled migration, including for economic purposes, constitutes an important share of inflows in the EU. In this regard, it is pertinent to consider whether and how this phenomenon fits in the discussion of labour and skill shortages.

From the theoretical point of view, low-skilled migrants are not considered to be filling skill shortages. In many countries, it is exactly the low-skilled native workers that show high levels of unemployment. However, in practice, it is often concluded that these migrants perform jobs shunned by the natives, referring to the poor wages and working conditions in sectors such as agriculture. Such are these conditions in comparison to other jobs in the labour market that migrants are often preferred by the employer due to the lack of possibility for them to change jobs and employers as stipulated by the work permit. In fact, some studies characterize this process as on-site outsourcing for those sectors that cannot be outsourced abroad through employing regular and irregular migrants in agriculture, construction and domestic work (Terray, 1999, cited in IOM, 2010). In addition, as discussed above, even in occupations that require low level of formal qualifications, specific informal skills could be required for the job; which could lead to mismatches and the need for foreign workers.

In any case, employers do report recruiting difficulties in many lesser skilled occupations for a number of reasons, including specific features of education and training systems. Less skilled occupations constitute the largest share of jobs in the European labour market. According to the European Vacancy Monitor released in October 2011, in the fourth quarter of 2010, the fastest growing occupational groups were plant and machine operators and assemblers (+36%), craft and trade related workers (+32%), and elementary occupations (+13%).

Employing various solutions to the labour shortages is ultimately a political decision that reflects specific priorities, including preserving certain industries and jobs in the country, suppressing wages by increasing a pool of available labour or supporting economic participation of native women and ensuring access to caregiving services for the ageing society. As public opinion is often critical towards less skilled migration in particular, policy-makers tend to respond by closing most legal avenues for the low-skilled migrant admission for economic purposes, meeting demand by admission through other channels (family, humanitarian, students, holiday-makers) or by tacit approval of high levels of irregular employment that arguably also contributes to filling some labour market gaps. Some occupations, such as domestic work, are still on the margins of labour market regulation, and are often carried out on the irregular basis due to either lack of recognition as an occupation in the national legislation, or inefficient regulation coupled with challenges of labour inspection in private households.

If any, admission channels for less skilled economic migrants are often of temporary or seasonal nature. While some demand for these workers is indeed seasonal, in some occupations it is of more permanent or cyclical nature that is difficult to capture by rigid temporary admission schemes. For this reason, Canada has developed temporary admission schemes for less skilled workers that allow subsequent transition to permanent migration.

Despite notable successes of some of these schemes, reports persist of right violations and concerns have been raised with regard to overstaying of temporary workers. These concerns could potentially be somewhat rectified by practices such as the recently adopted Swedish admission framework that allows attracting migrants of all skill levels and sees the government's role in preventing social or salary dumping,

enforcing legislation that protects employee labour rights and ensures that labour immigration is not used as a tool for unsound competition (Cerna, Country Report Sweden, IOM, 2011).

Finally, high levels of immigration into less skilled occupations do not equal immigration of the only low-skilled labour. Although data on actual migrant skills in comparison to jobs they perform is patchy, academic research consistently points towards significant extent of overqualification and subsequent brain waste. This phenomenon can be to some extent attributed to difficulties in validation of qualifications, but is also a result of strong demand in lesser skilled occupations, lack of comprehensive integration support, and persistent discrimination in employment and public life.

### 3.4. The Challenge of Immigrant Integration

Whether labour market needs are met through migration is ultimately determined by integration outcomes of migrants, both newcomers and those already residing in the country of destination.

In most EU countries, in 2005-2009 third country nationals continuously registered higher unemployment rates and lower overall earnings than nationals (IOM LINET, 2010). EU-wide findings by IOM LINET (IOM, 2010) and the European Competitiveness Report 2009 by DG Enterprise and Industry of the European Commission attest that migrants are in many instances relegated to low-skilled occupations regardless of their level of educational attainment with resulting high levels of over-qualification. In the United Kingdom, sample surveys of PBS applicants (only skilled workers admitted) indicated that almost 30 per cent were in low skilled employment or not in employment at all (EMN, 2011). Similar figures emerged as a result of a survey of Green Card recipients in Denmark (Ministry for Refugee, Immigration and Integration Affairs, 2010).

A clear trend in segmentation of the labour market has been observed in a number of LINET country reports, especially in Italy and Belgium. Across the EU, migrants tend to be concentrated in sectors such as agriculture, construction, manufacturing, healthcare, domestic work or hotels and restaurants. Segmentation by gender is relevant both for natives and migrants, but is particularly pronounced in the case of migrant women who tend to be predominantly employed in services and domestic work. As also stated in a recent analysis by FeMiPol (Kontos, 2009), ethnic and gender labour market segmentation leads to female migrants being disproportionately located in low-paid, low status jobs, and experiencing the insecurities and instabilities of short-term employment contracts and informal types of work.

Migration admission policies and the extent of their links to the labour market needs have impact on the subsequent labour market integration of migrants both in setting the selection criteria, and in establishing legal framework for their economic activity that can either promote or hamper their adequate positioning in the labour market.

Evidence shows that the labour market outcomes of migrants are further shaped by a set of factors, including migrant's individual characteristics, general labour market or specific sectoral conditions, barriers to integration such as discrimination or difficulties in skill validation, as well as challenges in terms of wider societal integration. Addressing

these barriers and providing integration assistance that combines elements of language training and other knowledge and skills instrumental to labour market insertion is crucial to facilitate adequate integration of all categories of migrants.

Insisting on certain migrant characteristics in return for admission, or indeed facilitating admission rules will not be sufficient in the case of many EU Member States to attract migrants, including those with higher qualifications, or indeed to ensure their successful integration upon entry. The receiving country can support successful inclusion by creating conducive labour market and societal conditions, including by upholding human and labour rights of migrant workers, combating discrimination, promoting tolerance and valuing diversity, as well as providing access to integration support, in particular language courses, as well as education and training measures to migrants of all skill levels.

Migrants not only take up paid employment, but can and do play an active role in entrepreneurial activities, and subsequently job creation. These migrants are attracted by environments that facilitate business creation, networking and innovation. Integration frameworks could be adjusted to recognize entrepreneurship as an option for labour market integration and to provide targeted migrant support.

### **3.5. Cooperation with the Third Countries**

Recent developments in 2011 on the EU level, including revision of the Global Approach to Migration and the release of the new European Agenda for the Integration of Third-Country Nationals point to the importance of cooperation with third countries to ensure intended immigration policy outcomes for countries of destination, but at the same time to contribute to the development of countries of origin and well-being of migrants and their families.

Cooperation on recognition of qualifications and developing compatible systems of education and vocational training could contribute significantly to alleviation of brain waste and making best use of migrants' talents. Further areas for enhanced involvement include cooperation of public employment services, improving and increasing compatibility of labour market information systems, as well as regulation of recruitment by private employment agencies.

Countries of origin also play an important role in provision of pre-departure introductory trainings and raising awareness on employment possibilities, living and working conditions in the receiving country, as well as on rights and responsibilities of migrants.

In principle, circularity of migration flows is a positive phenomenon inherent to many types of migratory flows, which also enhances the potential of migration to contribute to the development of the countries of origin. However, it is migrants with stable legal status, considerable experience and knowledge and financial means that are best places to provide contribution that extends beyond meeting short-term financial needs for consumption purposes. Facilitating circularity, in addition to improving admission provisions as discussed above, is also enhanced by enabling portability of benefits.



Finally, the destination countries should consider and implement practices of ethical recruitment, in particular in the healthcare sector. The shortage of health workers is a global phenomenon, but reaches most acute levels in Sub-Saharan Africa and in the Caribbean. Any policy should also respect the individual rights to freedom of movement, and take into account that closing immigration channels for certain occupations may result in decreasing enrolment in respective education in the countries of origin. However, in line with the existing and emerging codes of practice, and in accordance with its Strategy for Action on the Crisis in Human Resources for Health in Developing Countries adopted in December 2005, and the Programme for Action to tackle the shortage of health workers in developing countries (2007 – 2013) adopted a year later, the EU should among other measures abstain from active recruitment of foreign workers, and take appropriate steps to produce and retain sufficient numbers of own health workers.

## POLICY CONSIDERATIONS

- Shortages and skills are ambiguous concepts that are hard to measure and to reflect in policy measures. Both labour and skill shortages are shaped by the intricate relationships that exist between patterns of production and employment, social factors and government policies, including provision of education and training. In selecting and prioritizing solutions to shortages, including admission of migrants, the policy-makers inevitably attempt to balance the priorities of various stakeholders, including employers, consumers, and workers with the interests of the economy and the society as a whole.
- Labour market analysis can play an important role in determining potential areas for policy intervention and support various stakeholders in their decisions and planning. Assessing labour market needs is a complicated task even when good quality data is available. Various instruments provide insights into diverse facets of the labour market development, but are often subjective and limited in the capacity to capture needs within the necessary timeframe, the level of detail and budgetary limitations.
- Even in conditions of excellent labour market data and the use of a combination of approaches to establishing shortage areas, there are serious challenges to practical incorporation of these findings in the economic admission policies. Indeed, some governments consider focusing on admitting skilled workforce with potential to adjust to changing labour market conditions instead of micro-managing admission in accordance to detailed analysis of labour market needs.
- Within both the employer-led and human capital immigration models there are possibilities for reflecting the findings of labour market analysis in the admission process. Many countries have shifted towards combining elements of both models: 1) aiming at attracting migrants with characteristics that will both place them in a favourable position for labour market insertion and subsequent adaptation to the changing conditions, and 2) devising employer-led schemes that allow responding in a timely manner to growing temporary and long-term



labour demand in certain areas. For the latter, the governments then focus on ensuring that the need for migrant workers is genuine, verifying relevance of qualifications and securing labour rights and working conditions on par with the national standards.

- Attention has also been paid to adapting to creating pathways from temporary to permanent employment and residence based on clear rules and conditions, including for less skilled migrants. These measures reflect the difficulty in forecasting the duration of demand for particular types of labour, and the capacity and motivation of individual workers to succeed in their economic and societal integration. They also recognize the important role that clear and transparent prospects towards permanent residence and potentially citizenship play in attracting skilled migrants in particular.
- Shortages may occur at all skill levels. However, as public opinion is often critical towards less skilled migration, policy-makers tend to respond by closing most legal avenues for admitting such migrants for economic purposes, aiming to meet the demand by admission through other channels or by tacit approval of high levels of irregular employment. Existing economic admission channels for less skilled economic migrants are often of temporary or seasonal nature. While some demand for these workers is indeed seasonal, in some occupations it is of more permanent or cyclical nature that is difficult to capture by rigid temporary admission schemes. In addition, given the increasing relevance of soft skills, even occupations with low required level of formal qualifications may require wider range of skills than can be captured by the current assessment frameworks.
- Non-economic immigrant inflows (family, humanitarian, students) represent an important pool of potential workers if their access to the labour market is encouraged and facilitated. Fostering labour market inclusion of these immigrant groups remains a considerable challenge globally. Enabling family and student migrants to participate in the labour market is particularly important to encourage entry of skilled migrants for long-term stay.
- Stakeholder involvement plays a crucial role both in terms of data collection, validation of findings and de-politicizing policymaking in the field of migration. However, a further step would entail shared responsibility of various stakeholders in ensuring the extension of evidence-based depoliticized debate to the public arena.
- The country analysis revealed that not only initial assessment, but continuous monitoring and evaluation of immigrant admission policies serve as crucial basis for ensuring that policy goals are met and relevant adjustments are introduced. Such assessments and policy changes should be transparent and clear to enable migrants and employers to make intended use of the legal admission channels.
- Whether the labour market needs are met through migration is ultimately determined by integration outcomes of migrants. Migrant commitment and motivation could be strengthened by clear and transparent rules and regulations for admission, permanent residence, and eventually citizenship. The receiving country can support successful inclusion by creating conducive labour market and

societal conditions, including by upholding human and labour rights of migrant workers, combating discrimination, as well as providing access to integration support, education and training.

- Further improvements in linking migration to labour market needs could be achieved through cooperation with the countries of origin in such areas as portability of benefits, recognition of qualifications, and developing compatible systems of education and vocational training.

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# AUSTRALIA

Thorsten Stromback<sup>2</sup>



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## 1. Introduction

The connection between immigration and skill shortages has a long and illustrious history in Australia. In 1912, Commissioner A.P. Piddington reported on his “full and diligent” inquiry into the alleged shortage of labour in New South Wales:

*The conclusion at which I have arrived is that, as a result of natural causes, there does exist in the State, in most of the skilled trades and in most of the manufacturing industries, a great and permanent need for the introduction from abroad of trained and competent workers (Parliament of New South Wales 1912 p. vi).*

In a vast relatively unpopulated country with enormous quantities of natural resources the great need has indeed become a permanent one. The exact nature of these needs is a contested matter to which employers and workers often give different answers, while labour shortages and skills remain ambiguous concepts. To the advantage of today’s policymakers there is far more data at their disposal. Although few conceptual advances have been made, operational definitions and measures abound, modern policymakers are much better placed to shape an immigration programme to meet the labour market needs.

The current overall structure of the Australian immigration policy evolved during the 1970s and has remained largely intact since then. There are three broad programme streams: family, skilled immigration and a residual special eligibility stream. Each stream can then be further subdivided into a number of immigration schemes (Table I).

The family stream provides for the immigration of immediate family members of Australian citizens, permanent residents and eligible citizens of New Zealand. There are no skill or English language requirements but health and character requirements must be met.

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Since Australia’s immigration policy is focused on skills, the arrangements for the admission of skilled immigrants are also the most complex. For migrant workers the stream is broken down into either the employer sponsored or General Skilled Migration (GSM) categories.

The GSM category comprises of skilled workers who are not sponsored by employers, but are selected among applicants based on a points system. In the mid-1990s the skilled stream acquired a regional/state dimension to promote regional development by diverting the flow of migrants from a small number of large metropolitan areas to the rest of Australia, and to meet the particular needs for skilled workers in the different states. The regional/state schemes are concessional schemes: skilled workers who otherwise would not gain admittance under the employer sponsorships or skilled independent schemes are admitted through these channels. Under the GSM umbrella there are two separate schemes: one allows state government to sponsor the migrants, while the other is for migrants who intend to settle in region on their own accord. There is also a third version of employer sponsorship taking the form of a Labour Agreement, which permits an employer to sponsor lower skilled workers but includes strict conditions attached.

Entry under the migration and humanitarian program is subject to yearly caps set by the Australian Government. This cap is based on the expected demand for visa applications and a judgement on the number of immigrants that are needed or can be absorbed. Ultimately this is a finely balanced political decision that has to anticipate the consequences of admitting too many, leading to unemployment, or too few, leading to skill shortages. The very long lead time between an application of a visa and the eventual arrival of an immigrant makes it difficult to fine tune the intake according to the economic conditions. Nevertheless, the medium and long term changes in migration planning levels are mainly driven by economic conditions. This also applies to the free movement of citizens and permanent residents between Australia and New Zealand, which results in a large permanent migration from New Zealand to Australia.

**Table 1: Categories of permanent and temporary (long-term) immigration in Australia**

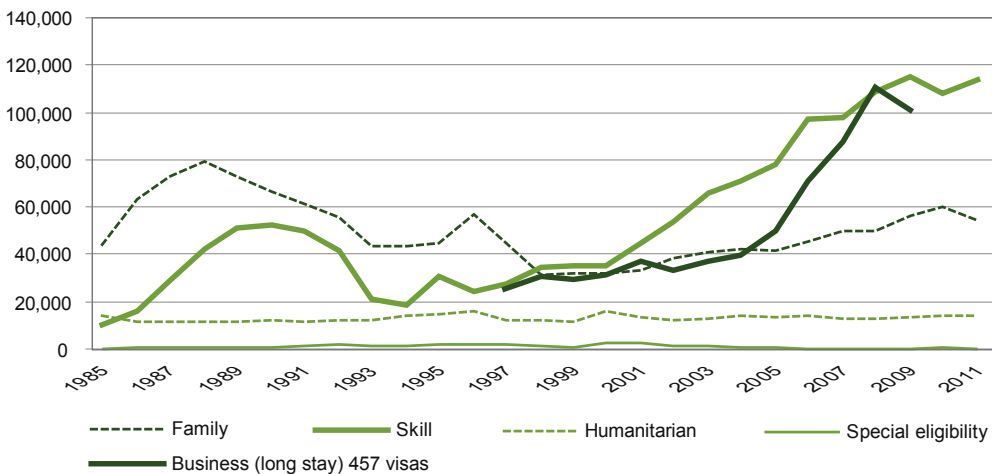
Permanent		
Migration program	Family	
		Regional and state-specific
	Employer sponsored	Employer nomination scheme
		Labour agreements
	Skilled economic	Skilled independents
	General Skilled Migration	State/Territory sponsored visa classes
		Skilled Australian sponsored
	Special Eligibility	
Humanitarian		
New Zealanders		
Temporary		
	Business (long stay)	
	Overseas students	
	Working holiday makers	

Source: Author’s elaboration.

The post-WWII Australia's immigration policy was focused on populating a large and empty continent. Since then there has been a continuous and in recent two decades a dramatic shift from prioritizing numbers towards focusing on skills. A public inquiry into immigration coined the term 'giving immigration a sharper economic focus' (Commonwealth of Australia 1988). This term or its synonyms have been widely used to rationalise the trend driven by the increasing skill requirements in the Australian labour market and the more successful settlement experience of skilled workers.

While the numbers of foreigners entering under the family stream remained at about 50,000 persons per year, the number of skilled economic immigrants has increased by a factor of ten in the past 25 years up to 110,000 in 2008-2009. Accompanying this trend have been more stringent requirements to ensure that immigrant skills are applicable in Australia including the accreditation of overseas qualifications and a demand for higher levels of English language proficiency.

**Figure I: Main permanent and temporary immigration streams, 1985-2011\***



Source: Parliament of Australia, Parliamentary Library, Australia's Migration Program, October 2010.

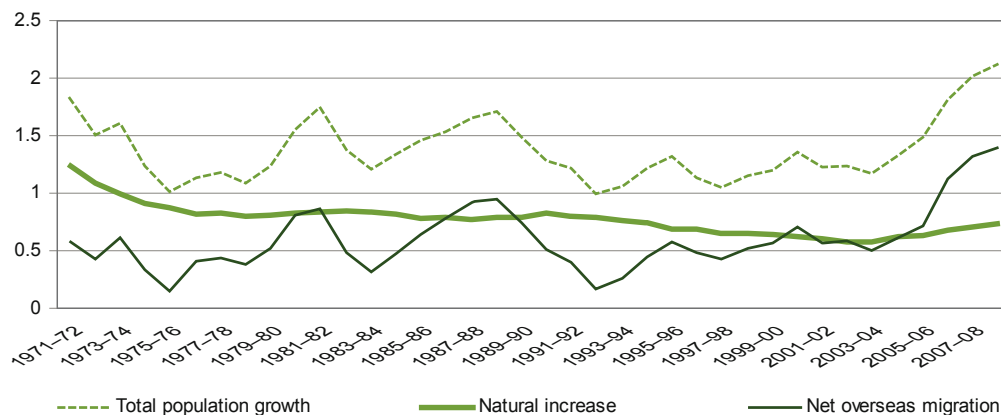
\*Note: The figures relate to financial years, July to June. The figures for 2010-11 are the projected planning levels and not the actual individual numbers.

Another major trend has been the large increase in temporary immigration. Temporary migrants come as workers, students and working holiday makers. They are distinguished from the permanent migrants by their visas being valid for a limited time (up to four years) and from visitors by their long-term status, having a visa for one year or longer and the right to work. The major component of temporary immigration is the Business (long stay) 457 visa class – skilled workers recruited by Australian employers to work for periods up to four years. Overseas students and working holiday makers also have (restricted) rights to work and a large proportion of these foreigners exercise this right. While permanent migration has increasingly closed the doors to unskilled workers, the large increase in overseas students and working holiday makers has opened another door for temporary migrants to do low-skilled work.

Partly as a consequence of the increase in temporary migration but also as a result of deliberate policy, temporary migrants have become a major source of permanent migrants. An increasing proportion of temporary skilled workers now replace their temporary visa with a permanent one. Overseas students have also become a significant source of permanent immigration. When this happens, they become “on-shore” permanent migrants and are counted as being part of the migration program. Since the migration program is subject to a cap, these on-shore migrants “replace” off-shore applicants. As a result, immigration policy now routinely distinguishes between on- and off-shore applications, and new forms of bridging visas have been introduced to allow for an orderly transition from temporary to permanent status. In 2007-2008, temporary migrants, mainly the 457 temporary visa class and overseas students accounted for 39 per cent of the skilled stream visas.

Finally, a very sharp increase in immigration was observed in the past decade and in the 2004-2008 growth years in particular. During the past decade the number of migrants under the skilled migration stream trebled as did the yearly inflows of temporary workers on the 457 visa and the overseas students. By 2008-2009 the net international migration contributed 1.39 percentage points to the total population growth of 2.1 per cent, far higher than at any time in Australia’s history.

**Figure 2: Natural population increase, net overseas migration and total population growth, 1971-2008**



Source: Parliament of Australia, Parliamentary Library, October 2010.

Much of the increase in the numbers of overseas students in recent years has been driven by the private vocational education and training sector. Overseas students are allowed to work for up to 20 hours per week during the term time and unlimited hours during the official semester breaks. About one-third of the students work an average of 10-15 hours per week, and a significant proportion are dependent on their income from work for their subsistence. By and large, the working pattern of overseas students mirrors that of local students. The vast majority work in low-skilled jobs at the minimum rates of pay in the service industry. The cash-in-hand payment of wages is not uncommon. They fare somewhat worse than their local



counterparts in the type of jobs they obtain, but overt discrimination reportedly is not common.

The Working Holiday Makers are allowed to remain in Australia for a period of up to 12 months and work for up to six months with one employer. The total yearly flow has now reached 150,000. Although the official rationale is to 'enhance the cultural and social development of young people', their role as temporary workers, and as seasonal agricultural workers in particular, has become increasingly evident (Department of Immigration and Citizenship 2008a).

A recent survey indicates that about 70 per cent work while in Australia for a period of about six months (Tan et al. 2009). Of these, no less than 27 per cent classified their occupation as farmhand. In 2002 the scheme was extended to allow for a second 12 month visa for those who had done "specified work in an eligible regional area for a minimum of three months". This qualifying condition was specifically designed to encourage the working holiday makers to engage seasonal work in horticulture. By 2009 the number of persons who satisfied this condition had grown to 20,000. These figures imply that that holiday makers contribute around 35,000 workers a year to the agriculture industry of which 20,000 have a one season experience. Outside of agricultural work they are employed in low skilled work in the service industries; as waiters, cleaners, kitchen hands, bar attendants, and sales assistants. Overseas students are typically employed the same type of jobs, but working holiday makers are not tied to a large city and form a highly mobile workforce attached to the hospitality and tourist industries.

Notwithstanding that overseas students and working holiday makers' work in mainly low paid low-skilled jobs, the official position is that they are making a valuable contribution. Working holiday makers, it is claimed, have "a positive effect on the Australian economy and create jobs in Australia" (Department of Immigration and Citizenship 2008a). Overseas students are the customers of what has become one of Australia's largest export industries – education and training. Concerns about their vulnerability or labour exploitation, or adverse effect on the pay and working conditions of resident low skilled workers, are generally muted. It is commonly held that the primary reason for their presence is not economic, and that they have financial resources to maintain themselves even in the absence of employment.

Combined, overseas students and working holiday makers constitute a pool of some 200,000 to 300,000 workers available for seasonal, part-time or casual work. This is about twice the highly skilled temporary migrant workforce even if dependants of the primary visa holders are included. Thus the use of temporary foreign labour for low-skilled work is a *fait accompli* in the Australian labour market, even if the governments have been reluctant to acknowledge this. This policy can be seen as a tacit acceptance of the need for a flexible workforce for the low-skilled jobs. In other developed countries that need is often met by irregular migrants. In Australia, however, the universal visa requirement and isolated island continent geography mean that there are few irregulars. Informed guesses put the number at no more than 50,000.

## 2. Identification of Labour and Skill Shortages in Australia

The research that underpins the identification of skill shortages in Australia is undertaken by the Department of Education, Employment and Workplace Relations (DEEWR). This research has many uses, one which is to inform which occupational lists for migration purposes. Skill shortage research also addresses a need for information about skill needs in each State and Territory including which occupations should be included on the regional and state sponsored migration program. Until the end of the 2007-08 the Australian Standard Classification of Occupations (ASCO) was used to define occupations. Since then it is based the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

The key component of the skill shortage research is a survey of some 9,000 employers who have recently advertised vacancies in selected skilled occupations. These employers are identified from a variety of sources including major newspapers, employment Internet sites and professional organisations. Additionally, for occupations with a small number of vacancies cold canvassing is also used to collect information. The sampling method does not permit population estimates to be derived, but it was deemed to be a cost effective method for discerning broad trends for individual occupations and the skilled labour markets as a whole (Department of Education, Employment and Workplace Relations 2010).

The survey uses semi-structured interviews seeking information on the number of positions available, whether vacancies were filled, the total number of applicants and the number of suitable applicants. Supplementary information is also collected when relevant using a set of recommended questions to find out why vacancies are unfilled. Cold canvassing for occupations with low vacancy numbers necessarily uses a different set of questions such as: 'Have you recently tried to recruit for occupation X? How long ago was this? Did you fill the vacancy?' and so forth.

To ensure that the survey generates consistent data over time, the key concept, a vacancy, is precisely defined. A vacancy is a definite position offered by the direct employer for a paid employee. Part-time positions are surveyed if the hours of work are 16 or more per week, and temporary/casual positions are surveyed if they are for three months or longer. Advertisements for self-employment or partnerships are generally excluded. If an employer advertises multiple vacancies without having a definite number in mind, an estimate of the number of vacancies involved is sought. A vacancy is considered to be filled if the employer recruited a suitable applicant within four weeks of advertising the surveyed vacancy (six weeks in the case of professions). If the recruitment is not completed, arrangements to recontact the employer are made. Alternatively, the vacancy is recorded as filled if the employer is highly confident of filling the vacancy.

Occupations are assessed at least on the annual basis, but for some occupations where demand for information requires more frequent assessment or where the labour market is more variable (such as construction and IT), research is undertaken ever six months. There is no formal process for the timing of assessments; the accumulated experience of how labour markets in different occupations evolve is seen as the best guide for making decisions about re-assessment.

The survey is then complemented by an analysis of a range of demand and supply factors to form assessments of occupational labour markets. Such demand factors include:

Examination of key determinants of demand;

- Relevant industry activity statistics and projections;
- Employment levels where reliable and current;
- Vacancy levels (where reliable data are available);
- Anecdotal information on demand from employers and industry contacts.

The supply analysis is generally more limited due to the many sources of supply at the level of individual occupations, but includes:

- Training completions and commencements where available;
- Wastage (people leaving the occupation);
- Net migration figures if relevant and available;
- Comment on informal supply if significant;
- Whether overall supply to the occupation is increasing or decreasing.

These factors may be taken into account, but this information is not necessarily available at the level of individual occupations. Australia monitors overseas arrivals and departures and each person who enters or leave the country has to fill in an arrival/departure card that records among others their occupation. From this data the change in the stock of, for example, bricklayers can be determined on a daily, monthly or any other basis. However, the accuracy or detail may be lacking with regard to the occupation or the type of movement (short-term or long-term). Hence this information, as most other data at the level of individual occupations have to be used with care.

Department of Education, Employment and Workplace Relations DEEWR is particularly conscious of the fact that vacancies can remain unfilled for a number of reasons other than a shortage. These include employers having specialist requirements, the position involving the operation of machinery or equipment which is not generally used, pay or conditions offered being below market rates, particular working arrangements and expectations of employers or employees which are unrealistic. Additionally, the working arrangements sought by workers may not match those offered by employers. These considerations make it less likely that a skilled occupation at the lower end of the skilled spectrum would be classified as being in shortage.

Based on this work, an occupation is classified as: being in shortage, with recruitment difficulty or having no shortage. This classification is guided by specific criteria.

### *Shortage*

Employers are unable to fill, or have considerable difficulty filling vacancies for an occupation, or significant specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and in reasonably accessible locations.

### *Recruitment difficulty*

Some employers have difficulty filling vacancies for an occupation. There may be an adequate supply of skilled workers but some employers are unable to attract and recruit sufficient, suitable workers for reasons which include: specific experience or specialist skill requirements of the vacancy, differences in hours of work required by the employer and those sought by applicants, or specific location or transport issues.

### *No shortage*

Research has not identified any significant difficulty filling vacancies.

The assessments are validated through consultations with key industry bodies, unions and professional associations and are undertaken on a six monthly basis to ensure changing labour market conditions are identified. At the same time, there are few institutionalised processes for community consultations in Australia.

## **3. The Role of Immigration in Alleviating Labour and Skill Shortages in Australia**

Identification of labour market needs is not a separate process, carried out without reference to the outcome of an immigration program. An initial perception of needs drives the criteria for different immigration streams. As migrants arrive, the outcome of their settlement experience is assessed. If this experience is less than satisfactory, the reasons for this are identified and the criteria revised in order to select immigrants who are more likely to be successful. The outcomes under the revised criteria are then assessed and the process repeats itself.

Australia's immigration program is large and complex. In addition, a number of changes were introduced in 2009-2010 and have yet to be fully implemented. To deal with this complexity, this report will consider one major stream, GSM and follow its success in identifying and meeting labour market needs during the 1999-2008 period. For the other major streams, the report describes the current arrangements for identifying skill needs taking account any changes in 2009-2010.

### **3.1. The General Skilled Migration Program in 1999-2008**

The operation of Australia's GSM in the past decade has been driven by a set of changes introduced in 1999. These reforms re-defined the Government's view of Australia's need for skilled migrants and developed a set of measures to ensure that these needs are successfully met. The changes included:

- A clear definition of the skills needed in Australia;
- Refining the points based selection system for skilled migration;
- Minimum threshold requirements for skills (including employment experience), age and English language ability (vocational level) in the points tested categories;
- Development of a migration occupations-in-demand list and use of a validated 'job offer';

- Skills assessment to be undertaken by appointed professional bodies before lodging the migration application.

The high-level skills that Australia sought were defined by a Skilled Occupation List (SOL). Initially it covered most, but not all, professional, managerial, technician and trade occupations considered 'skilled' in Australia. The line is drawn at the skilled manual workers who normally learn their trade through a four-year apprenticeship and technical college education. Such a concept of skill belongs to a goods-producing era and is not easy to apply in a post-industrial economy. The SOL occupations were further classified as 60, 50 and 40 points occupations for the purpose of the points test that would be used to assess visa applications. Sixty points were reserved for occupations where the possession of a relevant qualification was essential for working in that occupation.

To favour migrants with a skilled occupation in shortage, another list – the Migrant Occupation in Demand List (MODL) identified which SOL occupations were in shortage. Additional points were then awarded to migrants in these occupations. Occupations were to be included on this list were to be determined by the occupational skill shortage research under taken by the Department of Education, Employment and Workplace Relations. Low-skilled occupations have been excluded from this exercise from the start.

The points test then made an occupation on SOL a necessary requirement for admission under the GSM programs. The essential feature of the points test was that applicants in a 60 point occupation could achieve the pass mark for a visa even if their occupation was not on MODL. However, for migrants in the 50 or 40 points occupations, the additional MODL shortage points were almost essential to reach the pass mark.

These programme settings closely correspond to the concept of prioritizing highly skilled workers, and among those reflecting a greater need for those with an occupation in shortage.

The migration outcomes of this scheme then depend on:

- How well the SOL and the classification of occupations into 60, 50 and 40 points reflect the evolving needs of the labour market;
- How well the MODL reflect the evolving shortages;
- The interaction of the SOL and MODL points with the other factors included in the points test.

Based on the labour market research outlined in the previous section, occupations were included in the Migration Occupation in Demand List if they satisfied five criteria:

- A national skill shortage based on the findings of DEEWR's Skill Shortage Research Program;
- Critical skill – a 60 point occupation on the SOL list;
- Size of occupation – at least 1500 persons employed in the occupation;
- Unemployment rate in the occupation is below the national unemployment rate;
- Employment growth/ persistent shortage: employment growth in the occupation is greater than the average for all skilled occupations or projected five-year

employment growth in the occupation is above the median for all occupations or there is a persistent national shortage in the occupation.

Inclusion of occupations on the MODL can be quite sensitive to these criteria. Trade occupations were for a long time largely excluded because of their low growth in employment until the last alternative (persistent national shortage) was added to the fifth criterion.

The skill shortage list is updated every six months taking account of the changing labour market conditions. When first introduced in 1999, there were 17 occupations on the list and during the following years some occupations were added, and others were withdrawn. From about 2004, with the economic upswing the number of occupations began to increase and by 2008 there were no less than 106 occupations on the list.

At the most basic level the general migration program delivers migrants with MODL occupations. The extent to which it does so depends on the weight given to an occupation and the number of occupations on the list. As the number of occupations expanded in 1999-2008 period, the percentage of GMP principal applicants with a MODL occupation reached a high of 63 per cent in 2007-2008. Initially, this was taken as a measure of success but instead of just giving preference to occupations in shortages, this became an almost essential condition.

The real problem was that successful visa applicants were concentrated in few occupations. Initially, the two main occupations were accounting and IT professionals, and later on also nurses, cooks and hairdressers. (Department of Immigration and Citizenship 2008b). It is fair to say that this predominance of a small number of occupations is unintended (Birrell and Healy 2007). In addition, 15 occupations had been on the shortage list for more than five of the past ten years.

By the time the MODL was reviewed in 2008, a consensus emerged that MODL did not deliver on the intended goals. Identifying skill shortages was not a challenge in itself, but rather translating these findings into a functional immigration policy. MODL was considered 'a blunt instrument for resolving skill shortages' and other approaches were suggested to be potentially more effective (Department of Education, Employment and Workplace Relations 2007). The review then drew out the principles to govern a new MODL that were taken up by a new authority, Skills Australia that was also tasked with overseeing the conceptual identification of skill needs. The attempts to give preference to applicants with occupations in shortages were subsequently disbanded altogether in 2010. MODL was replaced with a new SOL, a Skilled (sometimes called Specialised) Occupations List much to the confusion of prospective migrants since MODL had previously been a subset of the old SOL.

### **3.2. Overseas Students and Skilled Migration**

Identifying shortage occupations and subsequently giving preference to migrants in these occupations seems a straightforward task. However, the problem with relying too much on a single factor such as occupation, is that occupation is not an innate characteristic. Just as immigration policymakers strategically devise regulations to attract migrants to meet the occupational shortages, prospective migrants can also act strategically by adapting themselves to these regulations.

Prior to 2001 overseas students had to return home upon completion of their studies in Australia. If these graduates then wanted to immigrate in Australia, they had to do so through the same process as all other prospective migrants. In 2001 this situation changed; students who had completed a qualification could now apply for a permanent visa while still in Australia. Initially this option was only open to those with a 60 point SOL occupation. It was seemingly a sensible idea to facilitate the stay of skilled migrants already on the Australian soil and already with the Australian qualifications. The graduates were thus awarded extra points for their Australian qualifications and even the work experience requirements were waved for this group (Birrell and Perry 2009, Birrell and Healy 2010).

Initially, only students who were already in Australia could avail themselves of this option, but very quickly the prospect for permanent residence came to drive enrolment and the choice of courses. In response, universities and private vocational training institutions began to develop courses designed to attract such foreign students. In the universities, generalist post-graduate courses in accounting and IT were the two most common tracks specifically tailored for the permanent visa gateway. In the Vocational Education and Training (VET) sector, cooking and hairdressing played the same role. Effectively, permanent entry visas could be bought at a relatively low price. Doing a 12,000 USD course to qualify as a music teacher was, for some period, an almost certain route to permanent residence.

This development was reflected in the permanent visa applications under the GSM program where a large proportion of applicants were overseas students who had purposefully acquired an Australian qualification en route to permanent residence. The speed and magnitude of these developments took policy makers by surprise. VET enrolments by overseas students almost trebled from 2005 to 2008. Apart from some minor tightening up of the criteria the Government did not act until 2009, and major changes were implemented only in February 2010.

The skilled migration program as it operated in 1999-2008 period was a concerted attempt to prioritize skilled workers in shortage occupations. The reason for abolishing this system does not lie in the difficulty to determine labour shortages per se, although these can only be specified to a point. Whether these needs are met by immigration is revealed by the integration outcomes of the migrants who are selected to meet these shortages. Opening up on-shore application to overseas students led to a large flow of applications from persons who only notionally satisfied the requirements for a permanent visa. In reality, in many cases they did not wish to work in the occupation for which they had qualified. More generally, the standard of their education or training was below the employer requirements, the graduates lacked job-relevant work experience or commanded insufficient English proficiency.

MODL ensured that large numbers of overseas students were admitted, but the fact that this immigration marginally contributed to meeting shortages did not register on MODL. The data registered only reflected unemployment by the last occupation in which a person was employed. Therefore, these migrants would only appear in the database if they remained unemployed after having worked in a particular occupation. Instead, MODL noted that the shortage remained and ensured that more of the same were granted a permanent visa.



### 3.3. Recent Changes to the Skilled Independent Migration Regime

The attempt to meet specific skill shortages through the skilled independent migration programme was abandoned in 2010. The MODL was dropped and replaced by a Skilled Occupation List based on the advice of Skills Australia. The SOL would identify “specialised occupations that require a long lead time of formal education and training and where the economic impact of not having those skills is significant”. It would also “take account of the broader context of Australia’s ongoing and future workforce development and help to ensure that the General Skilled Migration program is focused on high value skills that will help address future skills needs” (Skills Australia 2010a).

The new SOL was derived in two steps. Starting from the list of all skilled occupations in the first step Skills Australia drew up a list titled “Specialised” (skilled) Occupations (SpOL) (Skills Australia 2010b). To be included on this list skilled occupations should satisfy the two of the first three and the fourth of the following criteria:

1. Long lead time: these are highly specialised skills that require extended learning and preparation time over several years.
2. High use: these are skills which are deployed for the uses intended (i.e. there is a good occupational “fit”).
3. High risk: disruption caused by the skills being in short supply imposes a significant risk to the Australian economy and/or community. For example, a high risk occupation is subject to a licensing requirement (such as nurses and electricians) or is required for the registration or accreditation of a business.
4. High information: the quality of information about the occupation is adequate to the task of assessing future demand and evaluating the first three criteria.

Given this list, a second list, the Skilled Occupation List (SOL) is to be used for migration purposes by excluding occupations if:

- The occupation is likely to be in surplus in the medium to long term;
- There are other more appropriate and specific migration options for persons in the occupation (temporary migration is more appropriate for meeting short-term needs like ski instructors and entertainers);
- The job requires the person to be an Australian citizen (Commonwealth and State public service).

In conjunction with the equally specific criteria for how the indicators should be used and measured for different types of occupations this represents a concerted effort to define the skills that Australia needs from its GSM programme. The many criteria may be seen as elaborate and excessive, but they are subject to intensive scrutiny by employers, prospective migrants and other stakeholders, which promotes constructive dialogue based on objective criteria.

The first set of criteria implies a much more specific specification of the type of skills that the skilled independent migration programme should meet. Most of the included occupations are in the following sectors:

- Building and construction, including project managers, architects, surveyors;



- Engineering;
- Education – pre-primary and secondary school teachers;
- Medical – including doctors, nurses, and allied health professionals;
- IT professionals;
- A small number of trade occupations, mainly in building and construction;
- A small number of science occupations including chemists, agricultural and environmental scientists.

Compared to the past the list excludes a large number of previously covered common occupations:

- Most trade occupations, including cooks, hairdressers and fitters;
- Most science occupations;
- Most general business occupations, for example marketing specialist and general managers;
- Primary school teachers and teachers of English as a Second Language;
- Most associate professional occupations, apart from engineering associates;
- Welfare workers;
- Translators and interpreters.

Comparing SOL with the old MODL, however, suggests that the change was not dramatic. By coincidence the number of occupations on SOL (108) is almost identical to the number on the now old MODL (106). Nevertheless, although MODL was pure skill shortage list, SOL excludes occupations expected to be in surplus in the medium to long term.

Having discarded any attempts to explicitly tie the selection of migrants to skill shortages, further changes to the GSM were made in 2010. Skilled migration has always been subject to a yearly cap, but in 2010 an occupation specific cap was introduced, fixing the numbers in a particular visa class or sub-class. In the past this has been ruled out as too complicated to operate, but the experience during the past decade has diminished this concern.

The points test was also reviewed and a number of changes were made. These changes were strongly influenced by the former overseas students gaining selection to the exclusion of off-shore applicants. For a long time, all the research had pointed to the value of Australian qualifications and experience. However, the changing on- and off-shore composition of the intake during the 2004-2008 period and subsequent outcomes for the former overseas students suggested that Australian qualifications were overvalued. Well educated and experienced off-shore professionals were denied visas in favour of the recent on-shore graduates. To redress the balance, the differential between Australian and overseas qualifications and experience was reduced. In addition, more weight was given to work experience so that it now compensates for increasing age of up to 45 years old.

Finally, the most dramatic change was to drop the distinction between 60, 50 and 40 point occupations. When introduced it was thought that occupations for which a certain qualification was essential should be given preference by the maximum number of points. A decade later the arbitrary nature of this rule became obvious.

### 3.4. Regional and State- Sponsored Migration

Australia is a highly urban society with most of its population concentrated in a small number of large metropolitan cities. It is also a Federation (Commonwealth) of States which have much in common, but also considerable differences, including with regard to the skill needs.

Regional and state sponsored migration programme refers to the various programmes that have sought to address the regional distribution of immigrant labour. The process began in 1996 and was later expanded to allow States/Territories a greater role in the selection of migrants. Since 1990s several rounds of amendments were introduced expanding the application of the programme to a greater range of prospective migrants and to further increase the regional/state focus. The present Government has indicated further intentions in this direction to explore the feasibility of introducing the system of joint skilled applicant selection by employers, State and Territory governments or by the Commonwealth (Evans 2010).

The two main components of this immigration channel are sponsorship by employers in the regional areas and sponsorship by state governments. It offers a permanent or provisional visa to those prospective migrants who do not meet the standard criteria for employer sponsorship or the points test for skilled independent migrants. If the initial visa is provisional it is then converted into a permanent one if the migrant has met the qualifying residence and work conditions. This mechanism can be seen as a concession in exchange for the migrant committing to live and work in a designated region or state. In the Australian context, the term regional refers to the non-metropolitan areas outside the seven capital cities in which the majority of Australians live.

In the case of state-sponsored migration the State Governments develop their own migration plans and set the precise numbers to be sponsored by each state that is subsequently negotiated with the Commonwealth Government. To date, a migration plan is simply a list of occupations that a state is willing to sponsor. These occupational lists are also called SOL, but confusingly have nothing to with the SOL described in the previous section. Instead the range of occupations is defined by the list used for employer-sponsored migration (ENSOL). This list includes almost all skilled occupations where skilled occupations are defined as those at ANZSCO Levels 1 to 3, i.e. managers, professionals, technicians and skilled manual trade occupations. As consequence, State governments could, at least collectively, undermine the rationale for the development of the restrictive national SOL for skilled independent migrants by including non-SOL occupations on their occupation lists.

In recent years, this route has also become an alternative gateway for former overseas students whose prospects for a permanent visa were significantly reduced when the MODL skill shortage list was withdrawn. In assessing the spatial objectives of the

programme, Hugo (2004) notes that both migration theory and experience suggest that attempts to influence settlement locations can only have marginal effects. However, the decentralisation of immigrant selection to state government have also have some potential benefits. The skill needs do vary between states, with the difference between the two resource states, Western Australia and Queensland and the rest being particularly sharp. The position of State Migration Units that play a very active role in recruiting and assisting prospective migrants has been strengthened. These Units are better placed to closely liaise with both employers and prospective migrants, which in principle should lead to a closer match between the needs of employers and characteristics of migrants. On the other hand, the expansion of regional/state schemes has made the immigration system a maze that few individuals negotiate without the assistance of migration agents.

### 3.5. Employer Sponsored Migration

There are two avenues for the employer-sponsored migration: the Employer Nomination Scheme (ENS) and its concessional variants allow employers to sponsor workers for permanent settlement, but they can also sponsor workers for temporary residence under the Business Long-Term 457 Visa programme.

Employers sponsor overseas workers because they experience difficulties to recruit workers with the requisite skills from the domestic labour market, even in the absence of an officially established shortage. This labour shortage interpretation, trusting the employers to assess the actual shortages more accurately, was also one of the factors that led to the abandonment of the MODL and the extra points for occupations in shortage.

The primary role of the Government in this case is to ensure that the need for a paid employee is genuine (full time and permanent), the skilled jobs are on the ENSOL occupation list and are in fact skilled, and that the selected workers have the skills to do these jobs. The remaining conditions then provide further safeguards against excessive reliance on migrant workers (for example, the training record) or using migrant workers to avoid upholding the minimum working conditions.

In addition, the sponsored worker must satisfy the following conditions:

Working full-time in Australia in the nominated occupation while holding an eligible temporary residence visa for at least two years and having spent at least the last 12 months employed with your ENS sponsor;

or

Having satisfactory skills assessment from an Australian assessing authority relevant to the nominated occupation and at least three years of post-qualification work experience in the nominated occupation;

and

- holding, or being eligible to hold, any mandatory registration, license or professional membership;
- having the level of English proficiency required for the nominated occupation;

- being younger than 45 years of age;
- satisfying mandatory health and character checks;
- having evidence of a formal letter of appointment or an employment contract.

The stringent requirements and the procedure of extensive vetting of both employers and potential workers means that the ENS processing time is long, and even in priority the time between application and arrival between one and two years.

The Business Long Stay 457 Visa, on the other hand, gives employers an almost instant access to the international labour market of skilled workers. The most common occupations of 457 visa holders, engineers, medical specialists and IT professionals, have figured prominently on the skill shortage lists. This visa class is also much used for international intra-company transfers.

In the period 2004-2008 the persistent skill shortages in trade occupations led to some relaxation of the skill requirements to also include some semi-skilled occupations. The need for these workers may well have been greater than the need for professionals, but the rules were again tightened due to the concerns about the “integrity” of the program – notionally skilled worker doing unskilled work or some employers not adhering to the minimum employment conditions.

The 457 Business Long Stay Visa allows skilled people to work in Australia for an approved employer for a period from one day to four years. Under the current arrangements, employer must first apply to become a standard business sponsor, which allows them to sponsor an agreed number of overseas workers for a three year period. Once an approved sponsor, the employer can then nominate positions to be filled by the overseas workers. The position must relate to an approved occupation and the overseas worker must work in the position they were nominated for.

In the past, the criteria for sponsorship included a “benefit to Australia” requirement corresponding to the “genuine need” in the case of ENS. However, as this condition is difficult to verify, it was replaced by a demonstrated commitment to employing local labour and non-discriminatory employment practices. Another condition is the ability of the organisation to comply with the nine administrative obligations that are imposed on sponsors, including requirements to cooperate with an inspector, to keep records, to provide records and information, and so on.

The pre-qualification of sponsors is primarily a processing and compliance issue; it speeds up the processing time and reduces the cost of administering the programme. With sponsors prequalified, the individual assessment of each employer and each worker can be cut short. Instead, the resources used to process applications can be transferred to post-arrival monitoring to ensure that the integrity of the programme is maintained.

These arrangements have evolved in response to mainly two factors. The first is employer’s strong preference for speed in processing applications. The current processing times are on average three weeks, but much shorter (2 days in some cases) if the sponsor includes all the required documentation with their applications. Secondly, it has become apparent that most breaches of the conditions of the programme are made by a small proportion of sponsors, which is aimed to be addressed by the pre-qualification.

## 4. Labour Market Outcomes of Immigrants in Australia

The successful labour market integration of migrants has for some time been the single most important factor driving the Australian immigration policy. One of the earliest studies focusing mainly of the labour market experience concluded that on the whole “migrants in the Australian labour market do as well as persons born in Australia after an initial period of adjustment” (Bureau of Labour Market Research 1985). Since then extensive research has essentially confirmed this broad assessment, however it also established that migrant success is highly dependent on the economic conditions at the time of arrival.

As a group, refugees fare worst as a result of their traumatic experiences, generally low level of education, lack of skills and relevant work experience, and no or little knowledge of English. On the other hand, highly skilled migrants that Australia favoured encounter fewer problems. On average, they are more educated and skilled than the average Australian-born, which is reflected by the immigrant labour market outcomes. In between these poles, the labour market performance of the remaining immigrants is more varied. The poorer performance of migrants from the non-English speaking countries has been a long-standing concern and led to greater weight being given to English language proficiency. The increasing skill focus has indirectly had the same effect.

There are numerous data sources for following the labour market experience of migrants. The longitudinal survey of migrants first begun in 1993 and since then three cohorts (the latest being the 2006 arrivals) have been followed for up to five years. Other data sources are the monthly labour force surveys including supplementary surveys of migrants. In addition, numerous surveys of particular migrants group have provided highly detailed and contextual accounts of the migrant experience. Recently, further data sources have become available, such as a tool linking individual visa record with Census data, and a programme of continuous surveys with a limited longitudinal element that begun in 2009.

Comparisons of the labour force status provide an overall picture of the immigrant outcomes. The overseas-born as a group have the same unemployment rate as the Australian-born but the unemployment rate of recent migrants (arrived within the past ten years) is marginally higher (Table 2). Unemployment is associated with being young, having been in Australia for a short time, being of a non-English speaking origin and having no post-school qualification. Two of these factors apply to migrants and Australian-born alike, so in terms of migrant-specific factors, recent arrival, language proficiency and cultural differences are the main sources of potential difficulties. However, these factors are wholly or partially compensated for by the generally higher skill level of recent migrants.

Much more detailed and substantial insights come from the analysis of the data from the longitudinal surveys by some 70 mainly academic studies that explored the integration process in great detail since 1993.

**Table 2: Labour force status and other characteristics of recent migrants. Persons aged 15 and over, migration status and type of visa as at November 2007**

	EMPLOYED			Unemployed ('000)	Labour force ('000)	Not in the labour force ('000)	Total ('000)	Unemployment rate (%)	Participation rate (%)
	Full time ('000)	Part time ('000)	Total ('000)						
Born in Australia	5,454.0	2,206.8	7,660.8	326.1	7,986.9	3,633.4	11,620.3	4.1	68.7
Born overseas	2,039.8	714.9	2,754.7	117.5	2,872.2	1,912.3	4,784.5	4.1	60.0
Recent migrants and temporary residents	440.4	175.3	615.8	35.6	651.3	288.0	939.4	5.5	69.3
Australian citizen	148.1	45.0	193.1	5.7	198.8	79.3	278.1	2.8	71.5
Permanent visa	193.0	56.0	249.0	17.7	266.7	102.2	368.9	6.6	72.3
Skilled	121.9	26.5	148.4	7.4	155.8	32.8	188.6	4.7	82.6
Family	61.4	25.3	86.7	7.0	93.7	56.5	150.2	7.5	62.4
Humanitarian	6.0	1.3	7.3	-	-	--	19.5	-	-
Other	3.8	2.9	6.6	-	-	-	10.6	-	-
Temporary visa	96.3	72.2	168.5	12.3	180.7	104.3	285.1	6.8	63.4
Student	14.3	60.6	74.8	7.1	82.0	76.3	158.2	8.7	51.8
Long-term business	62.5	5.1	67.6	3.5	71.1	10.6	81.7	4.9	87.1
Other	19.5	6.5	26.0	1.6	27.7	17.4	45.1	6.0	61.3
Status not determined	3.0	2.1	5.1	0.0	5.1	2.2	7.3	0.0	70.0
Total	7,493.7	2,921.7	10,415.4	443.6	10,859.1	5,545.8	16,404.8	4.1	66.2

Source: Australian Bureau of Statistics, November 2007

Most of these studies are broadly supportive of the skill focus of Australian immigration policy. Chiswick, Yew and Miller (2005) find that the level and relative growth of earnings are higher for immigrants with higher levels of skill. In another paper Chiswick and Miller (2006) find that the increased English proficiency requirement for the independent and skilled sponsored categories appears to have been successful in raising the English language proficiency of the new entrants in these categories. Being skilled, or more precisely being more educated at arrival is associated with a higher probability of undertaking additional investment in education (Cobb-Clarke, Connolly and Worswick 2001). Skilled migrants are also better placed to negotiate the social and institutional barriers (Ho and Alcorso 2004). In a similar vein, Khoo (2003) demonstrates the importance of kinship in permanent settlement and return migration and suggests that liberal policies on family reunion reduce settler loss, especially among skilled migrants. In other words, family migration should not be seen as a concession, but supportive of a skilled migration programme.

While positive assessments dominate the findings, there are also some reservations. A recent study warns that high initial unemployment does not necessarily vanish after a period of adjustment; whether it does depends on the interaction of a complex set of factors including English language proficiency, cultural distance and employment growth (Lester 2008). Behind these factors lurks the possibility of discrimination, but as there is little evidence of overt forms of discrimination, the term itself is not widely used in the discussion about immigration.

Although the studies are very diverse there is one concise insight that is common to many studies. Comparing the outcomes for the second cohort with the first it was found that 'changes in immigration policy may have led to increased human capital endowments that in turn resulted in higher participation rates and reduced unemployment. At the same time, improvement in Australian labour market conditions and changes in income-support policy over the 1990s ...were probably instrumental in reinforcing the effects of tighter immigrant selection criteria' (Cobb-Clarke 2003).

During the past decade much the analysis of migrants performance has been undertaken within the over-and under-education paradigm. As in most other countries, the Australian data reveal a considerable degree of mismatch with only about two thirds having an occupation that correspond to their level of education, but the precise proportion varies between different data sources (Miller 2007). Not surprisingly the extent of over-education is most pronounced for recent arrivals but declines with time in Australia. In the case of female graduates Kler (2006) found that six months after arrival the degree of over-education was particularly high (close to 40 per cent) for persons from non-English speaking countries. In Kler (2007) similar results are reported for male graduates with the degree of mismatch increasing over time. Migrants are not alone in finding jobs commensurate with their education and training, many native-born face the same problem.

Having yielded very useful information for over a decade, the comprehensive Longitudinal Survey of Immigrants to Australia (LSIA) has now been replaced by the Continuous Survey of Australia's Migrants, first run in late 2009. This is an ongoing survey: every six months a new cohort of migrants will be surveyed together with a follow-up survey of the previous cohort. This survey is designed to yield quick answers to how a particular

group of migrants responds to changing policy settings (Department of Immigration and Citizenship 2010c).

Highly skilled migrants do well in an economy where there is a need for their skill. The increasing number of migrants does not seem to have an adverse effect on integration outcomes. The large increase in population does create some pressure on housing and other infrastructure, but the Australian labour market seems to be on the whole successful in absorbing newcomers.

## 5. Conclusions

Australia's immigration policy is based on the identification of worker characteristics that promote successful settlement and translating these into the criteria and conditions for the admission new migrants. This process has led to an approach focused on attracting highly skilled migrants, which tend to have a more successful settlement experience.

The Commonwealth Government is the principal arbitrator of the skill needs tackled by the General Skilled Migration (GSM) regime, but state and territorial governments also play a role. Other skilled immigration schemes are employer-led. The permanent/temporary distinction in immigration channels allows for capturing various types of labour market needs.

The ongoing monitoring of the immigration outcomes is an integral part of the programme. The resources devoted to this task are quite extensive, presenting the government and the community of researchers with a range of data sources. The analytical capacity is combined with the administrative capacity to modify the policy settings based on evidence. Australia's migration evolves with the changing circumstances but avoids drastic changes that might have unintended or adverse effects.

During a period of an emerging concerns about skill shortages, immigration policy sought to address the labour market needs by awarding extra points to migrants with occupations deemed to be in shortage. The identification of shortages was based on explicit definitions of the key concepts and underpinned by an extensive research program. However, it became evident that this resulted in an unbalanced intake of migrants concentrated in a small number of occupations. This experience was an important trigger for a more significant reconsideration of the skilled migration programmes implemented in 2009-2010 that included a comprehensive revision of the understanding of skill needs and their reflection in immigration policy.

These changes did not have much effect on the employer-sponsored migration. Employer nomination is not tied to a specific occupation, but can be used for most skilled occupations. Even so, significant attention is devoted to ensure that a need is genuine and that a sponsored migrant has appropriate qualifications.

Australia's immigration approach is thus characterized by workable rules that maintain the integrity of the immigration program. The Australian approach to these matters is to specify criteria or conditions for immigration that can be verified or demonstrated. A rule-based system also ensures that all parties have the incentives to invest in the migration process. Employers can invest in the costly recruitment



processes confident that if they meet all the criteria and conditions, a visa application will be approved. Likewise, migrants that invest in a certain qualification and obtain the necessary work experience can be reasonably sure that their immigration objective would be attained.

Australia differs in many respects from the situation in most European countries. Its remote location, absence of a land borders and the almost universal visa requirement means that it has a much higher control of immigration. To those European countries that intend to adopt a more active immigration policy, several aspects of the Australian experience are relevant.

- Destination countries should insist that prospective migrants have a level of education, vocational qualifications and possibly experience commensurate with the native workers doing the same jobs. In addition, they should have a functional knowledge of the official language of the destination country. If migrants lack any of these characteristics, they should have the capacity, the will and the opportunity to upgrade their profile during a temporary stay. However, if migrants are to commit to a new country, the receiving country must reciprocate by providing access to education and training, social services, and permanent status and citizenship after a reasonable period of time. Both parties have to invest to realise a return on economic migration.
- Details matter – the commitment of migrants is conditional on transparent rules and regulations. Armed with this knowledge they can purposefully acquire the necessary skills. A country that fails to tell prospective migrants what it needs and requires will not succeed in managing migration.
- Economic immigration programmes have to be continuously monitored and evaluated to ensure that the intended goals are met. Both the labour market needs and the migrants' capacity to meet those needs change over time. Reasons for failure have to be identified, and the programme modified in a way that does not undermine the essential continuity of the arrangements.

In short, the Australian experience emphasises that migration is a process of the re-location of human capital underwritten by complementary investments undertaken by both parties. Because of the joint investments, the incentive of each party depends on the actions of the other party. The task of immigration policy is to put in place institutional arrangements that promote these investments and ensure that the gains are fairly distributed.

# Annexes

## Annex 1

**Table 3: Permanent immigration in 2009 -2010, outcome until 30 June 2010**

Immigration category	On-shore visas	Off-shore visas	Total visas issued
<b>Family</b>	<b>16,458</b>	<b>43,796</b>	<b>60,254</b>
<b>Employer sponsored</b>			
Regional and state specific migration	8,420	1,793	10,213
Employer nomination scheme	27,220	3,048	30,268
Labour agreement	82	424	506
Employer sponsored total	35,722	5,265	40,967
<b>General Skilled Migration</b>			
Skilled independents	6,910	30,495	37,315
State/Territory sponsored visa	2,575	16,211	18,889
Skilled Australian sponsored	941	2747	3,688
General Skilled Migration (GSM) Total	10,526	49,353	59,892
<b>Business skills</b>	<b>330</b>	<b>5,459</b>	<b>6,769</b>
<b>Skilled total</b>	<b>46,672</b>	<b>61,198</b>	<b>107,868</b>
Special eligibility	484	17	501
<b>Total</b>	<b>63,614</b>	<b>105,009</b>	<b>168,623</b>

Source: Department of Immigration and Citizenship, Migration Update 2009-2010.

**Table 4: Ten largest source countries of permanent immigration to Australia, 2009-10**

UK	China	India	South Africa	The Philippines	Malaysia	Sri Lanka	South Korea	Vietnam	US
25,738	24,678	23,164	11,081	10,160	5,220	5,085	4,350	3,950	3,222

Source: Department of Immigration and Citizenship, Report on the Migration Program 2009-10.

Note: New Zealanders are not part of the Migration Program.

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# CANADA

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## 1. Introduction

For many years Canada has used immigration to encourage population and labour force growth, thus becoming one of the main immigration destinations worldwide with some 200,000-250,000 immigrants arriving annually in recent years (Canada Facts and Figures, 2009). Since the late 1960s, Canada also pioneered the use of a points system for selecting economic migrants, an approach subsequently adopted by Australia and the United Kingdom (UK). Current economic immigration policy is based on a human capital model that places emphasis on the recruitment of immigrants with the skills needed to succeed in the Canadian labour market, in particular education, work experience and language proficiency.

Prior to the 1960s, Canada's immigration policy principally focused on unskilled immigrants for settlement in the West, and to meet the growing labour demand in sectors such as mining and forestry.<sup>4</sup> During this period admission to Canada was mainly restricted to immigrants from the traditional source countries such as the United States (US), the UK and the rest of Europe. However, in 1962 Canada abandoned the long-standing policy of "preferred" countries of origin in favour of admission based on the individual characteristics of applicants, especially their education and skills. Subsequently, in 1967 a formal points system was adopted that provided a transparent framework for admission decisions based on factors such as age, education and language proficiency, as well as the labour demand forecast by the applicant's intended occupation and destination within Canada.

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<sup>4</sup> See Green and Green (1999) for a detailed account of the evolution of Canada's immigration policy, with emphasis on the economic goals.

From the outset, the points system applied to economic immigration, and not to foreigners admitted as refugees or for family reunification purposes. Indeed, at the time the points system was introduced, refugee and family immigration channels were prioritized, and economic immigration was initially a residual category.

Although the nature of the points system has since evolved, the central objective of selecting immigrants with characteristics appropriate for the Canadian labour market has remained. From the outset – and especially in recent years – the points system has focused on selecting skilled immigrants. Furthermore, despite some year-to-year variation, immigration policy has shifted towards admitting more economic immigrants and fewer foreigners under the family reunification and refugee categories.

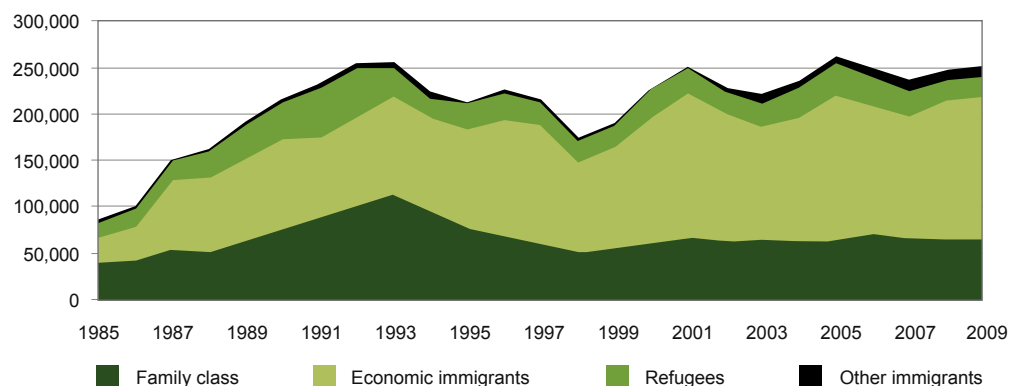
In 2002, Canada passed the Immigration and Refugee Protection Act (IRPA), which is the basis of the current immigration policy and replaces the Immigration Act of 1976. Immigrants may hence arrive under the three main categories: family class; economic or independent class; humanitarian class or refugees; and a small mix of other categories. In addition, some immigrants may access permanent residency status directly from temporary residency status through the Canadian Experience Class (CEC) or special programmes (such as *Live in Caregiver*).

- **Family class** is comprised of foreign nationals sponsored by close relatives or family members in Canada.
- **Economic immigrants** are selected for their skills and ability to contribute to Canada's economy, including skilled workers, business immigrants, provincial and territorial nominees and live-in caregivers.
  - The *skilled worker* component (those selected through the points system) includes immigrants who are able to demonstrate their ability to enter the labour market and successfully establish in Canada by meeting selection criteria that assess factors such as education, English or French language abilities and work experience.
  - The *business immigrant* component includes those who invest their money in an approved venture, those who intend to run their own business, or those who intend to be self-employed.
  - The *provincial and territorial nominees* are permanent residents designated by provinces and territories that have entered into agreements with the Government of Canada to select immigrants who will meet their local economic needs. While these nominees must meet federal health and security admission criteria, they are not subject to the skilled worker selection system for determining eligibility (See Annex I for a description of the administrative process involved in the admission through the PNP).
- **Refugees** include government-assisted refugees, privately sponsored refugees, refugees landed in Canada and dependants of refugees landed in Canada who live abroad.

The distribution of immigrants by category has shifted over time, with the economic immigration being a dominating component since the mid-1990s (Figure 1). In 2009, the majority of immigrants were in the economic class (63%), including both the “principal

applicants” who are selected via the points system if in the skilled worker category, and their spouses and children. The family class (family reunification) constituted 27 per cent and refugees 9 per cent. Table I presents a detailed outline of the various immigration categories and respective inflow figures in 2009.

**Figure I: Permanent Immigration by Category, 1985-2009**



Source: Canada Facts and Figures, 2009.

**Table I: Immigration to Canada in Main Categories in 2009**

Category		Total number	% of all immigrants	% in the category
<b>Economic immigration</b>				
Canadian Experience Class	Principal applicants	1,775	0.7	1.2
	Spouses and dependants	770	0.3	0.5
Skilled workers (Points System)	Principal applicants	40,735	16.2	26.5
	Spouses and dependants	55,227	21.9	36.0
Entrepreneurs	Principal applicants	372	0.1	0.2
	Spouses and dependants	943	0.4	0.6
Self-employed	Principal applicants	179	0.1	0.1
	Spouses and dependants	358	0.1	0.2
Investors	Principal applicants	2,872	1.1	1.9
	Spouses and dependants	7,435	2.9	4.8
Provincial/territorial nominees	Principal applicants	11,801	4.7	7.7
	Spouses and dependants	18,577	7.4	12.1
Live-in caregivers	Principal applicants	6,273	2.5	4.1
	Spouses and dependants	6,181	2.5	4.0
<b>Sub-total</b>		<b>153,498</b>	<b>60.9</b>	<b>100.0</b>

<b>Family reunification</b>			
Spouses and partners	43,894	17.4	67.3
Children	3,027	1.2	4.6
Parents and grandparents	17,179	6.8	26.3
Others	1,100	0.4	1.7
<b>Sub-total</b>	<b>65,200</b>	<b>25.8</b>	<b>100.0</b>

*Table 1 cont.*

<b>Refugees</b>			
Government-assisted refugees	7,425	2.9	32.5
Privately sponsored refugees	5,036	2.0	22.0
Refugees landed in Canada	7,204	2.8	31.5
Refugee dependants	3,181	1.3	13.9
<b>Sub-total</b>	<b>22,846</b>	<b>9.0</b>	<b>100.0</b>
<b>Total</b>	<b>241,544</b>	n/a	n/a

Source: *Citizenship and Immigration Canada, Facts and Figures, 2009.*

NOTE: On April 1, 2009, Statistics Canada estimated Canada's population to be 33,988,000, which implies a 0.71 immigration rate.

There is also a variety of temporary resident programmes specifically aimed to tackle temporary labour shortages in sectors where Canadian workers are not readily available. Some temporary categories, such as the *Live in Caregiver* and highly skilled programmes are intended to allow transitions to permanent immigration through the Canadian Experience Class (CEC), while others such as the Seasonal Agricultural Worker Program have very strict regulations with a very low percentage of workers transiting to permanent residence status (Figure 2).

The immigration system is currently undergoing significant changes driven by a number of goals that include: (1) a desire to improve the economic integration outcomes of entering immigrants, given their deterioration since the 1980s; (2) an attempt to better respond to short-term regional labour market shortages often associated with commodity booms, and (3) a desire to shift immigration away from the three largest cities to other regions of the country that are seeking more economic immigrants.

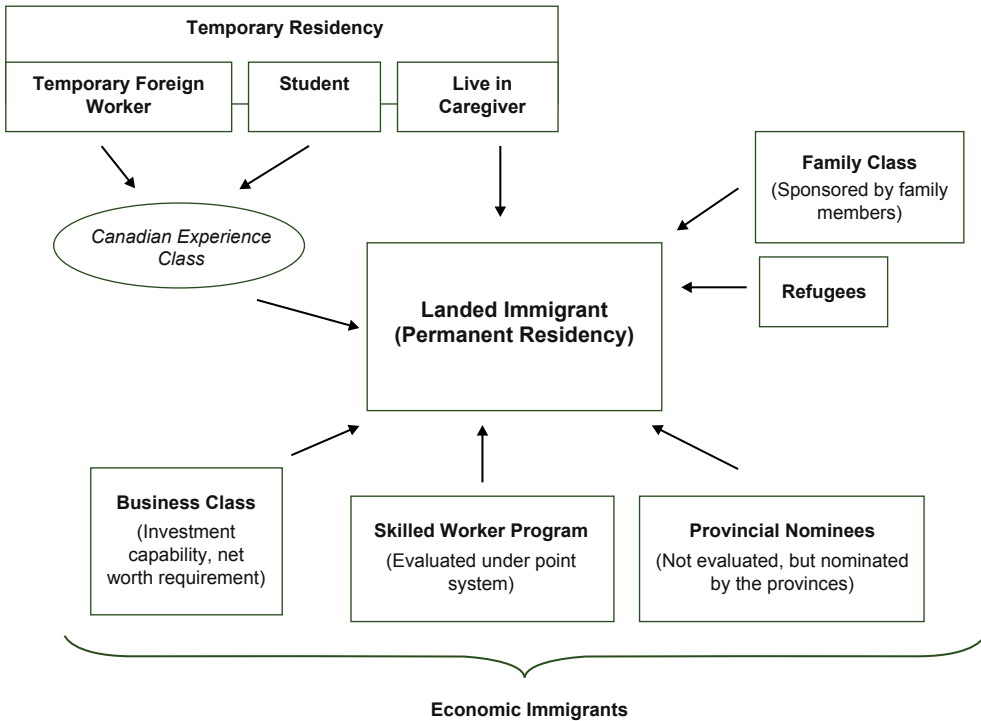
These goals are reflected in the recent implementation of a series of new immigration programmes, including the Canadian Experience Class (CEC), the Provincial Nominee Program (PNP) and the possibility to apply to permanent residency for temporary immigrants from the *Live in Caregiver* programme. These programmes:

- Increase the participation by provincial governments and employers in the selection of immigrants,
- Increase the use of temporary foreign workers,
- Expand the opportunities for certain types of temporary foreign workers to become permanent residents,
- And give the federal government more authority to control the flow of immigrants of particular types (e.g. in particular occupations).



Although it is too early to fully assess these changes in immigration policies, the results of subsequently discussed existing studies are cautiously optimistic.

**Figure 2: Channels to Permanent and Temporary Residency in Canada**



Source: Authors' elaboration.

## 2. Identification of Labour and Skill Shortages in Canada

Two methods are essentially used in Canada to identify current or future labour shortages:

- Forecasting models of occupational demand and supply of labour;
- Key informant interviews and current data on labour market shortages.

The first, and most systematic, method uses medium to long-term projections by occupation of both the demand and supply of labour. Occupational shortages and surpluses are determined by comparing the results from the demand and supply models. The most well-known of these models is the Canadian Occupational Projection System (COPS) model developed and used by Human Resources and Skills Development Canada (HRSDC), a ministry of the federal government. Other jurisdictions and organizations in Canada now conduct similar work. For instance, the Construction Sector Council (CSC) model provides an outlook for over thirty construction trades, for each of the Canadian provinces and for the Ontario regions based on a very similar methodology.

The identification of provincial shortages has been, until recently, mostly conducted through key informant interviews and analysis of current data on labour markets since the COPS model could not produce labour supply projections at the provincial level by detailed occupation.<sup>5</sup> These interviews and analysis indicated that important labour shortages existed, particularly in the province of Alberta in 2000-2010 period, associated with a commodity boom related to oil exploration and production. During the recent 2008-2009 recession concerns about shortages attenuated, but with the rise in oil prices shortages could reappear in this province.

In response to this situation, the Alberta government developed its own model to forecast labour supply and demand by occupation (Alberta Employment and Immigrations, 2009). Similar in many ways to the COPS model, it has an even greater level of occupational disaggregation. The COPS model projects supply and demand in 140 occupations, while the Alberta model employs over 500 occupations.<sup>6</sup> The British Columbia and Quebec governments have developed similar models. Other organizations such as the Conference Board of Canada<sup>7</sup> also provide estimates of future labour market shortages. Since the COPS model is the most widely used, and has the longest history, the report describe its methodology and data requirements in further detail below.

The second method used to identify labour shortages are Key Informant Interviews, combined with current data on employment and wages. This approach focuses on recurrent and recent labour imbalances, rather than the medium to longer-term outlook provided by the models mentioned above. Key informant interviews are qualitative in-depth interviews with people who have direct expert knowledge, in this case on the labour markets. They may include community leaders, employers, union representatives, public administrators or human resource specialists. Information on current labour market data will likely include analysis of the unemployment rate, changing wage rates, job vacancies and job postings. Ideally, these could be analyzed to provide signals of labour shortages and surpluses at a detailed occupational and regional level.

Unfortunately, while some of these data are available at a regional level (e.g. for the 10 provinces and 3 territories in Canada), providing such detail for very specific occupations is usually not feasible. The sample size of the Labour Force Survey, Canada's primary survey on unemployment and employment trends and wages, does not allow for such disaggregation at a regional level. Employer views regarding upcoming labour shortages are occasionally surveyed by various organizations.<sup>8</sup> However, these surveys are *ad hoc* and infrequent, with further concerns regarding their validity existing as these tools do not consider the potential labour market adjustments to the current wage.

In some countries, analysts use job vacancy surveys as means of identifying labour shortages at current wage rates. Statistics Canada ran a job vacancy survey in the 1960s and 1970s, but it was cancelled in 1978. Due to a combination of data quality concerns, and budgetary cutbacks, Statistics Canada concluded that the information

<sup>5</sup> Models of labour demand projections similar to COPS are common (for example, BC Stats, 2009). However, using only demand side projections to identify labour shortages can result in seriously biased results.

<sup>6</sup> **The COPS is based on the national occupation system (NOC).**

<sup>7</sup> The Conference Board is a not-for-profit organization specializing in economic analysis, often for large corporations.

<sup>8</sup> See for instance, Eastern Ontario Training Board (2008), Canadian Tourism Human Resource Council (2006) or Canadian Agricultural Human Research Council (2004)

on job vacancies could not be collected in a reliable manner with the available budget. The main difficulty was the proper identification of a vacancy within a firm, and its occupational characteristics. Following the cancellation of the survey, an economy-wide index of publicly listed job advertisements was created with little possibility of disaggregation by region or occupation.

Through the 1990s and 2000s, there were attempts to develop some form of a job vacancy survey. Information on job vacancies was embedded in the Workplace and Employee Survey that interviewed both firms and their workers to establish the effect of workers characteristics on firm outcomes, and the role of firm human resources practices and other policies on worker outcomes. However, the survey data provided on the vacancies was at a highly aggregated level, and hence of limited use in identifying occupational shortages at a regional level. This survey was cancelled in the early 2000s due to budget constraints and shifts in priorities.

Key Informant Interviews are also used to identify labour shortages, particularly within the context of immigration policy. HRSDC maintains a network of “regional economists” that develop ties to the local communities to assess labour shortages and surpluses. Much of the labour shortage information used in immigration policy originates in discussions of the regional economists and their provincial government counterparts. Employer groups also provide relevant input to the immigration officials, but trade unions, on the other hand, are not directly involved in these discussions. Data from key informants is combined with that produced by the COPS model to assess the status of particular occupations nationally and regionally.

In addition, HRSDC maintains a web site called “Working in Canada”<sup>9</sup> that provides information to prospective immigrants on the job opportunities in Canada, including a list of job postings and the future prospects for employment at a very detailed occupational and regional level and includes input from the COPS model.

## 2.1. The Canadian Occupational Projection System Model

The COPS model consists in fact of the following models that forecast labour demand and supply at the national level in Canada (Figure 3):<sup>10</sup>

- Forecasting labour demand
- Projections of GDP and employment by industry

The industrial scenario used in the COPS projection is developed in co-operation with the Conference Board of Canada. The employment projection by industry is derived based on the projected GDP and labour productivity by industry.

### *Projections of job openings by occupation*

Job openings data consist of the two major components in the model: expansion demand and replacement demand. Replacement demand is further disaggregated into retirements, deaths and emigration.

<sup>9</sup> [www.workingincanada.gc.ca](http://www.workingincanada.gc.ca)

<sup>10</sup> A more detailed description of the methodology can be found in HRSDC (2008) and Berube (2007).

### *Expansion demand*

Expansion demand consists of the job creation generated by economic growth. By occupation, the model considers expansion demand to be affected mainly by the evolution of industries that employ persons in particular occupations, and the effect of the structural factors on these occupation.

### *Replacement demand*

Replacement demand consists of the labour demand generated by retirements, deaths and emigration. The goal of the *retirement* model is to capture the number of jobs that will become available as a result of older workers permanently leaving the labour market. Age and gender specific retirement probabilities are estimated by using data from the Longitudinal Administrative Data Base (LAD). HRSDC attempts to include the effects of factors such as the unemployment rate, household wealth, and generational effects on the retirement probabilities. The projection of retirements is derived by multiplying the projected retirement probabilities by projected age and gender specific employment levels derived earlier in the models.

## **Forecasting labour supply**

The overall labour supply model consists of the three components: recent school leavers, recent immigrants and persons returning to the labour market.

### *a. School leavers*

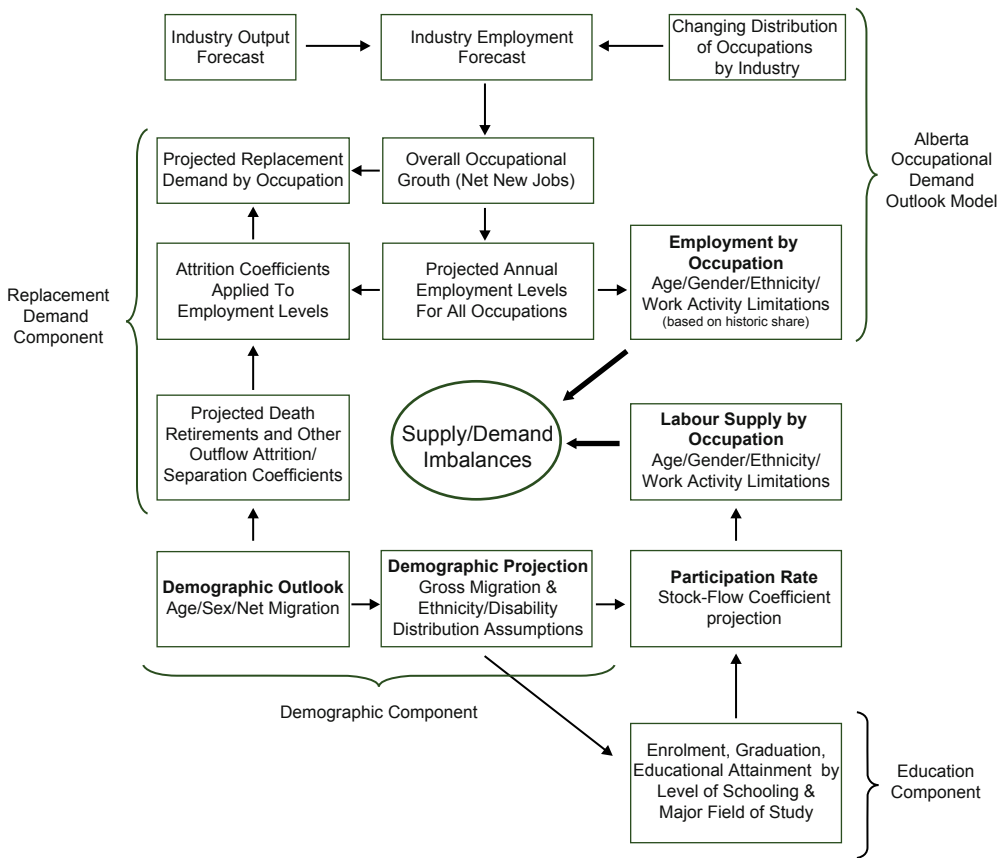
The school leavers model projects the number of people who leave the Canadian school system to enter the labour market, for each of 140 occupations. Enrolments and graduates are projected for four major educational levels: high school, trade and vocational community college, and university. Again the projections attempt to account for the effects of factors such as changing real disposable income, the unemployment rate, government funding for education and the changing source population on participation rates and enrolment levels. Of course, assumptions regarding future levels of these variables are required in order to use them in any projections (or simulation) methodology. Of course, many graduates do not work in occupations related to their field of study. Data on the experiences of graduates over the previous three years from the Graduates Follow-Up Survey are used to arrive at the supply by occupation. In an alternative scenario, it is assumed that graduates will work in occupations related to their field of study, and the implications for labour supply are determined.

### *b. Immigration and re-entrants*

Assuming that immigration will represent a fixed proportion of the Canadian population (0.75%), the total number of immigrants entering Canada is projected. Census data are used to estimate the labour force participation rate, and the occupational distribution of entering immigrants. Re-entrants to the labour force are estimated using Labour Force Survey data on the educational attainment levels of recent re-entrants, and the occupational distributions within those educational attainment levels.

By combining the projected labour supply from school leavers, immigration and labour force re-entrants, the total supply of labour is projected for 140 occupations over a ten year time horizon. The supply-demand imbalances are determined by simply comparing the projected demand scenario with the projected supply scenario. These imbalances are determined both at a broad skill level (educational level) and more detailed occupational level (140 occupations).

**Figure 3: The Canadian Occupational Projection System (COPS) Model**



Source: Authors' elaboration

The description of the forecasting models suggests that the data requirements are substantial. A number of standard surveys, such as the Labour Force Survey and the Census, as well as specialized surveys, such as the Graduate Follow-up Surveys, are required to drive the models. More specifically, the data sources employed include:

- Labour Force Survey;
- National Graduates Follow-up Survey;
- Post-Secondary Student Information System (administrative data on enrolments, graduate);

- Youth in Transition Longitudinal Survey (to track graduates that pursue higher levels of education);
- Census of Population;
- Annual Demographic Projections of Population;
- Longitudinal Administrative Data Source(LAD).

## 2.2. Limitations of Occupational Forecasts

The introduction in 2002 of the Immigrant and Refugee Protection Act (IRPA) represented an important shift in Canada's economic immigration policy. The focus of immigration policy shifted the short-term occupation shortages to longer run objectives for several reasons, including the reliability evidence providing basis for decision-making. Both occupational forecasting and its criticism have a long history in Canada, and the following are some of the more common critiques.<sup>11</sup>

A number of plausible assumptions are required in the projections. Using the results to determine whether the nation requires immigrants in a particular occupation due to labour shortages presumes an attempt to predict the future. What is needed in this case is a forecast of the shortage (or surplus) situation in the absence of an immigration response. Such forecast ideally would include the effects on the labour shortages of wage rate adjustments, changes in firms' mix of productive inputs (capital-labour substitution), advances in technology, offshoring, and so on. This is very difficult to achieve, and the plausibility and reliability of the assumptions is being questioned as a result. The COPS team argues that the model does not attempt to predict the future, but rather provides scenarios under various assumptions. Nonetheless, when the tool is used for decision-making it necessarily involves forecasting the future.

There is no straightforward and transparent method of accounting for the numerous adjustments that may take place in the labour market that will often attenuate shortage situations. In particular, it is true with regard to wage adjustments, changes in the mix of productive inputs, and the introduction of new technologies that influence the demand and supply of labour in particular occupations. It is almost impossible to foresee many changes in technology, even if the model had some way of handling them. Freeman (2006), in a paper assessing the occupational demand forecasts produced by the US Bureau of Labour Statistics (BLS),<sup>12</sup> reached a similar conclusion. He found that only one-quarter of the actual variation in employment growth by occupation was captured in the forecasts produced by the BLS, and argued that much of the projection error stemmed from unexpected technological change affecting occupational demand *within* an industry.

Freeman (2006) also noted that these models assume that the labour demand requirements will be met by domestic supply or immigration. However, labour supply is becoming increasingly global. In many occupations, notably high tech occupations in recent years, firms look to a global supply when confronted with shortage situations. They may use foreign direct investment, offshoring or subcontracting to reach out

<sup>11</sup> For a more detailed outline of the advantages and disadvantages of occupational forecasting models, see Canadian Council on Learning (2007), which reviews 36 articles on forecasting labour supply and demand

<sup>12</sup> The BLS uses a methodology that is very similar to that used by the COPS demand side model described above.

to labour supply in other countries, which clearly will affect the perceived domestic labour supply and demand imbalances.

As a result, the models may do a reasonable job projecting supply and demand imbalances for occupations that are not susceptible to rapid technological change, or shifts in consumer preferences that influence labour demand by industry. However, it is often the occupations that do in fact undergo such structural change that develop a shortage. One good example is the demand for engineers and IT workers in the late 1990s, and the subsequent IT bust in the early 2000s (see Box 1).

### **Box 1: The IT boom and bust in North America and the immigration response**

In 1996, the U.S. Bureau of Labor Statistics projected that over the next decade employment would double from 1.0 million to 2 million jobs. However, at the height of the dot.com and high-tech boom of the late 1990s, labour supply increased far more rapidly. By 1998, occupations in the high-tech sector grew by 350,000 employed persons per year, instead of 100,000 as projected by the Bureau. The supply came from persons from other disciplines shifting into the computer occupations in response to a booming job market. Given the rapid growth of employment, in 2000 the Bureau raised its projected employment to 5 million by 2010. The dot.com collapse and the off shoring of computer jobs to India and other low wage countries sharply reduced the demand for these jobs. The 2002 projection reduced the expected number a decade into the future to 4.1 million – an 18 per cent drop in projected employment compared to the 2000 projection for 2010. In 2000 the software developers had the lowest unemployment rate in the country (1.7% compared to a rate for all workers of 3.9%). By the following year, unemployment among them had tripled, exceeding the national rate (Freeman, 2006).

Similarly, Citizenship and Immigration Canada responded to the information technology (IT) boom of the late 1990s by increasing the emphasis on selecting IT professionals and engineers. Among the skilled principal applicants the points system the number of those with intended occupation listed as engineering or IT rose from about 9,000 in 1995 to 25,000 annually by 2000. In 2000, there were far more engineering graduates entering Canada through immigration (17,000) than graduating from the Canadian university system (11,400).

The unanticipated IT sector bust of 2001 disproportionately affected this group of immigrants, and the decline in immigrant entry earnings during this period was concentrated among skilled principal applicant IT and engineering workers. Male immigrants in these occupations saw their entry-level earnings fall by 37 per cent between the 2000 and the 2004 entering cohorts. Other groups registered a much smaller fall in earnings of around 11 per cent (Picott and Hou, 2009). Forecasting the run up in demand in the late 1990s would have been next to impossible, as was the bust in 2001-2005. This experience no doubt influenced Citizenship and Immigration Canada to reconsider the wisdom of trying to adjust immigrant inflows to short term occupational requirements in the labour market.

## 2.3. Labour and Skill Shortages in Canada<sup>13</sup>

Previous empirical studies concluded that there is no aggregate shortage of skills in Canada (see Gingras and Roy, 1998), but that specific labour or skill shortages were likely to occur over the next decade. Indeed, Canadian population projections anticipate the possibility of negative natural population growth by 2030, with immigration being the only source of population growth (Statistics Canada, 2010). This is due to the combination of a low (below replacement) birth rate and the expected retirement of the baby boom generation (Martel et al., 2007). Current projections forecast a significant decline of around 5 to 9 percentage points in the fraction of active labour market participants by 2030. The most serious population declines are expected to occur in the Atlantic provinces (Statistics Canada, 2010).

The retirement of the baby-boom generation will likely result in a reduction of experienced workers, unless current retiring decisions change substantially. Because of differences in the age structure across occupations and regions in Canada, this will have localized effects, leading to potential labour market and skill shortages. For instance, occupations that employ a higher fraction of older workers (such as managerial occupations) or where training is particularly long and costly (such as education and health related occupations) may face labour shortages over the next several decades (McMullin and Cooke 2004).

The recent report by HRSDC (Lapointe et al., 2006) documents the existence of current labour shortages in several occupations at the national level with employment and wages increasing substantially faster than in other occupations, and with unemployment levels that are low relative to the historical trends. Most of these occupations are in the health sector, but there are also others such as management, occupations related to the oil and gas sector, some construction trades, some computer and software engineers, and some occupations in social science and government service, such as university and college teachers. A few of these occupations are expected to fall into balance during the next decade, mainly those in the residential, construction and real estate sectors, and occupations in natural sciences.

Another potential issue that has received considerable media attention is the anticipated labour shortage for the province of Alberta. Emery (2006) studies the potential shortage of skilled labour in Alberta and concludes that the tight market experienced in the area is unlikely to generate a true shortage. The current labour market conditions in Alberta are the result of the high global demand for natural resources that has prompted large investments in the development of the oil and gas industry. Most of the apparent shortages related to this industry will likely disappear once the market has stabilized. Shortages in other occupational groups will persist, but these seem to form part of longer-term national trends.

<sup>13</sup> Although there are several studies of labour and skill shortages, as discussed in this section, there is no systematic Canadian database on labour and skill shortages.



## 3. The Role of Immigration in Alleviating Labour and Skill Shortages in Canada

The Canadian economic immigration policy moved from focusing on the short-term occupational shortages in the 1970s and 1980s to a human capital model prioritizing long-term integration and nation-building in the 1990s and early 2000s.

### 3.1 Evolution of the Points System: Embedding Information on Labour Shortages in the Immigration Policy

Integrating information on the current or future labour supply and demand imbalances with the immigration policy requires an elaboration of a formal mechanism, in the absence of which the data will be used on an ad hoc basis at best. In Canada, the respective formal mechanism is the points system based on the idea that by altering the points awarded to prospective immigrants, the immigration flows would better match the labour market needs. This approach was used during the 1970s, 1980s and much of the 1990s, and applied only to economic immigrants.

Currently, less than 20 per cent of immigrants are evaluated by the points system. However, the points system can have an influence on the characteristics of immigrants well beyond the principal applicants screened by the system. Since there is a positive correlation between the educational attainment of the principal applicant and their spouse (Sweetman and Warman, 2009), selecting highly educated immigrants through the points system will also influence the educational attainment of others in the economic class, although it may not affect the occupational distribution.

The desired policy objectives to be met by the points system have varied over the decades, and the system has undergone a considerable change. In the early years, in the belief that immigration policy could be micro-managed, points were assigned to specific occupations and were reviewed on a quarterly basis as new information on perceived vacancies became available (Green and Green, 1999). In the 1980s and early 1990s information from the COPS model, combined with that from the key informants was used to alter the points assigned to specific occupations.

However, in the late 1990s and in particular with new IRPA legislation introduced in 2002, Citizenship and Immigration Canada moved primarily to a human capital model of immigration. This model is based on the notion that highly skilled immigrants will have the ability to adjust to the changing labour market conditions, and in the long run their outcomes would be better. The COPS projections were suggesting that up to 75 per cent of future job openings would require some form of post-secondary education. Furthermore, highly educated parents tend to have highly educated children. Hence, from a nation-building perspective, the model envisaged to ensure a highly educated labour force, not just among first generation immigrants, but also among their children.

As a result of these changes the education level of immigrants rose dramatically. In the 1980s, approximately 10 per cent of all entering immigrants aged 15 and over had a university degree; by 2005 their share was 45 per cent. Fully 78 per cent of principal applicants to the points system admitted in 2000-2007 had a university degree, as did

about half of their spouses. Even in immigration categories educational attainment was moderately high: 27 per cent among family immigrants, and 13 per cent among refugees. Moreover, these data underestimate the immigrant educational attainment, since many people aged 15 and over have not completed their education. Instead for the population aged 25 to 54, in 2006 around 60 per cent of all male and 50 per cent of the all female immigrants had university degrees.

### 3.2. Why Move Away From Selecting Immigrants Based in Part on Occupational Imbalances?

There were a number of reasons for moving away from an attempt to meet labour market shortages by utilizing the points system, including the following:

- a. Considerable difficulty in obtaining reliable information on occupational imbalances, either in the short or long run, as outlined above.
- b. Challenges in selecting the number of immigrants desired in each occupation.

There was no mechanism to limit the number of immigrants entering in particular occupations. Even the number of points was increased for one occupation, and reduced for another, there was no guarantee of the corresponding shift in the occupational distribution. Many other factors, such as educational attainment, experience, and language ability could influence the selection. An internal evaluation in the mid-1990s suggested only a limited correlation between the desired number of immigrants in various occupations, and the actual number who entered.

- c. Difficulty to adequately respond to the regional or localized labour shortages.
 

Many occupational imbalances are unique to a regional labour market, but immigrants are free to settle anywhere in line with The Charter of Rights and Freedoms in Canada. During the 1990s about 75 per cent of immigrants settled in the three largest cities, Vancouver, Toronto and Montreal. This share has since fallen to about 60 per cent.
- d. Points assigned to occupation were based on the immigrant's intended occupation, which did not always correspond to the actual occupation upon entry.

There is no requirement that new arrivals work in their intended occupations. Furthermore, obtaining employment in a number of occupations, especially professional and highly skilled occupations, often requires some form of accreditation by the relevant professional association. In some cases, such as in the medicine, law and accounting professions, obtaining the necessary approval may require additional training and/or work experience in Canada, as well as passing a series of examinations. This process may take several years, and thus can represent a significant barrier to immigrants working in their intended occupation.

- e. Slow response by the immigration system to the labour market dynamics.

Even if short-term shortages could be identified, it was difficult to bring in immigrants to fill them quickly. Canada has a very long backlog of immigration applicants. It may take years for an application to be reviewed and accepted, and by then the short-

term shortage may have been resolved through internal mobility, wage adjustment, technological change, shifts in commodity prices or consumers preferences.

As a result, the immigration policy through the late 1990s and the early half of the 2000s increasingly shifted towards the human capital model of immigration, and away from the attempts to meet short-term occupational imbalances. Since the mid 2000s there has been a further rebalancing of the objectives, with an increased emphasis on meeting very short-term labour market needs. However, alternative approaches are now being used in this process of returning to greater emphasis on addressing labour and skill shortages through immigration.

### 3.3. The Recent Rebalancing of Longer Run Human Capital Objectives and Short-Term Labour Market Needs

Several policy steps have been taken since the mid 2000s to respond to the perceived need to address the short-term labour shortages. These developments were prompted in part by (1) short-term labour shortages in parts of Canada associated with the recent commodity boom before the 2008-2009 recession; (2) the perceived need by many provinces for additional immigrant labour to promote economic growth, since most previous immigrants to Canada settled in the three largest cities, and (3) a widespread belief among the general public, and the political circles, continued immigration is required for the economic and population growth and alleviating labour shortages.

Rather than turning to the points system to rebalance the policy objectives, the immigration system conceived new programmes developed in partnership, or exclusively by the provinces. Immigration is a shared federal and provincial responsibility, although the federal government has taken the lead role through most of Canada's history. However, the provinces are increasingly playing a major role. The province of Quebec for example has for many years had its own skilled worker programme, and is largely responsible for selecting its own immigrants.<sup>14</sup>

More recently other provinces are beginning to play a role in immigrant selection, primarily through the Provincial Nominee Program (PNP). This programme has two basic objectives: (1) to place more immigrants in the regions and provinces outside of the three major cities, and (2) to meet the labour needs of employers in those provinces, usually short-term labour market needs. Many immigrants entering via this program have pre-arranged jobs, and hence the short-term needs of employers are embedded in the selection process. The share of immigrants entering through the Provincial Nominee Program is increasing, while the share through the Federal Skilled Worker programme is declining.

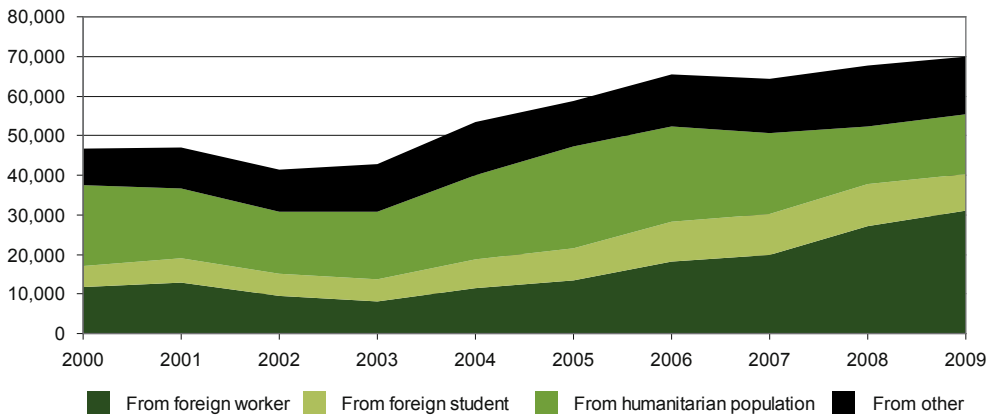
The second programme that is increasingly being used to respond to the short-term labour market needs is the Temporary Foreign Worker Program (TFWP) that is designed to meet very short-term needs, especially those in the specific regions. A list of occupations in short-term demand is developed jointly by the federal and provincial ministries of immigration and is used to guide the selection process. TFWP has been used more in the 2000s than during previous periods. The number of temporary

<sup>14</sup> Under the *Canada-Quebec Accord on Immigration*, Quebec establishes its own immigration requirements and selects immigrants who will adapt well to living in Quebec. Additional details are provided in Appendix I.

foreign workers may well increase again once the recession is over, and labour demand increases. It is fair to say that there are concerns about possible negative long-run effects of this programme related to (1) whether the workers would return to their countries of origin; (2) the possibility of worker exploitation, and (3) whether the skill distribution of immigrant workers would shift towards the lower skilled group, possibly creating future labour adjustment difficulties for these workers.

In line with the new policies facilitating immigrant integration, Citizenship and Immigration Canada (CIC) introduced in 2008 the Canadian Experience Class. This new immigrant category allows some skilled categories of the Temporary Foreign Workers (TFWs) with Canadian work experience, as well as international students who have a Canadian degree and at least one year of Canadian work experience, to apply to transfer their temporary resident status to permanent status without leaving the country. In recent years, around 30,000 applicants to permanent residency made this transition (see Figure 4).

**Figure 4: Transition of Temporary Residing Foreigners to a Permanent Residency Status**



Source: Canada Facts and Figures, 2009

The Canadian Experience Class approach is in contrast to the rationale of a points system that admits economic immigrants based on the observable characteristics to predict labour market success. The new approach gives employers and postsecondary institutions a greater role in the selection process. Employers influence the selection of immigrants by extending job offers and arranging temporary work permits, and post-secondary educational institutions influence selection by screening and admitting students (though graduates must also obtain subsequent work experience as TFWs).

Creation of this new immigrant category can thus be viewed as a tool to take advantage of the employer knowledge of the actual needs, and that of educational institutions with regard to selecting the best students. The new programme also has a language requirement that is structured differently from that for the Federal Skilled Worker programme as 1) it assesses English or French, as opposed to English and French, and 2) it is a matter of pass/fail and is not combined with other factors in the assessment. In other words, an applicant with high educational attainment but poor language proficiency in English or French could gain admission under the points system because

education receives a substantial number of points, but would nonetheless have great integration difficulties.

The third approach designed to increase the focus on occupational shortages was the implementation of the Ministerial Instructions legislation in 2008 at the federal level. This legislation allows the Minister of Citizenship and Immigration Canada (and the respective department) to set specific controls on the number of immigrants entering in particular occupations. It also allows for the implementation of a set of restrictions on applications, based on occupation. Since 2008, a prospective immigrant (principal applicant) in the Federal Skilled Worker program had to be in one of 36 occupations to be eligible to apply for admission. In June of 2010 this was reduced to 29 occupations. The approach used by Citizenship and Immigration Canada to arrive at this list of occupations is not transparent, and does not allow for a clear explanation on the rationale for retaining or dropping certain occupations.

Furthermore, in June 2010 a cap of 20,000 applications from the Federal Skilled Program was imposed for the next 12 months. Within this cap, a maximum of 1,000 applications per each of the eligible occupations will be considered. These limits do not apply to applications with an offer of employment. This occupational filter was designed in part to focus immigrants on a particular set of occupations deemed to be in demand, but also to reduce the number of applications and thus decrease the substantial backlog.

In general, pre-arranged employment is increasingly applied to immigration. While a small number of points are available for pre-arranged employment in the points system, relatively few immigrants enter on this basis. Rather, the new provincial programs, particularly the PNP are using pre-arranged employment in many cases to address short-term labour shortages as perceived by the employer. Issues for monitoring relate to the possibility that employers may select immigrants to pay lower wages than to the domestic workers, and possible fraud associated with the identification of jobs that do not exist in reality.

## **4. Migration and Labour Market Analysis in Relation to Public Policy**

The recent changes in the Canadian immigration policy were informed by research findings documenting and analyzing a deterioration of the economic situation of immigrants in Canada in the recent decades. These studies suggested that the previous policy aiming to address short-term labour market shortages could not anticipate changes in market conditions that would create difficulties for immigrant integration. These results inspired new policy directions such as the Canadian Experience Class, the Provincial Nominee Programs and the Temporary Foreign Worker Program.

Following Chiswick (1978) and Borjas (1985), a large literature has developed that explores how human capital characteristics at entry affect immigrants' subsequent labour market success. In Canada, research on the economic integration of immigrants has focused mainly on the deterioration of earnings with only a few studies addressing other labour market outcomes.

Since the 1970s, the economic outcomes of immigrants - relative to the native-born – have been deteriorating progressively.<sup>15</sup> This decline is evident not only in increasing earnings gaps between recent immigrants and the native born, but also in increasing unemployment rates relative to those of the Canadian born.<sup>16</sup> When *male* immigrants are compared to the Canadian-born with similar characteristics (i.e. education, age, marital status, and so on), the cohort entering during the late 1970s had annual earnings at the level of roughly 85 per cent of that of their Canadian born counterparts during the first five years in Canada. After 11 to 15 years in Canada, this cohort earned around 92 per cent of the wages of the comparable Canadian-born. Among the early 1990s entering *male* cohort, entry earnings fell respectively to about 60 per cent during the first five years in Canada, rising to only about 78 per cent after 11 to 15 years in Canada. There was some improvement for the cohort entering in the late 1990s, followed by further deterioration in the early 2000s. While there is some indication that the growth rate of earnings immediately post-immigration has increased among more recent entering cohorts, they may not catch up with their Canadian-born counterparts during their working lifetime.

Among men, the unemployment rate among immigrants entering during the late 1970s was lower during their first five years in Canada than the rate among the Canadian born (Table 2), rising for the successive cohorts of entering immigrants. Among migrants entering in the early 2000s there were 1.6 times more unemployed than among the Canadian born. Among women this deterioration was more significant. During the first five years in Canada, the unemployment rate of women entering during the late 1970s was 1.2 times that of the Canadian-born, and 2.6 times among the early 2000s cohort.

**Table 2: Unemployment rates by entering cohort and years in Canada. Immigrants aged 25-64 (1980-2005)**

Cohort	Unemployment rates					cohort	Relative to the Canadian born				
	Years in Canada						Years in Canada				
	≤5	6-10	11-15	16-20	<20		≤5	6-10	11-15	16-20	<20
<b>Women</b>											
1976-80	0.083	0.104	0.098	0.086	0.046	1976-80	1.15	1.05	1.10	1.08	0.82
1981-85	0.138	0.126	0.103	0.061	0.044	1981-85	1.40	1.40	1.30	1.08	0.90
1986-90	0.168	0.133	0.070	0.058		1986-90	1.87	1.68	1.24	1.17	
1991-95	0.188	0.087	0.071			1991-95	2.37	1.54	1.45		
1996-2000	0.136	0.082				1996-2000	2.42	1.66			
2001-2005	0.129					2001-2005	2.62				
<b>Men</b>											
1976-80	0.043	0.070	0.081	0.071	0.043	1976-80	0.84	0.85	0.92	0.82	0.67
1981-85	0.104	0.101	0.083	0.049	0.039	1981-85	1.27	1.14	0.96	0.77	0.75
1986-90	0.153	0.104	0.057	0.046		1986-90	1.73	1.20	0.89	0.88	
1991-95	0.145	0.068	0.049			1991-95	1.68	1.06	0.95		
1996-2000	0.099	0.055				1996-2000	1.55	1.05			
2001-2005	0.084					2001-2005	1.60				

Source: Picot and Sweetman, 2011.

<sup>15</sup> Hum and Simpson (2003), Bloom, Grenier, and Gunderson (1995), Abbott and Beach (1993), Baker and Benjamin (1994).

<sup>16</sup> Measuring the unemployment rate relative to the native born, rather than the unemployment rate itself, is more useful since it implicitly controls for business cycle fluctuations by using the native-born unemployment rate as the benchmark. It also controls for any policy changes that may influence unemployment in the same way.

Outcomes measured by the the employment rate demonstrate less of a decline. Among men, the relative employment rate to the Canadian-born fell between the late 1970s entering cohort and the early 1990s cohort, from 1.0 to 0.9, but since then it has recovered to almost 1.0 (Table 3). Employment rates among women in the early 2000s immigrant cohort during their first five years in Canada were only 0.8 times that of the rate among the Canadian-born women, representing a decline from a relative employment rate of 1.03 among the late 1970s entering cohort.

**Table 3. Employment rates by entering cohort and years in Canada. Immigrants aged 25-64 (1980-2005)**

Unemployment rates						Relative to the Canadian born					
Cohort	Years in Canada					cohort	Years in Canada				
	≤5	6-10	11-15	16-20	<20		≤5	6-10	11-15	16-20	<20
<b>Women</b>											
1976-80	0.569	0.638	0.698	0.700	0.660	1976-80	1.09	1.11	1.08	1.05	0.94
1981-85	0.551	0.640	0.656	0.725	0.674	1981-85	0.96	0.99	0.98	1.03	0.93
1986-90	0.568	0.603	0.700	0.729		1986-90	0.88	0.90	0.99	1.01	
1991-95	0.488	0.635	0.691			1991-95	0.73	0.90	0.95		
1996-2000	0.544	0.658				1996-2000	0.77	0.91			
2001-2005	0.574					2001-2005	0.79				
<b>Men</b>											
1976-80	0.886	0.877	0.864	0.833	0.806	1976-80	1.03	1.06	1.06	1.05	0.99
1981-85	0.803	0.832	0.818	0.855	0.805	1981-85	0.97	1.02	1.03	1.05	0.99
1986-90	0.740	0.781	0.844	0.858		1986-90	0.91	0.98	1.04	1.05	
1991-95	0.688	0.809	0.841			1991-95	0.87	1.00	1.03		
1996-2000	0.756	0.839				1996-2000	0.93	1.03			
2001-2005	0.795					2001-2005	0.97				

Source: Picot and Sweetman, 2011.

The deterioration in immigrant outcomes extends beyond low earnings and higher relative unemployment rates. Despite the high fraction of university graduates among recent immigrants to Canada (twice as high as that of Canadian-born in 2006), recent immigrants to Canada are 2.5 times more likely than Canadian-born to work in low-skilled jobs (such as truck drivers, sales clerks and taxi drivers). This situation is not temporary, as immigrants residing for eleven to fifteen years in Canada were still twice as likely than the Canadian-born workers to be in low-skilled occupations (Galarneau and Morissette, 2008). Furthermore, there has been a concurrent increase in poverty rates among immigrants. In 1980 the percentage of immigrants and the Canadian-born with annual incomes below Canada's Low-Income Cut-off (LICO) were comparable.<sup>17</sup> Abstracting from the short-term fluctuations associated with the business cycle, it is clear that the trends for the Canadian born and immigrants are developing in opposite directions, with poverty rising among immigrants, and falling among the Canadian born. These poverty trends are driven primarily by changes in annual labour market earnings among immigrants and the Canadian born (Picot, Hou and Coulombe, 2009; Picot, Lu and Hou, 2009).

<sup>17</sup> The LICO is similar to what is often referred to as a "poverty line."

A number of recent studies have focused on the reasons for the rise in the earnings gap between recent immigrant cohorts and the Canadian born (Picot and Hou, 2009; Ferrer and Riddell 2008; Ferrer, Green and Riddell 2006; Aydemir and Skuterud 2005; Sweetman 2004; Green and Worswick 2002, 2010; Schaafsma and Sweetman 2001). These studies point to the changing source regions of entering immigrants, declining returns to foreign labour market experience, a general deterioration in the outcomes for new labour market entrants, education quality, language skills and sectoral economic downturns as potential explanations for the poor results of immigrants.<sup>18</sup> In particular, the first three abovementioned factors could account for virtually all of the increase in the entry wage gap during the 1980s and early 1990s. In addition, immigrants that enter at young ages tend to perform better (possibly reflecting the acquisition of Canadian schooling and the lack of unrewarded foreign experience).

The integration challenges of immigrants that arrived in the past three to four decades suggested that the previous immigration system may not have considered all relevant factors. The selection mechanism was designed to address shortages in specific trades and occupations. For a variety of reasons, including the shift in source regions and the timing of major recessions, immigrants encountered unanticipated barriers in finding jobs in these trades and professions, which in turn impeded economic integration.

The findings of the Canadian research resulted in changes to immigration policy aimed to improve integration outcomes. During the early 1990s the points system was altered to raise the share of immigrants with higher education, and the share of economic immigration was increased compared to that of family reunification. The research findings were also important in the design of the IRPA selection grid in the early 2000s, with its focus the applicant's ability to change jobs as the labour market shifts. Labour market research was also instrumental in the development of the CEC, as a way of selecting immigrants that would not face issues related to the recognition of credentials and foreign experience.

Interestingly, much of the current discussion, and many government programmes address the issue of academic credential recognition among new immigrants. However, the empirical data suggests that there has been only a modest change in the rate of return to foreign credentials in Canada (see Ferrer and Riddell, 2008). In general, immigrants do receive a somewhat lower rate of return to pre-immigration education, but this has always been the case and is not a significant source of the *decline* in labour market outcomes. Furthermore, credential recognition issues are usually associated with professional occupations such as medicine, accounting, engineering and so on, which account for a relatively small share of all immigrants to Canada. Even if challenges of recognition of credentials disappeared, concerns of low earnings among immigrants would remain. Nevertheless, credential recognition is a real issue for particular groups of immigrants, and may be an appropriate policy lever to pull to improve their integration outcomes.

Perhaps most importantly, language skills appear to mediate the rate of return to formal education. Immigrants with good language skills in English or French can much more easily convert their education to earnings than those with poor skills. Recent work by Bonikowska, Green and Riddell (2008) has shown that the rate of return to literacy and

<sup>18</sup> See Picot and Sweetman 2005, Reitz, 2007 and Picot 2008 for a full review of the decline and its causes



numeracy skills as assessed in English and French is very similar for immigrants and the Canadian-born. Furthermore, when literacy and numeracy skills in English or French are accounted for, immigrants have similar earnings to their comparable Canadian-born counterparts. Literacy and numeracy skills (which are assessed in English or French, Canada's two official languages) are themselves dependent on English/French language proficiency, and explain a considerable portion of the immigrant-native born earnings gap. Overall, language skills appear to have a significant direct and indirect influence on the labour market outcomes.

Given this body of research, key policy changes have been carried through to improve labour market outcomes of new immigrants, including changes to the immigrant selection rules, the strengthening of language tests, the introduction of new immigration programmes, and beefing up immigrant settlement programmes. These programmes are still in their infancy, but initial evaluation of these changes is under way. The following section describes the preliminary findings of these evaluations.

## 5. Evaluation of Immigration Policies

Assessing specific immigration policies requires comparing immigrant outcomes under the policy regime being assessed to outcomes under one or more alternative policy regimes. The most common choices of alternative policy regimes are those that have operated at different times in the same country or at the same time in different countries. A key challenge of this approach is to account not only for the policy regime under which immigrants were selected, but also on numerous other factors such as the economic and labour market conditions at the time of arrival. One can observe the integration of immigrants entered Canada under the previous policy regimes, but these immigrant cohorts also faced different labour market as well as different economic and social conditions than those entering at a later stage. The extent of the impact of each factor is hard to determine.

Two recent studies discussed below evaluate aspects of the performance of the Canadian selection system for skilled immigrants (the points system) during the past several decades. Furthermore, the summary is provided on the ongoing research to assess the recent innovations in Canada's immigration policy – including the PNP, CEC, and TFWP.

### 5.1. Assessment of the Point System

Beach, Green, and Worswick (2008, 2009) analyse the impacts of immigration “policy levers” on immigrants’ human capital characteristics (years of schooling, age at arrival, and language proficiency). Their analysis uses entry data on all adult immigrants arriving in Canada in 1980-2001. The policy levers are the overall level of immigration flows, the percent of the total that is admitted under the economic class, and the points assigned for specific attributes (education, age and language). The authors then draw on the earlier research by Green and Worswick (2002) as well as some other studies to relate immigrant earnings to immigrants’ human capital characteristics. Combining these two components gives approximate relationships between immigration policy levers and immigrant outcomes.

During these two decades there was considerable variation in the policy levers under consideration. The authors conclude that variations in these policy levers – especially the increased emphasis on the economic category and increased points assigned to education – do influence the characteristics of immigrants and result in improved immigrant outcomes.

The introduction of IRPA in 2002 provides a unique opportunity to make a direct comparison between the two alternative policy regimes. This is feasible as due to the backlog in the admission process, immigrants admitted under the pre-IRPA regime continued to arrive in Canada after 2002. Thus, in 2002-2006 immigrants selected under both regimes arrived in Canada. Begin, Goyette and Riddell (2010) utilize this unique opportunity to study the impacts of the IRPA policy change on immigrant employment and earnings over this period. By comparing pre-IRPA and IRPA cohorts that arrived in the same year, they control for two key determinants of immigrant outcomes – economic, social and labour market conditions at the time of and subsequent to and years since arrival in Canada.

Begin, Goyette and Riddell use income tax data merged with information from the immigrants' applications and entry records. The results show that employment earnings increase steadily for the same cohort with the length of time spent in the country. The selection regime significantly affects the earnings of immigrants admitted under the points system. Those admitted under the IRPA points system do better than their pre-IRPA counterparts for every cohort and taxation year considered. New immigrants arrivals admitted under the IRPA selection regime earn between 21 and 46 per cent more (depending on the cohort and taxation year) than their counterparts admitted under the pre-IRPA selection system.

The study also looks at the factors that account for successful integration into the Canadian labour market. Once other factors are accounted for (province of residence, origin and intended occupation skill type) regression analysis shows that the most relevant factors for economic success of immigrants are, by order of importance, arranged employment, language and work experience in Canada prior to migration. Among other factors from the selection grid, age, education, work experience and partner's education also have a positive effect on employment earnings, while having received points for relatives in Canada affects earnings negatively.

## 5.2. Assessment of the Provincial Nominee Program

The Provincial Nominee Program (PNP) is relatively new (although it has been operating in the province of Manitoba for more than a decade) and therefore evaluation of its progress is premature. However, Townsend and Pandey (2010) have conducted a preliminary exploration on the success of the programme in attracting and retaining successful immigrants to smaller centres in Canada. In particular, they compare the earnings of immigrants that were admitted under the PNP with those admitted under the federal programme and conclude that Provincial Nominees have, in general, higher earnings. However, it does not seem that the programme has been successful in retaining immigrants in the nominating provinces.

Regression results confirm that Provincial Nominees earn, one year after arrival, between 69 and 98 per cent more than observationally equivalent immigrants admitted

under the Federal Skilled Worker program. The largest advantages are for lower levels of education in Manitoba and for university educated immigrants in other regions. Female Provincial Nominees also do better than their counterparts in the federal economic immigration category. Regarding retention rates, British Columbia had the highest retention rates one and two years after arrival (87% to 97%) and the Atlantic Provinces respectively the lowest (64% to 73%).

### 5.3. Assessment of the Temporary Foreign Worker Program

While economic immigrants are selected by the government through broad policies designed to target both economic and social goals, the Temporary Foreign Worker Program (TFWP) is driven by employers who are likely better placed to assess the transferability of the worker's skills to the Canadian labour market. Hence, one might expect TFWs not to encounter the same difficulty in securing returns to their foreign human capital.

Employers may hire TFWs after obtaining a Labour Market Opinion from the HRSDC, which assesses whether there are Canadian workers available to fill that job as well as checking that all administrative procedures have been followed. Foreign workers who want to work in Canada must first obtain a job offer from a Canadian employer, then apply to CIC for a permit to work temporarily in Canada. Applicants must include a copy of the HRSDC letter confirming that their employer received a positive Labour Market Opinion. They must demonstrate to a visa officer in one of Canada's offices abroad that they meet all applicable requirements under the IRPA including leaving Canada voluntarily at the end of their authorized stay.<sup>19</sup>

Temporary foreign workers have the same rights under the Charter of Rights and Freedoms and federal and provincial employment standards legislation as the Canadian workers.<sup>20</sup> However, their rights are restricted by the terms of their entry into Canada. For example, they do not have the right to search for an alternative job or to change employers without obtaining another work visa. In order to increase protection to TFW, new regulations have been put in place. Employers seeking to hire these workers, including live-in caregivers, are assessed against past compliance with the programme requirements. Before authorization can be granted and those found to have violated worker rights may be refused authorization to hire a foreign worker and denied access to the programme for two years. Offending employers' names would also be published on the CIC website to inform other temporary foreign workers already in Canada. For live-in caregivers, CIC provides clear guidelines in its website to determine abuse and the steps to be followed in that situation, including a list of live-in support networks.

A four-year cumulative limit is imposed on many temporary foreign workers' employment in Canada, and they are subsequently eligible for another term of

<sup>19</sup> Within the TFW, the *Live-in Caregiver Program* is a unique channel enabling the entry of qualified caregivers into Canada. Live-in caregivers must be qualified to provide care for children, sick or elderly people, or persons with a disability. Successful candidates are granted temporary resident status and a work permit and after two years are eligible to apply for permanent resident status.

<sup>20</sup> Employment standards legislation such as minimum wages and regulations relating to hours of work falls mainly under provincial jurisdiction in Canada. About 90 per cent of the labour force is covered by provincial laws, with the remaining 10 per cent being covered by federal legislation.

temporary employment in Canada after a pause of four years. This limitation does not affect eligibility for permanent residence; if they qualify, immigrants may still apply for a change of status at any time, while they are legally in Canada or after they leave.

Research on the TFWP is very limited. Warman (2009) finds some evidence that the immigrants in question not only receive larger returns to their foreign schooling, but also receive large positive returns to their foreign experience compared to the low returns experienced by other similarly skilled economic immigrants. This suggests that TFWP may enhance the ability of foreign-born workers to obtain recognition for their foreign acquired human capital in the Canadian labour market. Sweetman and Warman (2009) also find that TFWs initially have better earnings and employment outcomes than immigrants without previous Canadian human capital. However, this advantage seems to disappear four years after entry.

#### 5.4. Assessment of the Canadian Experience Class program

Since September 2008, the Canadian Experience Class program (CEC) allows some skilled categories of TFWs with Canadian work experience and international students who have a Canadian degree and Canadian work experience can apply to transfer their temporary resident status to permanent status without leaving the country.

Sweetman and Warman (2009) compare the outcomes of TFWs and former international students who became permanent residents to those of immigrants that became permanent residents without the previous Canadian human capital at the time of entry.<sup>21</sup> The findings suggest that even after controlling for differences in educational attainment and other demographic characteristics, four years after entry male TFWs experience a 61 percent advantage in earnings over other immigrants who were assessed under the points system, but who do not Canadian degree or work experience obtained prior to obtaining a permanent residency permit.

## 6. Conclusions

Since the 1970s, Canada's attempts to meet perceived labour needs in specific occupations have resulted in mixed success at best, prompting analysts to inquire on the parameters of effective implementation of such policies. The Canadian experience suggests that there are no definitive answers to these questions. Since immigration policy in Canada has multiple objectives, there are trade-offs to be considered in the implementation of any single approach to immigrant selection.

The idea of using immigration policy to alleviate labour supply and demand bottlenecks has a strong appeal. Employers often view such a policy as a common sense solution to their hiring problems. Politicians perceive this pathway as an opportunity to increase economic activity, while simultaneously responding to constituents demands. At the same time, many economists view an immigration response to perceived labour shortages with some scepticism.

<sup>21</sup> In this study TFWs and students had to apply outside of Canada compared to the new Canadian Experience Class that allows this group to apply within Canada. It is unlikely that this will have an important effect on results.

In this context, and based on Canada's experience to date, several conclusions can be drawn:

1. Attempting to use a national immigration policy to respond to perceived labour shortages in specific occupations, either short-term or longer term is fraught with difficulties. Due to these challenges, Canada in general moved away from attempting to use immigration to micro-manage occupational shortages. The reasons for this include the difficulty in:
  - accurately identifying the shortage;
  - accurately predicting business cycle effects or adjustments in wages, firms' input mix, technology, process innovation, or labour sources that will influence the shortage;
  - developing an immigrant selection mechanism that will succeed in selecting the immigrants desired;
  - altering immigrant flows quickly in order to respond to the shortage in a timely manner;
  - getting the immigrants to the region experiencing the shortage, and
  - ensuring that the credentials of the immigrants will be accepted in the host country labour market.
2. Increased use of employer input in the selection process can have a positive effect. Economic outcomes among immigrants with pre-arranged employment tend to be superior, at least in the short run. Employers possess knowledge of the short-term labour market demands that is difficult to acquire in a centralized manner. Only recently has Canada seriously given employers a significant role in immigrant selection, and this has been largely through the provincial, not national programmes.

However, there are several issues regarding employer selection that should be considered and addressed through policy checks and balances. Employers may look to hire low-wage labour through immigration rather than engaging available domestic workers. Furthermore, longer-run economic goals regarding immigration policy may not be met through employer selection, as employers often have a very short-run perspective. For example, if the goal is to maintain a high education level among immigrants to achieve longer-run goals, as Canada has done for some time, a mechanism would be required to ensure that employer-based selection was compatible with this or other goals.

Embedding employer selection within some form of a points system would be one way to achieve this goal. Currently the two methods of selecting economic immigrants – employer selection primarily through PNP, and points system of the FSW – operate in parallel and independently of one another. Linking these two processes by having basic human capital requirements in the PNP employer-based programs, or by assigning substantially more points to pre-arranged employment in the FSW points system could be beneficial.

3. Although selecting immigrants to meet particular needs in specific occupations is very difficult, information regarding the skills required in an economy defined at a much broader level may be useful. Increasing immigrants educational attainment or experience only is likely to be insufficient to meet labour market goals. In Canada, the relatively poor economic outcomes of immigrants persisted, even though their educational attainment grew. Additional measures are needed to ensure that barriers to the use of the human capital in the economy are overcome. Such tools may be imbedded either in the selection process (such as language tests, selection based on the quality of the education received, recognition of credentials before immigration, and so on) or by the integration support programmes (such as language instruction, adaptation to the Canadian work culture).
4. There are numerous advantages to employing an immigration policy in Canada that seeks to meet future labour market needs by focusing on highly skilled immigrants (from trades to university graduates), particularly among economic immigrants.
  - Forecasts suggest that most jobs in Canada in the future will require post-secondary education, either university or college/skilled trades.
  - More highly educated immigrants tend to have better economic outcomes than the less educated, particularly in the longer run.
  - The relative wages of the university educated have been rising in Canada over the past two decades at least, suggesting continued rising relative demand for highly educated labour (Boudarbat, Lemieux and Riddell, 2010).
  - Higher levels of education among immigrants contributes to higher educational attainment among their children.
  - Since the highly educated generally have higher earnings, particularly in the longer run, they are more likely to produce a net fiscal contribution rather than a net fiscal deficit in the host country over the course of their lifetime.
  - As noted above, however, other programmes may be needed to ensure that potential barriers to the successful conversion of human capital to employment and earnings in the host country are adequately tackled
5. Ideally the labour market goals of immigration policy, such as responding to longer run labour shortages, would be pursued in conjunction with education policy. If future labour demand is concentrated among the more highly educated and skilled, as projections are suggesting, then adjusting education policy to provide more highly educated graduates, and increase the educational attainment of currently disadvantaged groups would seem reasonable.
6. In order to respond to either short or longer-term labour market needs, a country must have means of managing immigrant flows to achieve such goals. Until recently Canada has relied on economic immigration and the respective points system in this regard. More recently Canada's system is relying somewhat more on employer-based selection and input from sub-national jurisdictions in the selection of economic immigrants. Many Member States of the European Union,

particularly among those that acceded in 2004 and 2007, have comparatively only a limited number of economic immigrants, and no means of managing the characteristics of the immigrant flows. Overall, the points system has likely served Canada well. Changes to the system in the early 2000s did improve integration outcomes of entering Federal Skilled Workers significantly.

7. While the Temporary Foreign Workers Program (TFWP) has been in place for some time in Canada, its use in meeting perceived short-term labour shortages in particular occupations has increased considerably during the past decade. TFWP in fact ranges across many programmes from low-skilled seasonal workers, workers filling perceived shortages in unskilled or semi-skilled occupations, and live-in care providers, to very highly skilled immigrants. The recent increase in programme size has prompted many policy analysts to consider its effect on the economy and labour market, including issues of impact on employment and wages, potential for abuse and poor working conditions, and the return of workers to their home country. Despite some initial assessments on various components of TFWP, no research currently exists to address these questions for all categories of temporary workers.

## Annexes

### Annex 1. Canada's Economic Immigration Programmes

#### *Federal Skilled Worker Program (FSWP)*

The current selection system for skilled workers was introduced with the implementation of the *Immigration and Refugee Protection Act (IRPA)* on 28 June 2002. The selection system was changed to respond to the dynamic labour market in the knowledge-based global economy. The programme amendments reflected the need to:

- improve the economic success rate of skilled worker immigrants;
- maintain the quantity of skilled worker immigrants; and
- improve the transparency of the selection process.

The FSWP introduced with IRPA was based on a human capital model, without consideration of occupation. The new skilled workers selection criteria were based on research and consultations which demonstrated that factors such as level of education, language ability, work experience, age, arranged employment and adaptability are important to successful economic integration in Canada.

The changes stemmed from the acknowledged need for quality and quantity of immigrants, and from the need to enhance the transparency of the decision making process for selecting immigrants. The new selection factors (education, language, age, and job experience) are intended to result in more objective selection decisions. Another important aspect of the system under the IRPA is that it facilitates management of the processing of applications, which reduces processing times. Reducing the time spent on the discretionary elements of each application was expected to reduce the number of skilled worker cases awaiting process.

With the implementation of IRPA, a new selection grid was introduced. Some factors of the old grid were abandoned; some were given more relative importance, while others remained the same.

### *Pre-IRPA*

The pre-IRPA grid contained the following 10 different factors: education, official languages, specific vocational preparation, occupation, work experience, age, arranged employment/designated occupation factor, demographic factor, personal suitability and presence of relatives in Canada. To meet the point requirement, an applicant needed to obtain 70 points of the possible 112 points.

1. Education, (maximum 16 points). Points for education were distributed in the following way:
  - 16 points: completed a second or third level university degree;
  - 15 points: completed a university degree in a program that requires at least three years of full time study;
  - 13 points: completed a post-secondary program which required, as a condition of admission, secondary schooling at a level that allows for entrance to a university;
  - 10 points: completed a post-secondary programme which required, as a condition of admission, secondary schooling at a level that does not ordinarily allow for entrance to a university OR completed secondary school and the programme includes trade or occupational certification OR completed secondary school and the programme provides for entrance to university;
  - 5 points: completed secondary school, but the programme does not allow for entrance to a university and does not include trade or occupational certification.
2. Knowledge of official languages (maximum 15 points, up to 9 points given to the first official language and up to 6 points to the French (second official language).
3. Specific vocational preparation (SVP) (maximum 18 points). Applicants whose occupation appeared on the occupation list obtained points depending on the points assigned by CIC to specific occupations. Applicants whose occupation was not included on the list, but received points on the arranged employment factor, could also obtain some points on the SVP factor.
4. Occupation (maximum 10 points). Depending on whether the applicant's occupation appears on the occupation list and on the points listed for this occupation. Also, if the applicant had an arranged employment or a designated occupation with a SVP of 11 or more, the applicant would obtain their full points for this factor.
5. Work experience (maximum of 8 points). The points for this factor are determined by looking at the years of experience in a given occupation and the points earned through the SVP factor.



6. Age (maximum 10 points). Ten points are awarded to applicants aged between 21 and 44 years. Two points are subtracted for each year over 44 or below 21.
7. Arranged employment or a designated occupation (maximum 10 points).
8. Demographic factor gave 8 points to all pre-IRPA applicants.
9. Personal suitability was assessed by a visa officer, who could award up to 10 points for that factor.
10. Relative in Canada (maximum 5 points). Having a close relative in Canada - a brother, sister, mother, father, grandparent, aunt, uncle, niece, or nephew - who is either a permanent resident or a Canadian citizen.

### IRPA

The IRPA changed the emphasis previously placed on the *intended occupation* of economic immigrants to focus on general skills that will facilitate integration and adaptability in a dynamic labour market. When IRPA was introduced, applicants required 75 points out of a possible 100 points to meet the pass mark. Later, the pass mark was lowered to 67 points.

1. Education (maximum 25 points). The point breakdown is as follows:
  - 25 points: completed a Master's Degree or Ph.D. AND at least 17 years of full-time or full-time equivalent education.
  - 22 points: completed two or more university degrees at the bachelor's level AND at least 15 years of full-time or full-time equivalent education OR completed a three-year diploma, trade certificate or apprenticeship AND at least 15 years of full-time or full-time equivalent education.
  - 20 points: completed a two-year university degree at the bachelor's level AND at least 14 years of full-time or full-time equivalent education OR completed a two-year diploma, trade certificate or apprenticeship AND at least 14 years of full-time or full-time equivalent education.
  - 15 points: completed a one-year university degree at the bachelor's level AND at least 13 years of full-time or full-time equivalent education OR completed a one-year diploma, trade certificate or apprenticeship AND at least 13 years of full-time or full-time equivalent education.
  - 12 points: completed a one-year diploma, trade certificate or apprenticeship AND at least 12 years of full-time or full-time equivalent education.
  - 5 points: completed high school.
2. Knowledge of official languages (maximum 24 points). Up to 16 points for the first official language and 8 for the second. The assessment refers to four types of language ability. Up to four points were granted per type of ability for the first official language and 2 for the second official language. To obtain the points for this criterion, applicants must submit either written evidence demonstrating their language ability in Canada's official languages or provide language test results from an approved organization or institution. Testing organizations are

approved if they meet several factors: validity, reliability, integrity/security and availability.

3. Experience (maximum 21 points). Having one year of experience is mandatory and gives the applicant 15 points. For each additional year of experience (up to four), the applicant gets 2 more points.
4. Age (maximum 10 points). The number of points awarded by age remained the same under IRPA. However, the range for which an applicant could obtain full points was increased to 49 years old. Therefore, 10 points were awarded to applicants aged between 21 and 49 years old. Two points were deducted for each year above or below the age range.
5. Arranged employment or a designated occupation (maximum 10 points)
6. Adaptability (maximum 10 points). Adaptability is composed of five different dimensions, each allowing the applicant to earn 2 points. An applicant could receive points for their spouse or common-law partner's education, having worked in Canada for a minimum of one year full-time, a minimum of two years full-time authorized post-secondary study in Canada, having received points under the arranged employment in Canada factor and having family relationships in Canada.

The Points System for both regimes is summarized in Table 5.

Under the *Canada-Quebec Accord on Immigration*, Quebec establishes its own immigration requirements and selects immigrants who will adapt well to living in Quebec. Immigrants wishing enter Quebec as skilled workers must first follow a separate selection process before their application is finalised by Citizenship and Immigration Canada.

**Table 5: Selection factors for the pre-IRPA and IRPA points systems**

Criteria	Pre-IRPA points (%)	IRPA points
Education	16 (14)	25
Official Languages	15 (13)	24
Experience	8 (7)	21
Specific vocational preparation	18 (16)	
Age	10 (9)	10
Arranged Employment	10 (9)	10
Personal Suitability	10 (9)	
Adaptability		10
Relative in Canada	5 (4)	Under adaptability (5)
Occupation	10 (9)	
Demographic Factor	10 (9)	
Total	112	100
Pass Mark	70	75/67

Source: *Begin, Goyette and Riddell (2010)*

### *PROVINCIAL NOMINEE PROGRAM (PNP)*

To increase the dispersion of immigrants throughout Canada, *Citizenship and Immigration Canada* introduced the Provincial Nominee programme in 1990. The programme is based on shared jurisdiction between the Federal and the provincial government and allows provinces to recruit and nominate potential immigrants using selection criteria according to locally defined needs. PNP applicants with job skills matching the needs of the province, benefit from faster processing of permanent residence applications.

The selection criteria used by PNPs differs significantly from those used by the federal programme, allowing provinces to recruit immigrants in semi-skilled occupations who would not otherwise have been eligible for immigration under the FSW. As the programs are intended to recruit immigrants that will stay in the province, most PNPs require that applicants be sponsored by an employer with a pre-approved job offer. Some programs (such as Manitoba) allow immigrants to apply through the PNP without a job offer, provided that they can demonstrate employability and strong ties to the province through either friends or family residing in the province.

### *Canadian Experience Class (CEC)*

Starting in September 2008, Canadian immigration policy introduced the Canadian Experience Class. Under this class some skilled categories of Temporary Foreign Workers (TFWs) with Canadian work experience, and international students who have a Canadian degree and at least one year of Canadian work experience are able to apply to transfer their temporary resident status to permanent status without leaving the country. Under the previous policy, such individuals were treated similarly to other applicants and only a small number of temporary immigrants were admitted.

Unlike under the FSWP, CEC applicants are not assessed under a point system but instead their evaluation is based on a pass/fail type of assessment. Applying for permanent residence under CEC is restricted to Skill Type 0 (managerial occupations), Skill Level A (professional occupations) or B (technical occupations and skilled trades) in the NOC.

International students require a Canadian degree of at least two years of fulltime study in Canada, as well as 12 months of work experience after the completion of the degree within a 24 month period immediately prior to making the application.

TFWs require 24 months of work experience over a 36 month period immediately prior to making the application.

Both are able to make the application on Canadian soil, unless they require an interview. Additionally they need to be either currently employed in Canada or apply within one year after leaving the job in Canada. There is a minimum language ability requirement under the CEC dependant on the class of occupation of their Canadian work experience. Immigrants with work experience in managerial or professional occupations (NOC O or A) require moderate language ability in either English or French, while those with experience in technical occupations and skilled trades (NOC B) require basic language ability.

### *Temporary Foreign Worker Program*

Canada's Temporary Foreign Worker Program helps address temporary labour shortages by allowing employers to hire foreign workers when sufficient numbers of Canadian workers are not readily available. Within the TFW, the Live-in Caregiver Program is a unique program enabling the entry of qualified caregivers into Canada when Canadians or permanent residents can't fill job vacancies. Live-in caregivers must be qualified to provide care for children, sick or elderly people, or persons with a disability. Successful candidates are granted temporary resident status with a work permit and, after two years, are eligible to apply for permanent resident status.

Employers may hire Temporary Foreign Workers after requesting a Labour Market Opinion from Service Canada, which then assesses the likely impact of hiring the foreign worker on the domestic labour market. Several factors are considered when developing this opinion, such as:

- whether the wages and working conditions are in keeping with norms for the occupation;
- whether the temporary foreign worker is likely to fill a labour shortage;
- whether or not there is a labour dispute in progress;
- the efforts made by an employer to recruit or train Canadians or permanent residents;
- whether hiring the foreign worker will result in transferring skills or knowledge to Canadians or in creating or retaining employment for Canadians;
- and ensuring that an employer-employee relationship exists where the foreign worker agrees to work full-time for an employer for a specific wage/salary.

Foreign workers who want to work in Canada must first obtain a job offer from a Canadian employer. They then apply to Citizenship and Immigration Canada for a permit to work temporarily in Canada. Applicants must include a copy of the Service Canada letter confirming that their employer received a positive Labour Market Opinion (HRSDC 2010).

Temporary foreign workers have the same rights as Canadian workers. In order to increase protection to TFW, new regulations have been put in place. Employers seeking to hire temporary foreign workers, including live-in caregivers, are assessed against past compliance with program requirements before authorization can be granted. Employers found to have violated worker rights may be refused authorization to hire a foreign worker and denied access to the temporary foreign worker program for two years. Offending employers' names would also be published on the CIC website to inform other temporary foreign workers already in Canada. Employers will be given the opportunity to provide an explanation before any such action is taken against them.

A four-year cumulative limit is also being imposed on many temporary foreign workers' employment terms in Canada. After the sum is reached, they will now have to wait for four years before becoming eligible again to work temporarily in Canada. The limit does not however affect eligibility for permanent residence, if they qualify, the workers may still apply at any time while legally staying in Canada or after their departure.

In compliance with the increasing involvement of the provincial jurisdiction in immigration matters, formal working groups have been established in Alberta, British Columbia, Manitoba, Ontario, Quebec and Saskatchewan that deal specifically with the role of temporary foreign workers in Canada's economy and society. Several agreements governing temporary foreign workers have been concluded between the federal government and interested provinces and territories, including agreements with British Columbia (2010), Alberta (2009) and Ontario (2008).

## Annex 2. Canadian Immigrant Datasets

There are no data sets that offer direct measures of shortages. The following data sets are commonly used to assess the performance of immigrants in Canada and to calculate partial aspects of the data used in estimating shortages.

### *The Longitudinal Immigration Database (IMDB)*

The Longitudinal Immigration Database (IMDB) is a database combining linked immigration and taxation records. The IMDB is a comprehensive source of data on the economic behaviour of the immigrant tax filer population in Canada and is the only source of data that provides a direct link between immigration policy levers and the economic performance of immigrants. The database is managed by Statistics Canada on behalf of a federal-provincial consortium led by Citizenship & Immigration Canada (CIC).

The IMDB brings together information from the Field Operations Support System (FOSS) landing information with taxation data (mainly from the T1 personal tax return). A person is included in the database only if he or she landed since 1980 and filed at least one tax return within that period.

Each year the IMDB is updated with a new cohort of landings and the taxation data for all landing cohorts covered by the IMDB. In each new tax year there are new entrants from all landing cohorts, not just the newly added cohort, who have filed (or are matched) for the first time. There are also those immigrants who have filed previously, but have not filed in that year (although these immigrants remain in the IMDB as they could file in future years).

This survey is a census with a longitudinal design. Data are collected for all units of the target population, therefore no sampling is done.

The IMDB was created to respond to the need for detailed and reliable data on the performance and impact of the Immigration Program. It allows the analysis of relative labour market behaviour of different categories of immigrants over a period long enough to assess the impact of immigrant characteristics, such as education and knowledge of French or English, to their settlement success. It also permits the investigation and measurement of different categories of immigrants on social assistance and allows the measurement and analysis of secondary inter-provincial and inter-urban migration.<sup>22</sup>

<sup>22</sup> Source: <http://www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=5057&lang=en&db=imdb&dm=8&dis=2>

### *The Longitudinal Survey of Immigrants to Canada (LSIC)*<sup>23</sup>

The LSIC is designed to examine the first four years of settlement, a time when newcomers establish economic, social and cultural ties to Canadian society. To this end, the objectives of the survey are two-fold: to study how new immigrants adjust to life in Canada over time and, to provide information on the factors that can facilitate or hinder this adjustment

Topics covered in the survey include language proficiency, housing, education, foreign credential recognition, employment, health, values and attitudes, the development and use of social networks, income, and perceptions of settlement in Canada.

The LSIC contains a sample of new immigrants who applied through a Canadian mission abroad, were 15 years of age or older at the time of landing and immigrated between 1 October 2000 and 30 September 2001. They are then interviewed six months, two years and four years after landing.<sup>24</sup> The target population accounts for approximately 169,401 of the 250,000 persons admitted to Canada during this period. Coverage of the survey included all Census Metropolitan Areas and non-remote Census Agglomerations.

Unique to the LSIC is information on whether an immigrant had previously held a Work Visa or a Student Visa in Canada. This allows, for instance, comparing the economic outcomes between TFWs, international students and immigrants who have no pre-immigration Canadian human capital. It is also of interest to survey the complete histories provided in entities consisting of event lists such as the List of Studies, List of Jobs and List of Places where the longitudinal respondent lived.

### *The Census*

The 20 per cent sample of Canadians, with detailed information on education, occupation, earnings and family income, geographic mobility and neighbourhood of residence, has been the mainstay for immigration research in Canada over the past few decades. Sample size is the main reason to use the census. It allows the researcher to focus on successively entering immigrant cohorts, an essential part of such research. The Census also includes specific immigrant information not often found in data sets:

1. The country where the highest level of education was received. Given that economic returns to education for immigrants differ significantly depending upon the country where it is received, this is an important feature of the Census.
2. Parental place of birth—added to the census in 2001—allows for the analysis of the outcomes of the children of immigrants for the first time.
3. Research on the impact of immigration on neighbourhoods is facilitated by the fact that the most commonly used “neighbourhood” definition—the census tract—is longitudinally consistent from one census to the next. One can study changes in the ethnic and immigrant composition of neighbourhoods over decades, and also look at the correlation with other neighbourhood outcomes.

<sup>23</sup> Data from the survey may be accessed through Statistics Canada’s Research Data Centres (RDC). For more information visit Statistics Canada’s Research Data Centres site at <http://www.statcan.ca/english/rdc/index.htm>.

<sup>24</sup> The response rate at the first interview was just over 60 percent, and of those who responded at the first interview, about 65 percent continued through to the third wave.

4. One of the most important events to encourage and facilitate immigration analysis in Statistics Canada has been the creation of easy-to-use, “flat,” SAS or STATA files from the census. In earlier periods, census data were only available to analysts through a relatively difficult to use hierarchical software that only produced tables. Following the 2001 Census, easy-to-use flat files formatted for use with popular statistical analysis packages have allowed researchers to themselves exploit the census data.

The Census has some shortcomings:

- Language ability (in French or English) may be one of the most important determinants of economic and social integration. However, measures on almost all surveys do not capture it well. Variables such as mother tongue and language spoken at work are available, but they do not provide an accurate measure of ability. The variables are self reported, and they are not designed to be measures of language ability. The lack of a reliable measure of language ability is one of the major data shortcomings in immigration research.
- The use of ‘synthetic cohorts’ from the census has allowed researchers to develop a picture of the earnings trajectory with years since immigration. Based on such an assumption, earnings, employment, poverty and other trajectories have been developed. However, recent research has shown that, in fact, a significant proportion (perhaps one quarter) of immigrants leave Canada within the first few years of their arrival. Little is known yet of the characteristics of these leavers and how they compare with the stayers. However, some ‘selection’ effects almost certainly exist in the synthetic cohort trajectories produced from the census. Whether this is a positive or negative selection, or its extent, is as yet unknown.
- Immigrant class (skilled economic, family, refugee, etc.) is an important determinant of various outcomes, but it cannot be identified on the census. It is unlikely that self reporting would provide reliable data.

### *The Ethnic Diversity Survey*

In 2002 Canadian Heritage and Statistics Canada initiated the Ethnic Diversity Survey (EDS), which focused on issues relating to the rapidly changing cultural diversity in Canada. While not strictly an immigrant survey, the EDS has provided many opportunities for immigration research. It used the 2001 Census as the survey frame. It was designed to better understand how people’s backgrounds affect their participation in the social, economic and cultural life of Canada. Topics covered include ethnic ancestry, ethnic identity, place of birth, visible-minority status, religion, religious participation, knowledge of languages, family background, family interaction, social networks, civic participation, interaction with society, attitudes, satisfaction with life, trust and socioeconomic activities. The sample of approximately 57,000 individuals was stratified so as to provide large samples for the ethnic groups whose mother tongue tends to be a language other than English.

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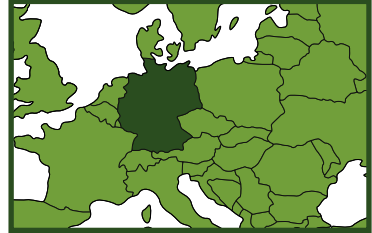


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# GERMANY

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## 1. Introduction

In contrast to other developed economies, the German economy managed to recover rather swiftly and vigorously from the global economic downturn of 2008. Germany's remarkable economic resilience was not fortuitous. The two contributing factors to the new German miracle were: (i) that the economic crisis was not indigenous, but touched Germany through its exports and (ii) that labour market reforms and other drastic measures in the country mitigated unemployment.

Germany, like other developed Western countries is facing growing demographic problems; mainly low fertility rates, low mortality rates, and increasing life expectancy. Naturally, an ageing population that retires early cannot be supported by its young; immigrants are often viewed as a solution to this problem. While many immigrants have been living in Germany for decades, Germany did not have an immigration policy until the new century.

The idiosyncrasies of the immigration and naturalization laws in Germany as well as its labour market laws have shaped both the quantity (flows and stocks) and quality (skill levels) of migrants in Germany over the last fifty years (Constant et al., 2010a). Germany only admitted being an immigration country through introducing relevant legislation and policies in the early 2000. Nonetheless, from 1954 to 1979 net migration to Germany rose sharply, and reached a peak between 1980 and 1990. Net migration follows a downward trend, since then, reaching a negative balance of 30,000 in 2009. This means that emigration from Germany was higher than the inflow of immigrants to Germany. In this case, skilled and educated native Germans migrate to other countries. In 2009, 154,988 native Germans left Germany for other developed nations. Their preferred destinations were Switzerland (15.9%), the United States (8.7%), Poland (7.8%), Austria

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(7.6%), and the United Kingdom (5.9%) (BMI, 2011). In 2009, the Federal Statistical Office (*Statistisches Bundesamt*) published a forecast of the German population by the year 2060 that shows that Germany's net migration would be less than that of the last half of the twentieth century (*Statistisches Bundesamt*, 2009).

Another related challenge that Germany will be facing soon is its shrinking labour force. In 2008, the total labour force was around 50 million. By 2020, it is estimated to be 47.6 million, and 32.6 million by 2060. According to the age structure, in 2008, those between 30 and 50 years of age are the biggest group of the German labour force. The younger people, the 20 to 30 year olds made up about 10 million (or 20%). The 2060 projections, however, show that the German labour market will be composed of only about 6.1 million people between 20 and 30. Middle-aged individuals will be about 15 per cent of the labour market and older individuals about 12 per cent (*Statistisches Bundesamt*, 2009).

In the early 2000s, the Government took a pioneering stance to redefine Germany as an immigration country and to pass a new immigration bill. The following changes were brought into action: (i) A new citizenship act, in effect since 2000, which recognizes both *jus sanguinis* and *jus soli*." (ii) The 'green card' regulation, intending to attract more highly skilled foreign professionals to Germany. However, the outcome of the latter programme was less successful than expected. In fact, for the ceiling of 20,000 work and residence permits imposed for this programme, only 17,931 work permit applications were approved and 17,111 (first time) permits were issued to foreign specialists. However, failing to attract highly skilled migrants, as manifested by the strong decline in visa applications, made the government officially abandon this scheme in 2005 (Constant et al., 2010b).

In 2005, the Federal Government passed a far-reaching Immigration Act (*Zuwanderungsgesetz*),<sup>2</sup> which entered into force on January 1 of that year. In doing so, Germany's policymakers laid down the foundation for immigration policy and the social integration of migrants, and finally recognized that Germany is an immigration country.

For citizens of non-EU countries who enter for the purpose of seeking employment in Germany, issuance of a residence permit for gainful employment requires the approval of the Federal Employment Agency (BAMF, 2009). Residence permits may be issued for up to three years for employment purposes and are subject to labour market test in Germany. Residence permits can be prolonged without a new labour market test after employment of at least one year with the same employer. Self-employed persons receive a residence permit if they invest at least 250,000 Euros and create a minimum of five jobs.

If a foreigner has successfully completed a top degree at a German university, a residence permit can be prolonged for up to one year in order to search for a job where migrant recruitment is permitted. This is the latest effort to keep highly skilled migrants in Germany. Highly skilled labour is eligible for an unrestricted residence permit after a minimum stay period of stay, but also immediately if the applicants can prove that they earn a salary of 85,000 EUR. Their family members who come to Germany with them or join them at a later date are entitled to take up gainful employment (for more details on the residence permits see Constant et al., 2010b).

Since May 1st, 2011, nationals of the countries that joined the EU in 2004 are freely access labour market in Germany.

Additional short-term immigration channels stemmed from bilateral agreements and applied to seasonal workers. These agreements allowed companies in partner countries to send their workers to Germany for a limited period of time for the purpose of completing work in cooperation with a German company (BMI, 2010; Parusel and Schneider, 2010).

Chaloff and Lemaitre (2009), made an astute remark about the intention behind immigration policy reforms made recently by countries like Germany. The policy has been to 'restrict' immigration, while still leaving a margin for employers to hire high-skilled workers. It is worth adding here that although the Immigration Act upheld the ban on the recruitment of foreign labour, particularly for unskilled and low-skilled workers, Section 18 Subsection 1 of the Residence Act stipulated that the admission of foreign employees must be "geared to the requirements of the German economy, according due consideration to the situation on the labour market and the need to combat unemployment effectively."

In fact, German policymakers have set high priority to job-matching within the framework of the German labour market policy, which involves finding the best fit between job seekers and job vacancies. To this end, the Act on the Reorganization of Labour Market Policy Instruments entered in force on January 1, 2009 in which the emphasis is, inter alia, on job placement (Bundesregierung, 2009). However, in practice, *"endeavours to expedite job matching and to find the best possible fit relate primarily to job seekers who are already residing in Germany. Within the framework of granting work permits to foreign job seekers and potential labour migrants, matching is only used occasionally. As Germany does not systematically pursue recruitment of foreign labour, it is basically up to the respective employer to examine whether a foreign applicant is suitable for a certain job. The employer must ensure that a foreign applicant meets the requirements of his business in terms of training, qualifications and language skills. However, a priority examination is carried out by the Federal Employment Agency before a work permit is granted to facilitate matching"* (Parusel and Schneider, 2010).

The January 1, 2009 Labour Migration Control Act (*Arbeitsmigrationssteuerungsgesetz*) instituted several legal amendments. These changes referred to regulations that were intended to facilitate the admission of highly qualified migrants, students, and researchers. One of the changes also addressed the access to labour market for persons whose deportation has been temporarily suspended, the so-called 'tolerated stay' (Parusel and Schneider, 2010).

## 2. Measuring Labour Shortages in Germany

Institutionally, the single authority responsible for tracking labour market trends and shortages in Germany is the Institute for Employment Research (*Institut für Arbeitsmarkt und Berufsforschung* or IAB) in Nuremberg. Since 1989, IAB has been conducting a 'survey on the aggregate national supply of labour.' The survey covers all companies and administrative agencies that have at least one employee who is liable for compulsory social-insurance payments. This survey has high regards among both businesses and

politicians, who have insofar perceived it as the only<sup>26</sup> representative and reliable source to examine the causes and scope of skilled labour shortages and therefore counteracting it. The interviews are conducted by phone in the first, second, and third quarter of the year with companies and administrations to update developments in the demand for labour on an ongoing basis.

Data on job vacancies are crucially important in the estimation of labour market flexibility and overall health. There are currently two sets of data that furnish useful information on job vacancies; they are collected on an ongoing basis. The first dataset is the 'employment statistics' that the Federal Employment Agency (*Bundesagentur für Arbeit, BA*) provides on a monthly basis in conjunction with local authorities. These employment statistics contain, inter alia, information on registered job vacancies. The second dataset is collected by IAB and contains data on the aggregate national supply of labour. It is worth mentioning here that the IAB survey provides the basis for the annual and quarterly statistics on job vacancies published by Eurostat (Parusel and Schneider, 2010).

In recent years serious efforts have been made by BA to explicitly address technical issues in labour shortage measurements. While the IAB data are good official statistics, they can only enlighten and elucidate the current situation of the labour market. There are no comparable official statistics or forecasts about the future of the labour demand (Parusel and Schneider, 2010).

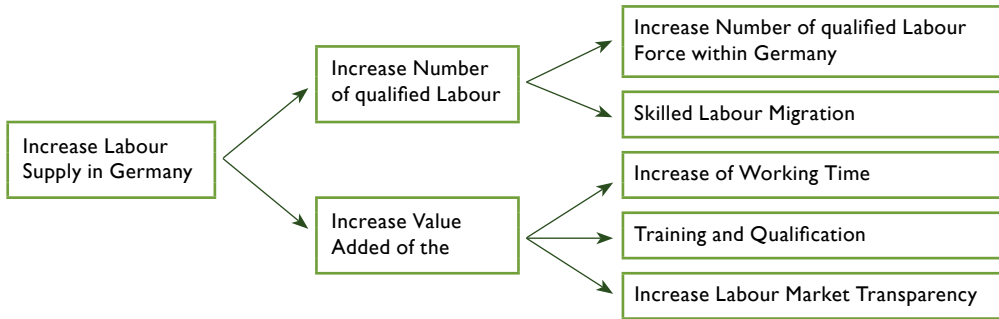
In Germany, labour shortages became a central issue of the government's cabinet meeting in August 2007. In a nutshell, the cabinet decided to reinforce its efforts (i) to activate the domestic labour force potential through strengthened training and qualification measures; and (ii) to take additional measures for eliminating shortages in certain sectors, which were viewed as difficult to cover domestically. The latter was to be implemented by a careful opening of the labour market to labour immigration (Chaloff and Lemaitre, 2009).

In face of the ageing population associated with its labour market implications, experts do agree that in the medium and in the longer term migration could and would play a crucial role in addressing these demographic challenges (Sachverständigenrat, 2011). At the same time, the political actors have been concerned with the reliability of labour market needs projections carried out by various bodies, given the nature of numerous factors influencing the demand of labour; such as cyclical trends, activation of the national supply of labour, demographic trends and developments in education and training policy.

According to the Federal Employment Agency (2011), there are two ways to increase the labour supply: by increasing the number of qualified labour force and by increasing the value added of the workforce (Figure 1). The first way can be subdivided into parts: (i) increase the number of qualified labour domestically in Germany and (ii) through skilled labour migration.

<sup>26</sup> In recent years, in addition to the IAB survey, employers' associations and economic think tanks have also been conducting their own analyses on the German labour market situation (Parusel and Schneider, 2010).

**Figure I: Pathways for Increasing Labour Supply**



Source: Adapted from Bundesagentur für Arbeit, January 2011.

The priority of the German government has been so far to activate the domestic labour supply reserve. However, full coverage of various areas of intervention will require involvement of a range of actors from the Federal Administration to employers, educational institutions and other stakeholders (Table I).

**Table I: Role of Different Actors in Increasing Labour Supply in Germany**

	Bund	Länder	Municipalities	BA	Labour Unions	Businesses	Others
School Dropouts		Dark Green	Light Green	Light Green			
Trainee Dropouts		Light Green		Light Green		Dark Green	Light Green
College Dropouts	Light Green	Light Green		Light Green		Light Green	Dark Green
<b>People over 55</b>							
– Labour Force Participation				Light Green	Light Green	Dark Green	
– Working Life	Dark Green			Light Green	Light Green	Light Green	Light Green
<b>Female</b>							
– Labour Force Participation	Light Green		Light Green	Light Green	Light Green	Dark Green	
– Working Time for Part-time Jobs			Light Green	Light Green	Light Green	Light Green	Light Green
Labour Skilled Migration	Dark Green			Light Green	Light Green		
Working Time for Full-time Jobs	Light Green				Dark Green	Light Green	
Training and Qualification	Light Green	Light Green	Light Green	Dark Green	Light Green	Dark Green	Light Green
<b>Labour Market Transparency</b>	Light Green			Dark Green		Light Green	
<b>Taxes and Levies</b>	Dark Green	Light Green			Light Green		

Source: Adapted from Bundesagentur für Arbeit; Perspektive 2025: Fachkräfte für Deutschland, January 2011.

Note: Dark Green shaded area: Institution or Organization plays a Leading Role;

Light Green shaded area: Institution or Organization plays an Important Role;

Yellow shaded area: Institution or Organization plays a Participatory Role

### 3. Labour Market Outcomes of Immigrants and Policy Implications

To our knowledge, there is no empirical work on the effectiveness of the recent Immigration Act enacted in 2005 in terms labour market outcomes of these ‘new’ gainful employed immigrant workers in Germany. Nonetheless, the following analysis will present some key labour market outcomes of the immigrants living in Germany compared to the native Germans.

Table 2 presents the average characteristics of employed natives and foreign-born, who were on obligatory social security schemes in February 2011. Among Germans, the shares of employed men and women workers are rather close with 54 and 47 per cent respectively. Among immigrants, however, a significant discrepancy is observed in employment rates. While 61 per cent of immigrant men work, only 39 per cent of immigrant women work.

**Table 2: Characteristics of the Employed under the Obligatory Social Insurance Scheme in February 2011: Natives Versus Foreign-born in Germany**

	Gender		Age			Qualifications				Type of Employment	
	Male	Female	Less than 25	B/w 25 and 50	B/w 50 and 65	In Train.	W. Prof. Qualif.	W/ out Prof. Qualif.	None Above	Full-Time	Part-Time
Natives	53.5	46.5	11.5	61.1	26.1	5.4	70.3	8.7	15.6	80.6	19.4
Foreign-born	61.4	38.6	10.4	70.3	18.7	4.1	37.9	24.9	33.1	79.8	20.1

Source: Bundesagentur für Arbeit; *Analyse des Arbeitsmarkets für Ausländer, February 2011*; Authors’ presentation. Note: Minimum Age is 15.

It is when the qualification required for the job is examined that the figures considerably diverge between Germans and immigrants. In Table 2 four types of qualifications are considered: (i) in training, (ii) with professional qualification, (iii) without professional qualification, and (iv) none of the above. The type “with professional qualifications” clearly contains the largest percent of employees, both among Germans and immigrants. However, while about 70 per cent of the employed Germans have a professional qualification, only 38 per cent of the employed immigrants have a professional background. Interestingly, one fourth of immigrants are in the “without professional qualifications” category, alongside only 9 per cent of Germans.

Even after the reform of 2005 and the serious government’s efforts to recruit more highly skilled migrants, most of the immigrants in Germany are employed in low skilled jobs (Table 3). In 2006, 8.4 per cent of immigrants were employed in low skilled jobs. Among them, immigrants from third countries were more likely to be in these low skilled positions; in 2006 it was 12.3 per cent and in 2009 it was 12.1 per cent.



**Table 3: Employed Individuals by Level of Professional Qualification in 2006 and 2009**

Main Category	Number Employed <sup>1</sup> In 1000		Nationals of EU-14		National of EU-10		National of EU-2 <sup>2</sup>		Third country National	
	Total Numbers		In Percent		In Percent		In Percent		In Percent	
	2006	2009	2006	2009	2006	2009	2006	2009	2006	2009
Highly Skilled (ISCO 1-3)	15,353	16,324	2.4	2.5	0.5	0.5	0.1	0.2	2.6	2.8
Skilled (ISCO 4-8)	18,049	18,334	2.9	2.7	0.6	0.9	0.2	0.2	5.5	5.7
Low Skilled (ISCO 9)	3,095	3,211	3.7	3.7	-	-	-	-	12.3	12.1
Other <sup>3</sup>	525	496	2.5	2.4	-	-	-	-	7.2	7.9
<b>Total</b>	<b>37,023</b>	<b>38,365</b>	<b>2.8</b>	<b>2.7</b>	<b>0.6</b>	<b>0.8</b>	<b>0.2</b>	<b>0.2</b>	<b>4.9</b>	<b>5.0</b>

Source: Micro-census 2006, 2009; Parusel and Schneider, 2010; Authors' presentation.

Notes: 1 Excluding soldiers; 2 Bulgaria and Romania; 3 Not Reported, and Soldiers

At the same time, it is apparent that there is a substantial increase in the entry of researchers. While in 2008, there were 64 employed researchers, a year later in 2009, there were more than double (142) constituting an increase of 122 per cent. Employment of highly qualified migrants through the dedicated immigration channel for this group also rose by 12 per cent in the same years, albeit the overall numbers remain small (169 persons in 2009) (Parusel and Schneider, 2010; authors' calculation).

Because the implementation of the Residence Act was enacted only in 2005, it is quite early to make a full assessment of the effectiveness of the Immigration Act. Nascent statistics indicate that more work needs to be done by German policymakers in attracting foreign high skilled workers. Also, with the recent full opening of the German labour market to the EU-10 countries, these effects are as of now not quantifiable; although some experts have argued that impact of intra-EU mobility will only be moderate.

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# SPAIN

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## 1. Introduction

There is no single variable which serves to explain the recent and rapid incorporation of Spain into the European migratory system. The unique nature of migration to Spain over the last decade is characterized by the diverse and intense migratory flows in a decade of strong economic growth.

In 1999 there were less than 750,000 foreign residents in Spain, representing only 1.86 per cent of the population. The latest data, from the beginning of 2010, indicate that there are more than 5.7 million immigrants, which constitutes 12 per cent of the population (Table 1). Throughout the last decade a third of the new migratory flows towards Europe were directed towards Spain, making it the OECD country with the second largest number of immigrants received, after the United States, and the first in relative terms (Table 2).

The Spanish migratory model has mostly been based on immigrants seeking work, although there is a component of family and retirement migration. Nowadays, contrary to the archetypal young, unskilled, male migrant, the internal composition of the flows is rather varied: the areas of migration have multiplied, there are a greater number of women and teenagers, and there has been an increase in the migration of highly skilled workers, although the actual level of migration into low-skilled occupations remains higher.

Amongst the factors that have given rise to the transformation of Spain into a migratory destination, it is important to point out the rapid economic growth over the last decades, the consolidation of the heavily segmented labour markets, the relative weight of the informal economy and the increasing demand for low-skilled workers in

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the service sector and, in household services in particular. The seasonal nature of a large number of economic activities (intensive farming, construction, hospitality, fishing and so on) creates the need for a flexible and mobile workforce which is only partially subjected to the labour market regulation system, and poorly regulated as far as the national labour force is concerned.

**Table 1: Stock of foreign population in Spain, 2000-2010**

	Total	(%) Population
<b>2000</b>	923,879	1.9
<b>2001</b>	1,370,657	2.3
<b>2002</b>	1,977,946	3.3
<b>2003</b>	2,664,168	4.7
<b>2004</b>	3,034,326	6.2
<b>2005</b>	3,730,610	7.0
<b>2006</b>	4,144,166	8.5
<b>2007</b>	4,519,554	9.3
<b>2008</b>	5,268,762	11.4
<b>2009</b>	5,648,671	12.1
<b>2010</b>	5,747,734	12.2

Source: Municipal Register. Foreign Population (thousands). The National Statistics Institute (INE)

**Table 2: Inflow of foreign population in Spain by sex, 2000-2009**

	Total	M	F	M (%)	F (%)
<b>2000</b>	330,881	178,006	152,875	53.8	46.2
<b>2001</b>	394,048	210,580	183,468	53.4	46.6
<b>2002</b>	443,085	232,699	210,386	52.5	47.5
<b>2003</b>	429,524	223,036	206,488	51.9	48.1
<b>2004</b>	645,844	354,722	291,122	54.9	45.1
<b>2005</b>	682,711	370,562	312,149	54.3	45.7
<b>2006</b>	802,971	422,997	379,974	52.7	47.3
<b>2007</b>	920,534	502,168	418,366	54.6	45.4
<b>2008</b>	692,228	370,432	321,796	53.5	46.5
<b>2009*</b>	469,342	238,916	230,426	50.9	49.1

Source: Residence Variation Statistic. The National Statistics Institute (INE)

\*Last data available

There were many changes in the family and economic role of women, seeing them command increasing skills and professional aspirations. Without any doubt this has had an effect on the growth of the replacement flow led by young migrants of greater or lesser skill, coming from developing countries. The increasing incorporation of native women into economic activity created the need for a female workforce to take over or help with jobs in what is referred to as the reproductive sphere (care of the elderly and children, cleaning services, etc.) work which today is mainly carried out, in many cases, by the first female immigrants to arrive, not only as pioneers among their families but also of the flows themselves.

There is a demographic parameter which could likewise be seen as indirectly encouraging this migratory transition: the reduced natural growth rate in Spain in part resulting from the decline in fertility. Spain, as other Northern Mediterranean countries represents not only a clear economic border between the North and the South, but also a significant demographic border with regards to international population trends.

In Spain, the insertion of immigrants into the workforce is concentrated in certain economic sectors (services, construction, hospitality, farming and domestic services), not only resulting from the intrinsic needs of the national labour market, but also from the active policies of channelling the workforce towards these sectors. Examples include the annual quota plan, recruitment agreements with countries of origin and the policy of work permits.

Two circumstances largely determined the response of Spain faced with the phenomenon of migration. Firstly, was the absence of institutional structures and the inexperience of the authorities as far as planning; regulation and internal management of immigration were concerned. The unforeseeable nature and speed of the transformation meant that the policy was, in the majority of cases, set up hurriedly in the face of the demands set by the new social reality. This was a remarkably reactive policy which only during the past decade, began to tackle immigration as a long-term social phenomenon.

Secondly, the consolidation of Spain as a receiving country coincided with its integration into the European Union which meant that the outline of national policies depended, to some extent, on initiatives adopted in the EU. The pan-European drift towards policies of a restrictive nature also had an effect on the admission of labour immigrants on the territory and the labour markets of Spain.

Both elements served to shape the development of a policy fundamentally focused, between the mid-1980s and the mid-1990s, on the objective of border control. Over these two decades Spain witnessed, therefore the expansion of institutions, as well as legal and political measures aimed at control and management of immigration.

Spain needs a foreign workforce, or at least that is the message conveyed to the public, which in the Spanish context resulted in the development of some moderate recruitment systems and regulations of access to the labour market, such as the annual quotas for workers and specific regulations for accessing to the national labour market (General Regime).

## **2. Educational and Occupation Transformation of Spain**

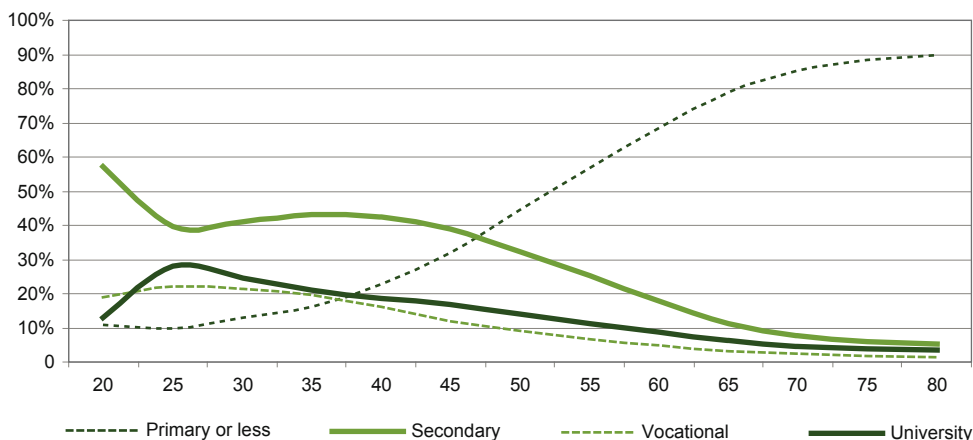
### **2.1. Labour shortages, skills and immigration flows**

The transformation of Spain over the last decades has systematically been described as a success story. The Spanish governments in place after 1975 have had a particular focus on education and as a consequence, the percentage of the public expenditure devoted to it increased importantly until the mid 1990s and has been quite stable around 4.5 per cent of the annual GDP ever since (Bernardi and Requena, 2007). According to estimations conducted by these authors, the percentage of Spaniards that remained enrolled in any form of education between the age of 20 and 24 increased from a low 15 per cent in 1980 to an average of 35 per cent in 2000 (40% among

women and slightly over 30% for men). The number of university graduates boosted from 76,814 in 1982-83 to 226,773 in 2002-03.

Figure 1 shows this dramatic transformation of the educational composition of Spanish society by using the the Economically Active Population Survey (second terms from 2000 to 2010). According to authors calculations, among respondents aged 25-30 28.1 per cent had a university degree as opposed to only 8.9 per cent of those between the age of 60 and 65.

**Figure 1. Evolution of the educational composition of the Spanish population by age, 2000-2010, per cent**



Source: Authors' calculations based on the LFS (2000-2010).

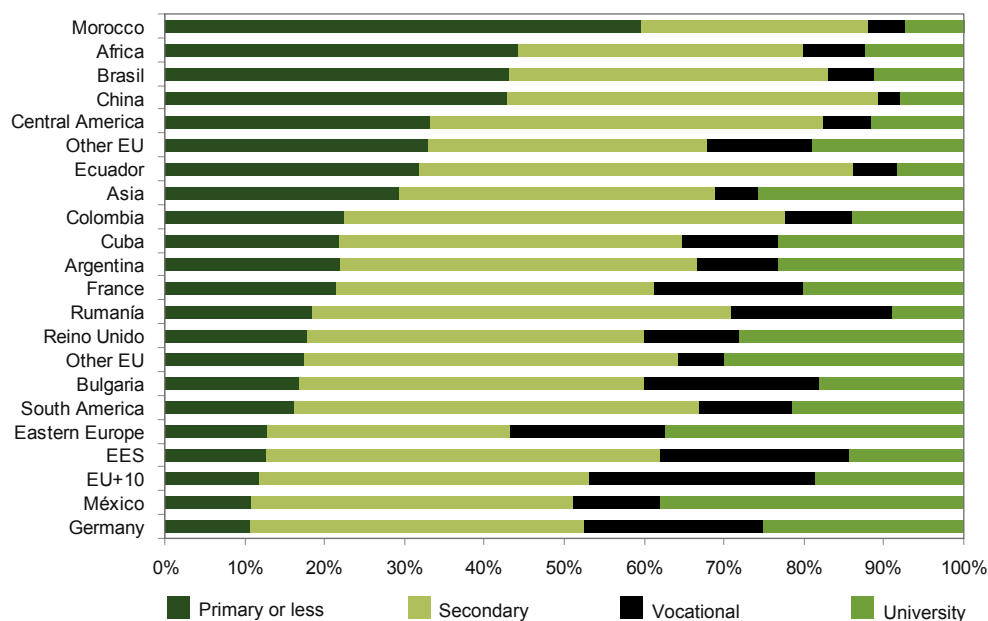
Legend: For each age (horizontal axis), the Figure provides information of the educational composition of the Spanish population (vertical axis). The addition of the percentage that each four groups scores 100%.

Spain has witnessed a comparable transformation of its productive structure, passing from being a country in which peasants represented an important amount of the labour force (20% in 1976) to an economy with an expanding service sector, mostly due to the territorial decentralization and the instauration of a social welfare state. Garrido and González (2007) argued that the expansion of the number of jobs in Spain was mostly lead by sectors strictly dependent on the business cycle (such as construction, trade, transport, house services and tourism) together with those that behave more independently from the economic cycle (services to firms, social and personal services and the public administration). This modernization of the Spanish productive structure was carried out at the cost of an impressive increase of temporality of work and the continuous challenge of unemployment compared to other EU countries.

Immigration reached Spain at the end of this intense transformation, in most cases to fill the need for a low-skilled labour force in productive sectors that were most dependent on the business cycle. This could be linked to the findings of recent research that identified a trend according to which the consequences of economic crisis last longer in Spain, although causes of economic downturns are shared with the rest of the advanced economies (Fernández Albertos and Manzano, 2010).

All this explains why the need for a foreign labour force was mostly the low-skilled. The Spanish baby-boomers were in many cases overqualified for filling the enormous needs for unskilled workers that the booming Spanish economy needed from 1995 to 2007. Migration to Spain happened to reflect this low level of formal education that the host labour market required. The following Figure shows the educational composition of the most important national origins (or broader geographical areas) of migrants in Spain. This evidences that, notwithstanding the above mentioned generalization, there are important national differentials. Africans (both Moroccans and other Africans) are disproportionally overrepresented among the less skilled migrants: only 59 per cent of Moroccans and 44 per cent of Africans have primary education at most. By contrast, EU12 migrants bring more sophisticated educational profiles to Spain: almost one out of five (18.8%) EU10 nationals have a university degree, and a similar rate is displayed by the Bulgarians. Among Romanians, the largest group of EU12 country migrants in Spain, there are only 9.1 per cent of university graduates. While generally speaking Latin Americans are also highly qualified in at least 20 per cent of the cases, only 8.4 per cent of Ecuadorians have a university degree, and 14 per cent of Colombians. Argentines lead the Latin American ranking with 23.3 per cent of university graduates among those residing in Spain.

**Figure 2. Level of migrant qualifications by country of birth and area of origin, 2000-2010**

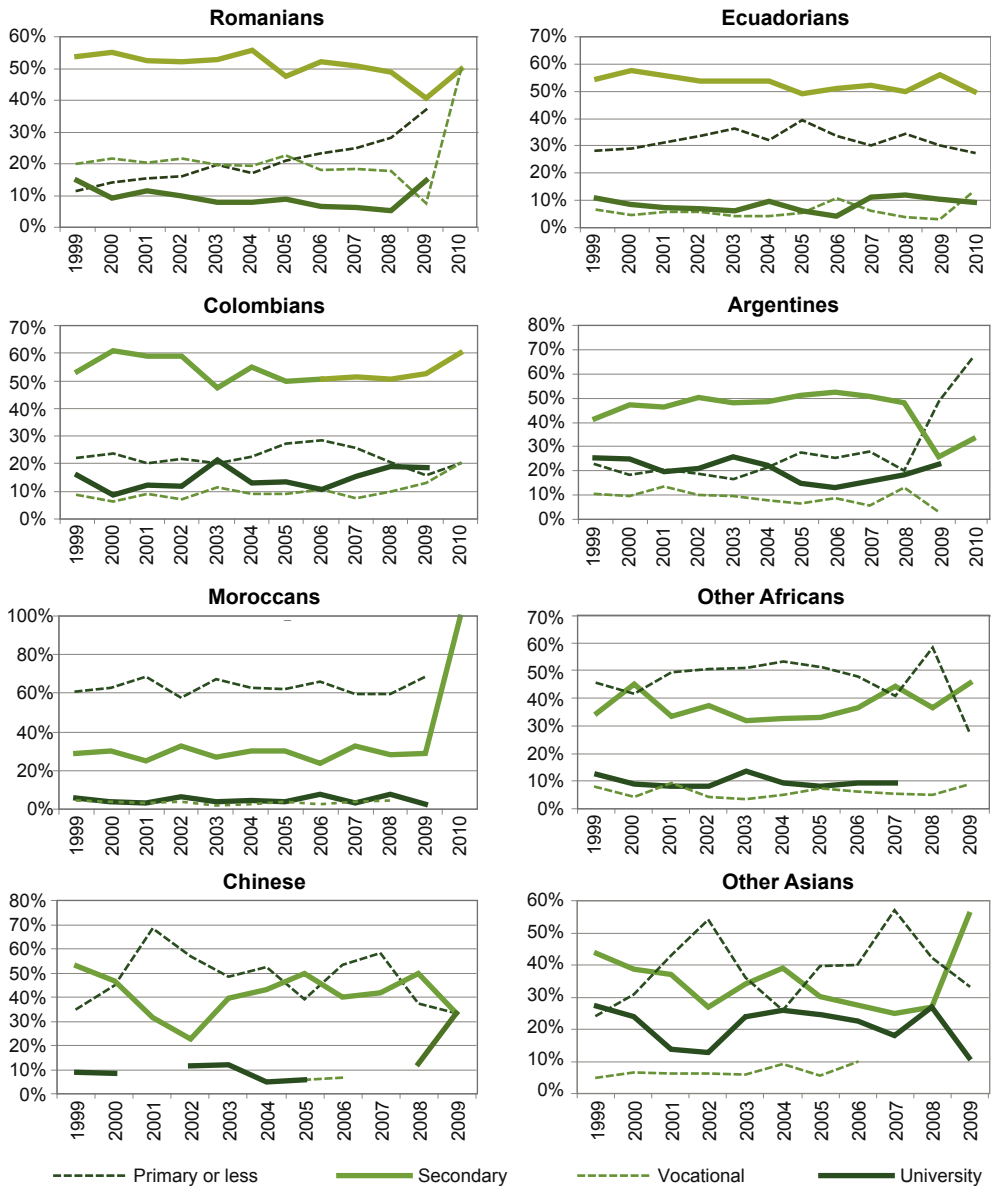


Source: Author's calculations from the LFS (2000-2010).

It can be argued in the light of the evidence available that the educational composition of the migrant population has not shifted over time. Of course, as a recent immigration country, Spain cannot provide large enough longitudinal series, but by merging data from 1999 to 2010, the trend indicates stability in the qualification of migration inflows to Spain. Nonetheless, some changes are worth being mentioned: the percentage of the most low-

skilled Romanian workers has importantly increased at the cost of a steady reduction of the percentage of workers with secondary education. Similar developments can be observed among the Argentines since 2008. The trend among the Asian immigrants is more unpredictable, possibly due to technical reasons (the sample size of Chinese and other Asian migrants in the authors' merged dataset is not very large), although it is clearly observed that these two groups can also be identified as low-skilled.

**Figure 3: Evolution of the educational composition of main immigrant nationalities or groups to Spain 1999-2010**



Source: Our calculations from the LFS (2000-2010).



## 2.2. Immigrants and Spanish Labour Market

Throughout the last decade, immigrants had been included in the national regular and irregular labour market due to market demands and needs. The bulk of this migratory flow has primarily been attracted by the opportunities offered by an expanding labour market base in sectors such as tourism, construction and services.

The percentage of immigrants working on industry and services remained stable over the course of the decade. On the contrary, employment in agriculture and construction was more irregular depending on changing economic dynamics. The recent economic crisis explains, for instance, the shift in the employment from construction to agriculture and services.

**Table 2: Stock of foreign workers in Spain by economic sector, 2000-2010, per cent**

	Agriculture	Industry	Construction	Services
2001	14.4	9.2	14.2	62.1
2002	14.2	9.1	15.4	61.03
2003	14.1	9.0	15.8	61.0
2004	11.7	9.0	17.7	61.6
2005	10.79	7.63	18.84	62.7
2006	9.62	8.11	20.71	61.54
2007	9.10	8.66	21.09	61.13
2008	11.9	8.13	14.35	65.52
2009	15.44	7.51	11.51	65.4
2010	15.73	7.28	9.67	67.08

Source: Labour and Immigration Ministry (2001-2010).

Additionally, one of the most important changes in the Spanish labour market throughout the last decade is the steady increase of the proportion of the foreign active population. Immigrants have come to represent 16 per cent of the active population. This figure surpasses most traditional immigration countries due to the high active rate of immigrants residing in Spain (Table 3). In 2009 only Cyprus, Luxemburg and Switzerland witnessed major levels, and this percentage was lower in Austria (10.9%), Germany (9.1%), Belgium (8.7%), United Kingdom (8%) or France (5.6%) (see Elías, 2011).

**Table 3: Active Foreign Population Rate in Spain, 2000-2010**

Year	Active migrants	Activity rate
2000	810,100	66.0
2001	1,117,200	71.1
2002	1,542,700	72.4
2003	2,039,600	75.1
2004	2,534,900	75.7
2005	3,095,100	75.5
2006	3,616,600	77.1
2007	4,176,800	75.9
2008	4,627,500	76.7
2009	4,775,000	77.1
2010	4,748,700	76.9

Source: Labour Statistics Bulletin. Labour and Immigration Ministry, 2011.

The debate about the effect of migrant workers on the labour market has not been as heated as in other European countries, and public opinion surveys so far do show high levels of xenophobia. Nationals have concerns about the competition from migrant workers especially in hospitality and tourism. On the other hand, there is a strong demand for labour, not matched by a supply of workers who are nationals. The issue of competition has been raised recently as a consequence of harsh economic crisis in Spain. The unemployment rate reached 20 per cent by the end of 2010. However, this rate includes important differences between native (18%) and foreign workers (30%). The difference between the native and immigrant workers (using data of the Economically Active Population Survey) reached its highest level by the end of 2009 and nowadays is almost twelve percentage points (see table 7).

**Table 4: Unemployed population and unemployment rates, 2005-2010**

Year (Quarter)	Unemployed population	Unemployment Rate (total)	Unemployment rate (native workers)	Unemployment rate (migrant workers)	Unemployment gap
<b>2005 (I)</b>	2,099,500	10.2	9.8	14.0	4.2
<b>2005 (II)</b>	1,944,700	9.3	9.1	11.6	2.6
<b>2005 (III)</b>	1,756,000	8.4	8.2	10.2	2.0
<b>2005 (IV)</b>	1,841,300	8.7	8.5	10.2	1.7
<b>2006 (I)</b>	1,935,800	9.1	8.6	12.3	3.7
<b>2006 (II)</b>	1,837,000	8.5	8.0	12.0	3.7
<b>2006 (III)</b>	1,765,000	8.2	7.7	10.9	3.1
<b>2006 (IV)</b>	1,810,600	8.3	7.7	12.0	4.3
<b>2007 (I)</b>	1,856,100	8.5	7.8	12.6	4.8
<b>2007 (II)</b>	1,760,000	8.0	7.3	12.0	4.7
<b>2007 (III)</b>	1,791,900	8.0	7.4	11.8	4.4
<b>2007 (IV)</b>	1,927,600	8.6	8.0	12.4	4.4
<b>2008 (I)</b>	2,174,200	9.6	8.7	14.7	5.9
<b>2008 (II)</b>	2,381,500	10.4	9.3	16.5	7.1
<b>2008 (III)</b>	2,598,800	11.3	10.2	17.5	7.3
<b>2008 (IV)</b>	3,207,900	13.9	12.5	21.3	8.7
<b>2009 (I)</b>	4,010,700	17.4	15.2	28.4	13.2
<b>2009 (II)</b>	4,137,500	17.9	16.0	28.0	12.0
<b>2009 (III)</b>	4,123,300	17.9	16.1	27.5	11.4
<b>2009 (IV)</b>	4,326,500	18.8	16.8	29.7	12.9
<b>2010 (I)</b>	4,612,700	20.1	18.0	30.8	12.8
<b>2010 (II)</b>	4,645,500	20.1	19.7	30.2	10.5
<b>2010 (III)</b>	4,574,700	19.8	18.0	29.4	11.4
<b>2010 (IV)</b>	4,696,600	20.3	18.5	30.4	11.9

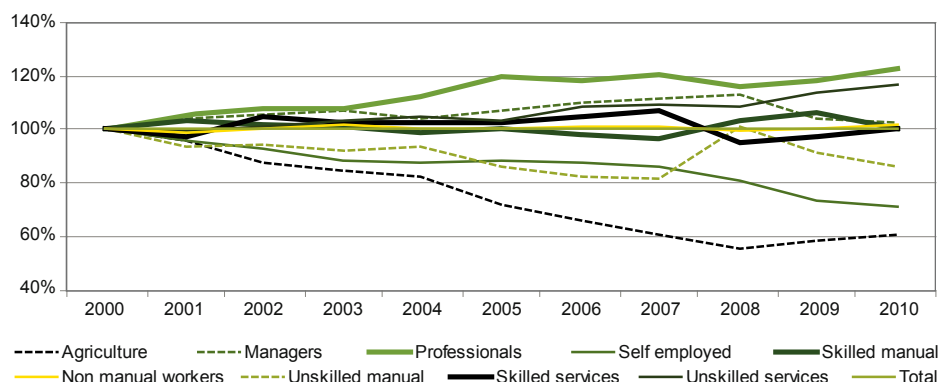
Source: The Economically Active Population Survey (LFS). The National Statistics Institute (INE)

The LFS showed the following distribution of the overall population by occupations in the second term of 2010. Low-skilled workers in the non-manual and manual categories and in the service sector account for more than 42 per cent of employment. Managers and professionals constitute almost 30 per cent of the Spanish labour force and other skilled workers account for less than 15 per cent.

Immigrants and natives are not equally distributed in these categories. The differences are broadly documented, but this analysis could benefit from assessing the

evolution of these categories in 2000-2010 to describe how the Spanish labour market has absorbed the low-skilled inflow of migrant workers and how it allocated workers to sectors over time.

**Figure 4: Evolution of occupational distribution of the Spanish nationals, 2000-2010**

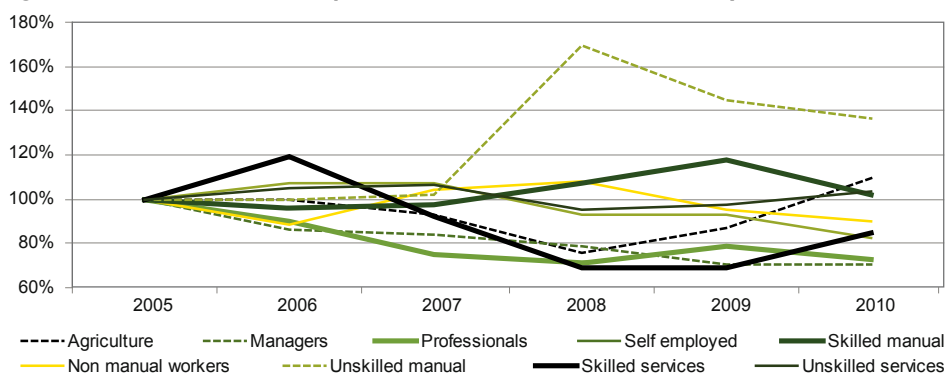


Source: Author's calculations from the LFS, 2000-2010.

Legend: The figure represents the evolution in percentage points from 2000 to 2010. In other words, the position a group occupied in 2000 is taken for a 100% and yearly changes are calculated using 2000 as the reference.

Figure 4 indicates that the most important transformation in the occupational distribution of the Spanish nationals was the significant increase of professionals from 2000 to 2005 by 20 per cent. This figure has been quite stable since 2005 and proves to be resistant to the economic crisis. An increase in the weight of low-skilled employment should also be highlighted, although it has not regained its initial importance. Agriculture continues to lose importance with regards to the employment of nationals.

**Figure 5: Evolution of the occupational distribution of third-country nationals, 2005-2010<sup>28</sup>**



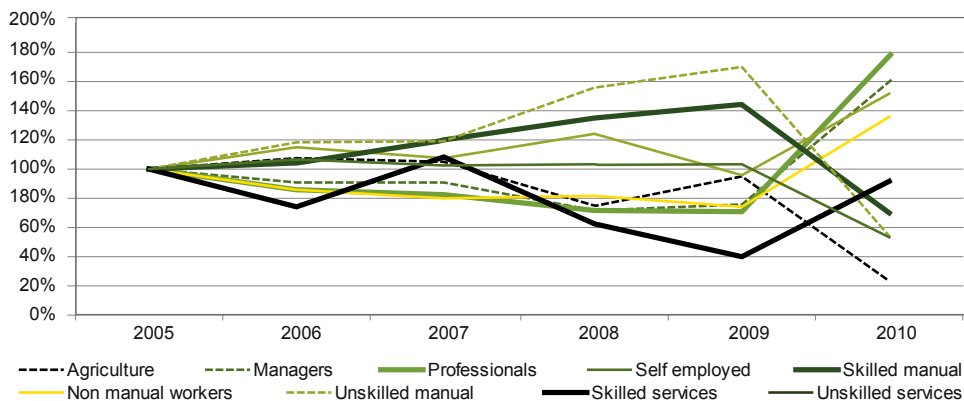
Source: Our calculations from the LFS (2000-2010). 2005 is the year of reference.

Legend: The figure represents the evolution in percentage points from 2005 to 2010. In other words, the position a group occupied in 2005 is taken for a 100% and yearly changes are calculated using 2005 as the reference.

<sup>28</sup> Because of the sample sizes for each group, our analysis for workers born abroad has to be restricted to the period 2005-2010. Here, 2005 is the year of reference.

These trends do not apply to the evolution of occupational distribution of third-country nationals. In fact, the trend is mostly stable, except for two elements. First, employment in of unskilled manual workers peaked in 2008, when employment in this group grew by 60 per cent in comparison to 2005. This occupational group lost importance in 2009 and 2010 as a consequence of the crisis, and the destruction of unemployment in key sectors such as the construction. Secondly, a downward sloping trend can be observed among managers and professionals, where the number of employed in 2010 accounts for some 70 per cent of the size of this category in comparison to 2005.

**Figure 6: Evolution of the occupational distribution of the EU nationals, 2005-2010**



Source: Our calculations from the LFS (2000-2010). 2005 is the year of reference. Bulgaria and Romania are included in this sample.

Legend: The figure represents the evolution in percentage points from 2005 to 2010. In other words, the position a group occupied in 2005 is taken for a 100% and yearly changes are calculated using 2005 as the reference.

The trend for EU nationals is much more complicated to describe. Because of the inherent heterogeneity of this group, the lines show an equivalent increase in the weight of unskilled manual occupation from 2005 to 2008, led by the incorporation of Romanians and Bulgarians in the Spanish labour market. When the economic crisis triggered an increase in unemployment, the share of professionals and managerial occupations regained importance (EU15 nationals being predominantly represented in these two groups).

### 2.3. The Relationship between Qualification and Employment for Immigrants in Spain

Unemployment in Spain has importantly grown as a consequence of the current economic crisis. As we have explained before, many of the sectors leading the expansion of the Spanish labour market in 2000-2007 were very dependent on the business cycle, and also intense in labour. As a consequence, the economic downturn has affected them more importantly. Unemployment is these days affected workers from diverse profiles, but mostly the unskilled and young workers. Migrants are, of course, more exposed to the risk of unemployment both as a consequence of their age composition and the low level of qualification of some migrant groups.

LFS-based authors' calculations for 2000-2010 indicate that holding a university degree decreases the likelihood of unemployment for migrants of all nationalities, but more so in the case of Argentines, Moroccans and non-Chinese Asians. Black Africans shows the highest risk of unemployment in all educational categories. Yet, generally speaking it cannot be stated that in the period 2000-2010, having better education importantly decreased the risk of unemployment for immigrants of all origins.

Regression analysis confirms that the general importance of education for preventing respondents from unemployment has increased evidently in the case of the overall sample and the non-EU nationals. On the contrary, the effect of education for EU nationals (excluding Spaniards) is not significant in 2010 (when it was so in 2005). The reason for this is that EU nationals are scarcely affected by the worsening conditions imposed by the crisis on employment. Including basic explanatory variables in the controlled model has no impact for EU nationals.

### **3. Labour Immigration Policy: Filling the Gap?**

The Spanish labour immigration policies have been traditionally oriented towards a combination of two interconnected aspects: migration pressures and integration, and policies focused on recruitment of workers for sectors such as agriculture, domestic services or construction. The main characteristic of the Spanish case, until recently, was an increasing importance of the informal economy in the recruitment of foreign workers due to both widespread general acceptance for informal work, and the absence of legal access to the Spanish labour market for non-EU migrants.

Since the 1990s there were two main legal channels of entry into the Spanish labour market: through the Worker Quota System and the General Regime, and both have not been working properly.

Since 2000, the immigration policies in Spain evolved in two phases: 1) commencing with the Organic Law 4 in 2000 and 2) and initiating with the approval of the Royal Decree 2393 in 2004 on Immigration Regulations.

#### **3.1. Starting regulation: Laws 4/2000 and 8/2000**

Until 2000 the immigration regulation in place was ambiguous and soft. The dynamic at the time was very clear: growing inflow and increasing informal employment of migrants succeeded by regularizations. Market forces were the main source of internal regulation of foreign workers in the Spanish economy.

The needs of the economic sectors, coupled with lax regulation of the internal labour market allowed immigrants to enter Spain “through the back door”, find work in the informal economy and later receive legal status through regularization programmes. Five amnesties have been carried out in Spain since mid 1980's (1986, 1991, 1996, 2000-2001 and 2005) which have regularized the legal status of some 1.5 million people. According to official declarations, each process has been an attempt to simultaneously control the informal economy, reduce the numbers of unauthorized immigrants in the country and gather information about their profile.

The reforms started in 2000 with the main goal of facilitating regular access for foreigners to the Spanish labour market in order to reduce irregularities. They were based on two pillars:

The reforms started in 2000 with the main goal of facilitate foreigners' regular access to the labour market in order to reduce irregularity, and were based on two pillars:

- a. **Political Management:** The foreign worker recruitment was to be followed by the national authorities through all its phases; basically the General Regime system was created.
- b. **Regulation:** changes in the worker Quota System<sup>29</sup> transforming it into a real tool of regular entry in the country, with all foreigners already in country automatically excluded from the procedure. A new procedure established to determine the number and characteristics of quotas, and new emphasis was made on the development of a network of bilateral agreements with the countries of origin.

The new Quota System was based on two main criteria: the number of foreigners allowed into Spain and its labour policy-related features. The original Quota System intended to promote new avenues for legal entry, creating a collective system of access to particular economic sectors determined annually by the government. The number of jobs offered under this policy was a result of political evaluation of economic needs and agreements concerted between trade unions, employees associations, local and regional governments and the Spanish Ministry of Labour. Additionally, before work permits could be granted, the National Employment Institute (Instituto Nacional de Empleo, INEM) and the Provincial Commissions on Labour would issue a report on the nation's and regional's employment situation. The assessment of national needs for workers in several sectors has shaped, first de facto, and later de jure, the granting and renewal of the work permits in Spain since 1985 (Cachón, 2009).

The number of jobs offered annually under this quota policy stemmed from the policy consultations in the area of employment and migration (a consensus between a wide range of stakeholders), rather than a rigorous objective assessment of the real labour market needs. In this sense, the quota was a political number to generate consensus around migration policy, than a real estimate based on the Spanish economy and generated a mismatch between its rhetorical aims and the real needs.

In practice, the system functioned as an implicit regularization programme, as most applications were filled by irregular migrants already residing in the country. Quota policy was managed in the institutional framework of the Interministerial Immigration Commission and specifically under the jurisdiction of the Government Commission for Immigration Flows (Ministry of Labour).

Some authors have pointed out a general pattern of mismatching in the Spanish immigration policymaking between its formal restrictive admission policies and the actual labour demand (Izquierdo, 2001). Entry permits depended on evaluation of labour market needs, but the nature of this assessment and the administrative constraints had a major effect on the real migrant pathways to the Spanish labour market and their legal status. Since the labour market needs assessment "was undertaken by

<sup>29</sup> The model created in the 90' was transformed into a regularization mechanism already irregular in Spain.

the local public employment offices, legal admission of foreign workers depended on discretionary interpretations and practices of labour market tests” (Bruquetas et al., 2008). Bureaucratic and rigid procedures of management and blurred criteria for admission created uncertainty for employers and workers. This resulted in the emergence of a reactive and irregular immigration model (Izquierdo, 2001) and the implementation of frequent regularisation measures.

The Quota System reform proposed at the end of 1990s involved diverse actors in the administrative borders of the *provincia*:<sup>30</sup> trade unions, entrepreneurs, and local and regional authorities. The needs identified by these actors (by a special commission where information is gathered from the regional unemployment offices network and employer associations) were transferred to the Ministry of Labour.

The Ministry then made the formal proposal for the Quota System listed the sectors and *provincias* in which the demand was required. After this preliminary phase, the proposal was sent to the Major Council of Immigration Policies, a new advisory body<sup>31</sup> in which Autonomous Communities were present as well as the other Ministries implied. Finally, the Quota System list was approved by the Council of Ministries. Recruitment in countries of origin was implemented by the local authorities with priority workers to be hired from the countries with which Spain had signed bilateral migration agreements, such as Morocco, Colombia, Ecuador, Dominican Republic, Romania and Bulgaria.

This reform tried to improve on some of the limitations stemming from the prior management of the quota policy: the lack of transparency around real criteria to determinate the needs of workers for the Spanish economy and the weakness of civil society actor input in the final resolution. Additionally, a report of the Economic and Social Council (CES) highlighted that the number of jobs offers suggested by the National Institute of Employment never showed real labour market needs due to its limits as a genuine agency of unemployment management and labour intermediation (see CES, 2000 and 2004).

The document approved by the Council of Ministers presented a list of potential work offers by employers. In the Quota System the public authorities were responsible for the effective recruitment according to the list of work offers during the year of validity of each working quota list. The essential elements of this procedure were as follows:

- a. Recognition of competences on labour issues of the Autonomous Communities for the first time;
- b. The link between labour needs and the *provincial* labour market indicating that the labour market it is not homogeneous across the state territory;

<sup>30</sup> *Provincia* is an administrative territorial division in an inferior level than Autonomous Communities, but of a superior level than the local authorities.

<sup>31</sup> Major Council of Immigration Policies is an agency with the function of coordination created in 2001 in response to the demand for a consolidated approach to decision-making and implementation of immigration policy in Spain. It focused mainly on coordinating several institutional processes at different government levels involved in implementation of immigration policies. Its composition included members of different ministries (Interministerial Commission of Migration), the regional and local governments.

- c. The new participation of trade unions and entrepreneurs initiated the orientation of immigration policies towards a labour market guidance of migration management (Aparicio and Roig, 2006).

The system was in force until 2006 and showcased poor outcomes. Every year the quota offered around 20,000 jobs, but the number of annual foreigner entries using the data provided by the Residential Variation Statistics exceeded 200,000.<sup>32</sup> The reasons for these deficiencies in assessment can be found in the:

- reluctance of trade unions to facilitate immigration,
- the limited representativeness of the employer associations, in particular with regard to diverse firm sizes,
- and the weight of informal labour market.

In practice, the gap between the policy and the labour market reality perpetuated the choice of informal paths of access by migrants, and the overall reactive responses to economic needs. As Oliver pointed out (2006), “Spain has taken a long time to realise that immigration is linked to the labour market”.

The Government in 2003 made attempts to fix the systemic dysfunctions by adopting several measures, such as a new form of recruitment of domestic workers.<sup>33</sup> However, the system continued to fail due to political constraints, its inflexibility and the lack of adaptation of the bureaucracy to the new system. Furthermore, admission through the General Regime were closed<sup>34</sup> by a political decision.

Additionally, the component of recruitment through bilateral agreements was not working as planned. The bilateral agreements were managed in two separate phases in both the country of origin and destination. The country of origin was in charge of candidate selection, which in most cases (i.e. Morocco or Latin American countries with Poland as a rare positive example) was a failure due clientelistic recruitment policies, limited collaboration of these countries on agreement implementation, and the short-staffed Spanish consulates and embassies. The main labour market consequence of this process was a slight substitution of traditional Moroccan and Latin American immigrant groups by the new migrants from Central and Eastern Europe (Ferrero-Turrión, 2005).

### 3.2. Managing Labour Migration Flows (2004-2010)

In 2004-2010, one Law (L.O. 2/2009) and one Immigration Regulation (R. D. 2393/2004) have been approved that have implied an immigration system mainly based on the

<sup>32</sup> The Residential Variation Statistics (Estadística de Variaciones Residenciales) is elaborated based on the new registrations and registry removals in the municipal registers of inhabitants due to changes of residence. Migratory annual flows are thus obtained, both at a domestic level, between different Spanish municipalities, and at a foreign level between Spanish municipalities and foreign regions (National Statistics Institute).

<sup>33</sup> In 2003, for the first time and together with the general decree on the annual quota, a specific number of stable jobs were offered for domestic service recruitment. Public Employment Services was in charge of the procedure. The initial job offer had to be presented in the PES administrative unit before the worker's arrival in Spain. The responsibility for the final contract signature and presentation to the authorities was the responsibility of the employer. This contract was acting as a proper residence and work permit.

<sup>34</sup> Since 2002 it was expressly ordered that any visa to work on any requests on this regime were denied while the quota system was opened. Even though some Justice Courts considered this act illegal, between 2000 and 2004 the entrance to the labour market via General Regime was *de facto* closed.



national labour market context. The new tools incorporated in the system have improved the link between legal migration and labour market needs.

The main features of the 2004 Immigration Regulation included some important modifications to the existing tools and new mechanisms.

The changes introduced to the Quota System included: the possibility of modifying the number of available jobs through the course of the year; the provision to process only stable job offers (contracts lasting at least one year) and the creation of job-seeking visas (two categories: for the children or grandchildren of Spanish citizens, and for immigrants specializing in areas with a serious shortage of workers). The number of job offers was to be negotiated between the Spanish Government, the Autonomous Communities, the Trade Unions and Employer Associations, as part of the Tripartite Labour Commission of Immigration. The acquired number of stable job offers was always provisional and could be modified through the year depending of the needs of the labour market.

In 2007, which saw strong economic growth, 27,034 stable jobs were offered through the Quota System, along with 455 visas for domestic work and 500 visas for children and grandchildren of Spanish citizens to search for jobs. The crisis has negatively affected this process. In 2008, the number of stable jobs was reduced to 15,731, a number that would be further decreased by 90 per cent in 2009, when the quota shrank dramatically to a mere 901 job offers. For 2010 the offering constituted just 168 stable jobs offers.

Furthermore, the reform opened the General Regime for admission with the objective of enabling employers that wished to seek foreign workers themselves to do so at any time of the year by bypassing the Quota System. The procedure would nevertheless be subject to a labour market test.

In the General Regime, applications for migrant residence and work are evaluated on an individual basis following objective criteria such as the negative labour market test; a guarantee of stable employment; enterprises or employers being having kept their Social Security payments in order; working conditions being on par with the national occupational and sectoral standards; and the worker having of relevant qualifications, having no penal history and not being an irregular on Spanish territory.

By the 2004 Immigration Regulations, a new recruitment system was incorporated in the General Regime and became operational in July 2005 – the so-called Special Catalogue of Vacant Jobs. The Catalogue listed all occupations that needed to be covered by workers and could be filled either by Spaniards, EU nationals or third-country nationals with a valid work permit.

The Catalogue is elaborated by Labour Public Services and is approved and renewed every three months. It is disaggregated by province, island in the cases of Balearic and the Canary Islands, the autonomous cities of Ceuta and Melilla, and by sector. The Catalogue lists all vacancies available in the national labour market. This tool speeds up the General Regime process, because it avoids the need to publish job offers by the employer. The presence of a vacancy in the Catalogue implies that an employer may manage the residence and work permit of the foreign worker.

These modifications have established the new General Regime as the main path to immigrant labour market access, due to its flexibility and its facilitation of work permits. Besides, the combination of the Regime with the reformed Quota System for the first time provides with appropriate channels for either an individual or general offers to better link labour market needs and migration realities.

Both the General Regime and the Catalogue have showed to be very flexible and adaptable mechanisms for different economic situations. While in 2006 120,324 initial permits of residence and work were issued through the General Regime, in 2007 178,340, and only around 17,000 in 2010 following the crisis. The Catalogue contained 488 occupations in the first semester of 2008, and only 50 in the first semester of 2011.

Another new instrument the Large Enterprise Unit was created in 2007 to facilitate recruitment of highly qualified migrants by the largest enterprises based in Spain. Its main objective is to guarantee more effectiveness and speed in managing work permit process. The Unit has already processed around 10,000 applications. The trade unions disagree with the need for this body arguing that it creates inequalities among foreign workers.

The latest reform of the Immigration Law<sup>35</sup> took place in December 2009, in particular the modification of its articles 19 and 21 pertaining to the labour market. These changes allow the spouse and children of older than 16 having entered Spain through family reunification to access the labour market upon arrival without a labour market test. This measure seeks to avoid economic dependency on the sponsor, and to recognize family migration as an important source of foreign labour on the Spanish labour market.

Other modifications in the Law that would support labour market integration are focused on skilled workers and transpose the respective EU legislation: a new residence and work permit for highly skilled workers (EU Blue Card), and a new regulations pertaining to researchers. Both were approved by the Council of Ministers in April 2010. Another set of amendments concerns new competences for the Autonomous Communities that intends to expedite issuance of permits.

Besides the labour market integration provisions, this new Law meant to consolidate a national immigration policy based on a coordinated decision making process through 1) the Tripartite Labour Commission on Immigration Issues that since 2005 gathers trade unions, employers and immigrant organizations,<sup>36</sup> and 2) the creation of a Sectoral Conference on Immigration<sup>37</sup> with the new law this is in charge of coordination among all state administrative bodies – General Administration and Autonomous Communities.

<sup>35</sup> Law 2/2009 of December, 11, reforming the Law 4/2000 of January, 11, on Rights and Freedoms of Foreigners and their social integration in Spain (*Ley Orgánica 2/2009, de 11 de diciembre, de reforma de la Ley Orgánica 4/2000, de 11 de enero, sobre derechos y libertades de los extranjeros en España y su integración social*).

<sup>36</sup> The creation of this Commission was part of a more general policymaking approach based on Social Dialogue. It was created in 2005 on the basis of Immigration Regulation 2393/2004. The Commission is a collegial body of an advisory character which the main objective of joint immigration management by Government and the social partners (trade unions and employers). The role of this Commission is especially relevant in the approval of the Special Catalogue of Vacant Jobs and the Quota System (now Collective Management of Recruitment in Origin), as well as in reporting on legal changes or regulations which affect labour market or labour relation.

<sup>37</sup> This Sectoral Conference was created through 2/2009 Law to substitute the Superior Council of Immigration Policy. Both bodies were in charge of the coordination and cooperation among the different administrations present in Spain. Its main objective is to reach as much coherence as possible among the state bodies with competences in immigration policies within the General Administration and Autonomous Communities.

## 4. Conclusions

Regulation of migration flows need to be considered in the context of the general dynamics of the Spanish economy and the evolution of worker qualifications, which include:

- poor regulation of the domestic labour market,
- the predominance of small and medium enterprises,
- a weak tradition of innovation,
- and a relatively high level of irregular employment and economic activity.

Spain witnessed a modernization and transformation of its productive structure from agriculture to services. The Spanish economic growth in recent decades was based on sectors that are highly dependent on the business cycle (such as construction, trade, transport, house services and tourism) and despite strong economic growth, labour productivity growth has been modest.

The insertion of immigrants into the national labour market has been concentrated in certain economic sectors (construction, hospitality and tourism, agriculture and domestic services), not only due to the intrinsic needs of the national labour market, but also to the active policies of channelling the workforce towards these sectors, especially the Spanish Quota System.

The increasing qualifications of the native population and the high level of standards of working conditions and wages enjoyed by a part of the native population created some labour niches in low-skilled occupations to be filled by foreign workers. These processes explain why qualification has not been a key factor in the recruitment of foreign workers in Spain.

Spanish regulation and policies have taken a long time to understand and adapt to the links between immigration flows and labour market needs. In the 1990s the national policy resulted in a general pattern of mismatch between the real labour demands and labour immigration regulation.

Legislative changes taking place in Spain since 2000 have advanced the synchronization between immigrant admissions and labour market needs. The reform of already existing instruments, such as the General Regime and the Quota System allowed adaptation of the admissions mechanisms to the business cycle. Some good practice examples from Spain include the permanent agreement and collaboration among relevant social partners and the local and regional authorities to jointly identify labour market needs.

Changes in the model and philosophy of the immigration system have obliged the authorities to incorporate new instruments to differentiate by skill level during admission procedures. In this regard, the concept of the Large Enterprise Unit fits well with the rationale of the EU Blue Card Directive, and its incorporation into the Spanish legislation, and provide the basis for recruitment of highly skilled migrants should new economic and labour market conditions create opportunities for this group.

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# SWEDEN

Lucie Cerna<sup>38</sup>



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## 1. Introduction

Family reunification and humanitarian migration were the main immigration channels in Sweden in the 1980s and 1990s. Labour immigration remained insignificant following a ban on recruitment since 1968, and no major policy changes to the overall fairly restrictive labour immigration regime took place until 2006. The government then proposed a new labour immigration policy, which is in force since 15 December 2008.

The 2008 legislation spearheaded an employer-driven labour immigration policy. Under the previous system, too many governmental agencies were involved in determining labour shortages and granting work permits, so that actual shortages did not always correspond to those on the shortage list and respectively to the employer needs. The new 2008 system has allowed employers to recruit third-country nationals to fill their vacancies, if they could not find suitable Swedish or European Union (EU) workers. Employers gained the right to decide on their labour market needs and fill their vacancies accordingly. There are no caps or quotas in place to determine how many labour migrants can enter the labour market.

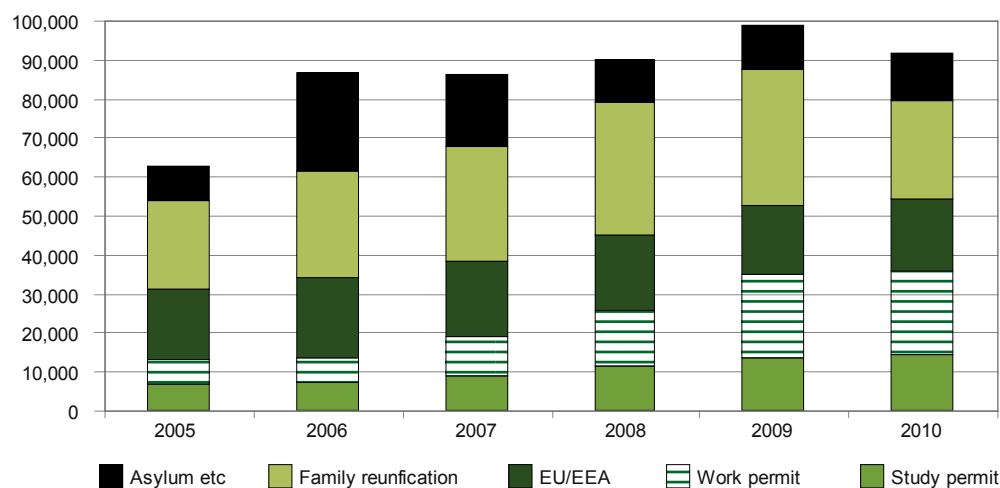
Under the previous government a commission was established to examine labour and skills shortages and the potential need for labour immigration. The main reason for the 2008 reform was “first, the recognition that labour shortages in Sweden could not be filled by people living in Sweden or in other EU countries. Second, the population was rapidly getting older, and fewer people of working age would have to support an increasing percentage of the population in the near future” (Billström, 2009).

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As a result, labour immigration increased since 2008, especially for third-country nationals. Nevertheless, family reunification and asylum-seekers still make up the largest proportion of immigration to Sweden. EU/EEA migration has remained fairly constant during 2005 to 2010 (around 18,000/19,000 per year). Overall, immigration reached almost 100,000 new entrants in 2009, up from 40,000 only ten years earlier in 1999 (Migrationsverket, 2009).

**Figure 1: First residence permits granted, 2005-2010**



Source: Migrationsverket 2011a.

The Swedish government recognizes that labour immigration can only be complementary to other measures in Sweden which are aimed at increasing employment and broadening participation (EMN, 2010).

## 2. Identification of labour and skill shortages in Sweden

Various methodologies are used in Sweden to establish labour shortages and labour market needs forecasts. They range from employers' surveys to statistical analyses based on graduation and retirement rates. Both macro-level data (for labour shortages) and micro-level labour market information (for skill shortages) are used for policy development and implementation. Shortages are assessed nationally, but also on the level of individual sectors and regions (county, municipality).

A range of actors are engaged in the forecasting of labour market developments in Sweden but key agencies are Statistics Sweden (SCB), the Public Employment Service (PES) and the Migration Board. Their publications are used in long-term studies and also for planning by authorities, schools and individuals (Lindskog, 2003).

As of March 2011, 63 occupations were on the shortage list. Shortages occur at both high and lower skills levels. Some occupations (such as doctors, dentists, psychologists, teachers and nurses) are regulated and thus require authorisation or certifications.



Comparing the current shortage list to previous ones from 2009 and 2010, the number of shortage occupations has increased substantially (from 35 occupations in 2009 and 49 in 2010) not least due to the economic recovery.

PES produces occupational forecasts twice a year analyzing the labour market situation and future prospects for almost 200 occupations. For the forecasts, the PES assesses interviews with 12,400 private employers, municipal authorities and county councils. A 'shortage index' is then used to quantify recruitment needs, using a weighted average value from 1 to 5. It identifies the occupations (occupational groups) where there is a shortage of applicants. Before the new legislation on labour immigration was introduced (December 2008), this shortage list comprised a criterion for who could get a work permit in Sweden (EMN, 2010).

The SCB publishes regularly reports on job openings and unmet labour demand. It also produces labour forecasts, including of long-term perspective until 2030 in its 'Trends and Forecasts' publication (SCB, 2009b). Among the relevant assessments by the SCB and other agencies are the following:

- Short-term forecasts "Labour Market Tendency Survey" provide information on the current labour market situation and its future prospects for the coming years for 71 educational programme. Every fall some 10,000 questionnaires are sent to selected 7,000 employers inquiring on a range of issues, including their assessment of the supply of potential employees and the training plans in the perspective of one and three years (SCB, 2010). In the 2010 Survey employers thought that there was a good supply or a balance of job-seekers without occupational experience for eight out of ten educational groups. Employers reported that there was still a shortage of candidates with occupational experience for most of the educational groups, such as engineers, experienced doctors and childcare workers (SCB, 2010).
- PES produces occupational forecasts twice a year that analyze the situation in the labour market and future prospects for almost 200 occupations. The forecasts are based on interviews with 12,400 private employers, municipal authorities and county councils (EMN, 2010). The PES' research department engages also in a macroeconomic assessment and industry forecasts that contribute to the overall analysis (PES, 2010).
- The Svensk Näringsliv (SN) – Confederation of the Swedish Enterprises – publishes *ad hoc* reports with the aim to improve the understanding of requirements and demands on future labour market from the perspective of private employers. Most studies are based on interviews with the member company needs (Lindskog, 2003). In 2002 two SN members published a report stating that employers were dissatisfied with the Swedish labour immigration system due to facing considerable difficulty hiring non-EU workers. In fact, the policy was assessed to be so restrictive that it kept migrants deliberately away from the Swedish borders (Ekenger and Wallen, 2002, cited in Bucken-Knapp, 2007). The 2011 the first SN economic survey indicated that while the national unemployed rate was at same level in 2005 and 2010, there were about 40 percent more unfilled vacancies in 2010 (SN, 2011).

- The National Agency for Education (NAE) is responsible for conducting forecasts in the fields of childcare and education.
- The Swedish Association of Local Authorities and Regions (SALAR) represents the governmental, professional and employer-related interests of Sweden's 290 municipalities and 20 county councils. The Federation produced forecasts on the municipal level on various issues, such as healthcare, based on the current personnel data and assumptions on the future recruitment possibilities (Lindskog, 2003).

PES advertises notified vacancies, but employers are since July 2007 no longer obliged to report vacancies to PES. Therefore, only about 30 percent of all vacancies are publicized via PES (EMN 2010, 24). In the fourth quarter of 2010, the average recruitment time for all private sector workers varied by both occupation and geographical location. The longest recruitment times were observed for the IT specialists (about 1.7 months) and professionals such as lawyers, economists, veterinarians and technicians (about 1.4 months). The shortest recruitment time was reported in the hotel and restaurant sector (0.1 month). In terms of regions, Stockholm has the average recruitment time of 0.8 months, while the lowest period is recorded for North Central Sweden and Central Norrland (about 0.4 months) (SCB, 2011a). SCB data indicates that in the fourth quarter of 2010, almost 50 percent of vacancies (about 8,900) were registered in the region of Stockholm (SCB, 2011a).

Small companies with one to nine employees have the most vacancies, followed by those employing between 10 and 49 workers. It appears to be difficult for small companies to fill their vacancies as they might not have access to the same resources and know-how for recruitment, and be could be less attractive to potential employees than larger companies.

Information on the vacancies and issuing work permits for migrants is available at the regional, county and municipality levels. Regional and local authorities identify labour and skill shortages, and the data are then passed on to the SCB Statistics Sweden, Swedish Migration Board and other relevant authorities.

### 3. Migration and Labour Market Analysis in Relation to Public Policy

Labour market analyses by various bodies seem to have influenced the Swedish policymakers, in particular the Department for Migration and Asylum Policy of the Ministry of Justice in designing the 2008 legislation.

No changes were implemented with the economic crisis as the system is considered to be self-regulatory. Sweden was one of the three EU countries that did not impose any transitional restrictions on labour immigration from new EU Member States in 2004. Nevertheless, Sweden did not receive many highly skilled EU immigrants for various reasons, including the limitations of the Swedish language. By 2007 over 10,000 migrant workers from the new EU Member States had come to Sweden (Gerdes and Wadensjö, 2008), compared to over a million workers headed for the United Kingdom. The evidence of the small number of EU migrant workers helped to secure the Swedish

Parliament's approval to the proposal for opening Sweden's borders to more labour immigrants.

For many years, the ruling governments were opposed changes in the labour migration policy. In late 2001, employers tried to negotiate the relaxation of labour migration restrictions, but were criticised by the labour market boards, the Social Democratic government and the unions. Even though the main union confederation, LO had been mostly concerned with the low-skilled immigration, any changes to the labour immigration policy were resisted.

In 2002 the pressure from a range of political parties started to mount. The next year, the opposition parties formed a powerful alliance and established a parliamentary committee on labour migration to review the immigration legislation. Several reports by SN, PES and Statistics Sweden indicated that Sweden suffered from labour shortages in some sectors already (SCB, 2005). While the trade unions finally acknowledged in 2003 the need for labour immigration to help fill labour shortages, they pushed for the continued tripartite shared control of labour migration policy and issuing the migrant work permits by unions, employers and the government. LO was supported by the two other union confederations, TCO and SACO that favoured a centralized system and very limited labour immigration in shortage occupations (Cerna, 2009).

The 2006 Commission Report (*Arbetskraftsinvandring till Sverige. Slutbetänkande av Kommittén för arbetskraftsinvandring*) concluded that no widespread labour shortages were observed in Sweden, but there could be shortages in specific occupations, sectors (such as healthcare and education), and regions (Ministry of Justice 2006). The report proposed: 1) extending the work permit to 24 months with the possibility of renewal after 48 months, then conversion to permanent residence (after four years); 2) linking labour immigration to the labour market shortages (established by the Swedish Migration Board and PES, based on graduation and retirement level statistics, as well as employers' surveys); 3) letting the Labour Market Administration establish a shortage list and take decisions in consultation with social partners; and 4) tying the work permit to a specific occupation and a specific employer during the initial permit period. If the person was still in the same employment when the work permit was revisited, the extended permit would be subsequently tied only to the occupation (EMN, 2006). The link between the work permit and the occupation and employer was intended to ensure meeting labour requirements by the employer.

The Committee also found that it was important for Sweden's competitiveness to continue offering a generous policy for labour migrants to bring their families into the country; but also to utilize existing talent more effectively by activating disadvantaged groups on the labour market (Ministry of Justice, 2006).

To sum up, the 2006 Committee Report called for greater liberalisation of labour immigration, which was supported by the new centre-right coalition government. The Committee report and the subsequent legislative proposal were often labelled as targeting highly skilled immigration, but the fact that they concerned workers of all skill levels. The legislative proposal was largely based on the recommendations of the Committee, but spearheaded the approach that would allow employers to decide on their labour needs, and request work permits for migrants without the approval of the unions. It supported the protection of the Swedish workers by reaffirming

the need to guarantee the equality of wages and working conditions for immigrant and native workers. Consultation on the proposal ran until November 2007 and the Parliament adopted it in November 2008. The law came into force on 15 December 2008.

According to the new legislation, the trade unions retained the right to state their opinion on the new recruitment within five days. For employers it is sufficient to prove that they advertised without success through the Swedish Labour Market Board and the European Union's EURES system, and that the remuneration and working conditions were in line with sectoral collective agreements. Immigrants initially receive a work permit for two years and can apply for an extension of another two years if still employed at the renewal date. Labour immigrants can obtain permanent residency after four years of legal stay in Sweden. The permit is restricted to a specific occupation and employer for the first two years. If the residence and work permit is extended after two years, it is restricted only to a specific occupation. If the employee changes occupations, he/she must apply for a new work permit. In case the migrant loses the job, he/she can look for other employment for three months before having to leave the country. The labour migrant is allowed to bring family members to Sweden from the start and they can also receive work permits. Importantly, migrants can also leave Sweden for up to 12 months without compromising their status and the pathway towards permanent residency (Migrationsverket, 2009).

Prior to the 2008 reform, the PES had the central role in assessing labor shortages, and reflecting this data in granting decisions on issuing work permits. Currently, the PES is no longer able to argue that the particular labour is already available in Sweden, other EU/EEA countries or Switzerland. The new labour immigration regime is based on the assumption that the employers know best what they need. As employers have difficulties in finding suitable candidates with the right match of skills in a wide range of occupations, the system employs a non-sectoral approach to labour immigration (Carlander, 2009). The role of the government is to regulate the labour market, and offer the same salaries, insurance and employment protection to all workers to avoid labour exploitation and salary dumping. The unions check whether the collective agreements are upheld where they exist. In other cases, the salary cannot fall under the minimum wage in the occupation.

Even though the new immigration system is demand-driven, shortage lists are still being used for various purposes. The shortage list has a positive effect for foreigners already staying in Sweden on a visa with a referral to visit an employer for an interview. Normally an employee should apply for a work permit in his or her home country and wait there until a permit is granted. For occupations that are on the list it is instead possible for the employee to submit the application in Sweden (and wait for the decision from the Migration Board without leaving the country). Applications for work permits by candidate employees with a job on the shortage list are also handled with priority (personal communication, Migrationsverket).

The government also simplified the rules for foreign students who wish to stay and work in Sweden upon the completion of their studies. Asylum-seekers who have found employment of the duration of at least six months can now apply for residence and work permits (Ministry of Justice, 2010). The government thus considers other types

of immigration (family, humanitarian and student) in assessing the potential of migration to fill identified labour shortages.

As the new immigration policy has only been in force since 15 December 2008, it is hard to assess its impact, although an initial assessment requested by the government is currently underway. The Swedish think-tank FORES published a report on the first 100 days of the new system in March 2011 (Rosenqvist, 2011), which highlights several challenges, including in the area of the inter-agency cooperation in provision of integration services, and the delivery of the integration programmes (IOM, 2011). Evidence also suggests that employers outside the main cities (Stockholm, Malmö and Göteborg) and the metropolitan areas, and small employers continue experiencing difficulties in attracting suitable workers despite the liberalization of immigration rules.

Sweden is experiencing shortages for a number of causes, which are also tackled in by the public policy. For instance, there is insufficient interest of young people in engineering training (PES 2010). In addition, trade union Landsorganisationen i Sverige (LO) claims that Sweden has neglected vocational training and apprenticeships that resulted in a labour shortage in less skilled occupations (Andersson, 2008). Regional labour mobility is also insufficient. Other proposed measures to address shortages include increasing the geographical mobility of workers within Sweden, and active labour market policies incentivising Swedish employers to hire national workers/immigrants already in the country through tax breaks. In addition, the government seeks to introduce measures in order to encourage unemployed people and those on long-term sick leave back to work (Andersson, 2008). Another area of effort includes validation of jobseeker education, training and skills (EMN, 2010).

## 4. Labour market position of migrant workers

The policy change in 2008 also brought about more elaborate migration data collection that allows for examination of the migration phenomenon by age, occupation and nationality.

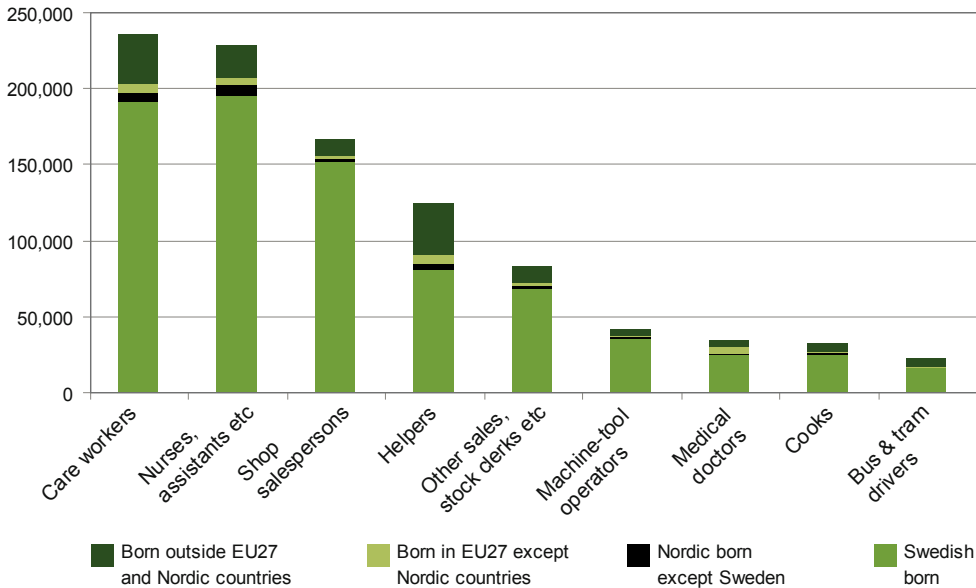
Third country nationals – those born outside the EU and the Nordic countries – are concentrated in several less skilled occupations: care workers (32,400 in 2009), helpers (33,500 workers in 2009), nurses (21,900) and other sales assistants and stock clerks (11,300) (Figure 2). The number of third-country nationals in highly skilled occupations (for instance, 4,200 medical doctors in 2009) is smaller.

Among bakers, pastry chefs and confectionary makers 36.6 per cent of workers were born outside the EU27 and the Nordic countries. There are many third country workers among helpers and cleaners in offices and hotels (32.5%) and bleaching, dying and cleaning machine operators (26.5). Among highly skilled occupations, third-country pharmacists constitute 19.9 percent of all workers in this occupation.

Based on the 2003-2004 survey of population aged 16-64, OECD reported the over-qualification rate of 6.5 per cent for the native-born, in contrast to 16.1 per cent for the foreign-born working age population. Another study indicated that among the foreign-born, 30.6 percent were overqualified in 2003. Women and immigrants, especially from Eastern Europe and Africa, Asia, and Latin America, were overrepresented among all

overqualified workers. The same study found that for the Sweden-born women and Western European immigrants the probability of overqualification appears to decrease with time. This was not true for non-EU immigrants, which could be indicative of discrimination (Thorkelson, 2010).

**Figure 2: Occupation of third-country workers in Sweden, 2009**



Source: Swedish Occupation Register with statistics 2009

Note: SSYK4 according to the Swedish Standard Classification of Occupations (SSYK96)

Overqualification is a significant problem for third-country nationals since their qualifications are not always recognised. Sweden has invested resources to support language acquisition for immigrants, as well as to improve their qualifications. With the introduction of the Anti-Discrimination Act the country is also clamping down on discrimination (OECD, 2010).

Swedish-born workers generally fare better in the labour market (Table 1). The unemployment rate (8.3% of national rate) is higher for the foreign-born workers (15.1%) than for Swedish-born ones (7.1%).

Data also indicates some changes in 1995-2008. For instance, the employment rate for foreign-born men increased from 51.7 per cent in 1995 to 69.9 per cent in 2008, and respectively from 50.0 to 58.7 per cent for foreign-born women. Furthermore, the unemployment rate decreased for foreign-born men from 28.1 per cent in 1995 to 11.5 per cent in 2008, and respectively for the foreign-born women from 19.9 to 12.9 (Table 2). These data seem to suggest that either the government implemented successful integration measures and/or Sweden admitted immigrants better geared towards success in the labour market.

**Table 1: Labour market outcomes of the Swedish and foreign born working age population (15-74 years of age) by labour force participation and sex, 2010, absolute figures in thousands**

Population category	Employed	Unemployed	Active	Inactive	Total	Unemployment rate	Activity rate	Employment rate
<b>Total</b>	<b>4,499</b>	<b>408</b>	<b>4,907</b>	<b>2,048</b>	<b>6,955</b>	<b>8.3</b>	<b>70.6</b>	<b>64.7</b>
Swedish born	3,860	295	4,154	1,664	5,819	7.1	71.4	66.3
Foreign-born	639	114	753	384	1,136	15.1	66.2	56.2
<b>Men</b>	<b>2,539</b>	<b>222</b>	<b>2,581</b>	<b>935</b>	<b>3,516</b>	<b>8.6</b>	<b>73.4</b>	<b>67.1</b>
Swedish born	2,032	161	2,192	782	2,974	7.3	73.7	68.3
Foreign-born	327	62	389	153	542	15.9	71.7	60.3
<b>Women</b>	<b>2,140</b>	<b>186</b>	<b>2,326</b>	<b>1,113</b>	<b>3,439</b>	<b>8.0</b>	<b>67.6</b>	<b>62.2</b>
Swedish born	1,828	134	1,926	882	2,845	6.8	69.0	64.3
Foreign-born	312	52	364	231	594	14.3	61.2	52.5

Source: SCB Statistik årsbok, 2011b.

**Table 2: Labour market outcomes of the Swedish and foreign born working age population (15-74 years of age) in 1995-2008, per cent**

	1995	2000	2007	2008
<b>Employment rate</b>				
Native-born men	73.2	75.8	78.0	77.9
Foreign-born men	51.7	59.6	68.1	69.9
Native-born women	71.7	73.2	74.3	74.5
Foreign-born women	50.0	54.7	58.6	58.7
<b>Unemployment rate</b>				
Native-born men	8.8	5.1	5.1	5.1
Foreign-born men	28.1	13.5	11.7	11.5
Native-born women	7.0	4.3	5.5	5.5
Foreign-born women	19.9	11.2	12.6	12.9

Source: OECD, 2010

Foreign-born persons who have lived in Sweden for a long time have improved their situation in the labour market and reached a better occupational position (Rooth and Ekberg, 2006).

Hedberg (2008) provides an excellent summary of several empirical studies on labour market integration of foreign-born nationals. These studies show, for example, that the employment gap between natives and immigrants in the Swedish labour market can be explained by ethnic discrimination. Migrants also have lower exposure to social networks which has an impact on their access to the labour market. Foreign-born workers are overrepresented in low-skilled and low-wage occupations due to the ethnic sorting in the labour market (Hedberg, 2008). Clearly, this indicates the need for continuous integration policy efforts to ensure that the goals of the new immigration policy are achieved.



## 5. Conclusions

As many other high-income countries, Sweden experiences labour and skills shortages in a variety of sectors and occupations, ranging from engineers and IT specialists, doctors and nurses to bricklayers and shop assistants. The new employer-led immigration regime, in force since 15 December 2008, promotes labour immigration is one of the means to fill labour shortages. The new policy states that “labour demand in the labour market is the driving factor and that human resources are emphasised as an important component of global migration” (EMN, 2010).

The Swedish approach comprises a number of good practices, but also some potential problem areas.

To encourage applications from Swedish and EU nationals, employers have to advertise the job offer for ten days, and adhere to the established collective agreements. Trade unions have a more limited role in comparison to the previous system, but still have an opportunity to comment on the application and the contract. Some unions are worried that the amount of time they receive to comment is insufficient, which might leave too much of the decision-making power in employers’ hands and potentially harm the labour market options of the Swedish workers. In addition, not every occupation has union representation. Nevertheless, the government provides special incentives through active labour market policies to encourage employers to first recruit among the unemployed.

Many countries do not have such comprehensive social partnership between employers’ associations, unions and the government, especially for both high- and low-skilled occupations. The challenge with such a flexible labour immigration policy, where the decisions are delegated to employers is to prevent social and wage dumping as a result of hiring migrants.

Another concern is that employers do not invest more in training and education of Swedish students and workers because they have an easy access to labour migrants. Therefore, it is important for the government to stress that labour immigration is one of the means to respond to labour and skills shortages, and should not be considered a substitute for other labour market and social policies.

Some of the practices and labour immigration rules could be transferred to other national policies. The flexible, demand-driven approach to labour immigration is a noteworthy approach to fill shortages and respond to some of the mismatches and problem areas. Employers ‘know best what they need’ and permits are granted by the Migration Board, instead of the previous procedure of being approved by several agencies. It is system that adjusts itself to the economic cycle, as the scope immigration is directly linked to the availability of vacancies and adapts in turns to economic growth and recession.

Importantly, Sweden offers migrant workers a possibility to settle permanently with their families. For small and open economies, this might be a step forward in attracting labour migrants, including highly skilled workers that value favourable admission mechanisms and set of rights that extends to their family members. If the foreign nationals stay longer than 12 months, they have to register with the population register and have access to the same welfare rights as the Swedish nationals.



Another strong point of Swedish labour immigration system that it acknowledges labour shortages in all skills levels in contrast to many countries that focus only on attracting highly skilled immigration. Such approach discourages irregular migration and realistically reflects the nature of labour shortages in Sweden.

Overall, many of the Swedish practices are applicable to other countries. The parallel focus on domestic measures such as training/education of workers, and labour immigration policy is an appropriate for addressing labour shortages in a comprehensive manner, including their root causes. In order to limit social dumping, it is necessary for governments to guarantee the equality of salary and working conditions for foreign and native workers. Good communication between migration management agencies and statistical bodies determining labour market needs is also a crucial element of the system, as are continuous efforts to improve provision of integration services.

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# UNITED KINGDOM



Alex Glennie<sup>39</sup>

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## 1. Introduction<sup>40</sup>

The Government of the United Kingdom (UK) has continuously expressed a preference for upskilling and training the domestic workforce as a means of filling shortages, rather than using migration policies to this end. In practice however, migration – through both irregular and regular channels – has and will continue to play an important role in filling certain skills gaps and labour shortages.

The UK's decision to open its labour market to workers from the new EU Member States in 2004 led to a rapid, substantial, and largely unpredicted wave of immigration. Although evidence suggests that this rapid migration flow had largely positive impacts on the UK economy and very limited impacts on wages or employment rates among British workers, it did lead to high levels of public and political concern about labour immigration. Partly in response to this, in recent years the UK government has become more strategic in the way it identifies labour and skills shortages that might be sensibly filled by the admission of immigrants, and work/study entry routes from outside the EEA were rationalised into a Points-Based System (PBS) in 2008.

Before the introduction of the Points-Based System, non-EEA economic migrants seeking to enter the UK were regulated through a number of schemes that granted temporary permits to work in the UK, the largest of which was the work permit system. Under the 1971 Immigration Act, a work permit would be granted to a specific employer for a named person for a specific job. Skilled workers were able to apply for a work permit as long as they held a valid job offer from a viable employer in the UK and were able to accommodate and support themselves and any dependants without recourse to public funds. Work permit holders were then able to apply for their dependants to join them in the UK, and their dependants were allowed to work in the UK without restrictions.

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<sup>40</sup> Section 2 draws on data compiled for a previous ippr LINET country report for the UK (see LINET 2010a).

Between 2002 and 2008, another channel for migration into the UK was the Highly Skilled Migrant Programme (HSMP), a scheme that was designed to allow highly skilled people to move to the UK to look for work or self-employment opportunities. It was different from the standard UK work permit scheme then in place in that applicants did not need a specific job offer in order to enter the UK.

For specific industries that faced seasonal shortages, a few routes also allowed the temporary entrance of low-skilled workers. The Sector Based Scheme (SBS) allowed UK-based employers to recruit low-skilled workers to vacancies in the food manufacturing sector that cannot be filled by resident workers, while the Seasonal Agricultural Work Scheme (SAWS) allowed farmers and growers in the United Kingdom to recruit low-skilled overseas workers to undertake short-term agricultural work. Farmers and growers who participate in the SAWS scheme are allowed to employ a fixed number of overseas workers through the scheme each year for a maximum of six months (with the quota for 2010 and 2011 having been set at 21,250 places). These schemes have been maintained alongside the PBS, but affect small numbers of workers since they are only open to Bulgarian and Romanian nationals.

The pre-2008 arrangements for the admission of skilled non-EEA migrants were largely based on a ‘trust the employer’ approach. Under this system, British employers had to advertise skilled jobs and undergo a labour market test in order to hire migrants<sup>41</sup>, but there were no limits on the numbers allowed into the country and little oversight of employer practices. In a period of fast economic growth, these relatively flexible admissions criteria resulted in a tripling of the number of work permits issued, from less than 30,000 in 1995 to almost 90,000 in 2007 (Martin and Ruhs, 2010).

However, the government’s desire to link migration policies more explicitly to the UK’s skills needs, coupled with an increasingly negative public and political discourse around the influx of large numbers of migrants, prompted it to carry out a fundamental rethink of the rules around admission. In 2008, this led the UK to adopt a Points Based System for managing the migration of non-European Economic Area (EEA) nationals into the country for work, training or study, which includes five immigration channels/tiers:

- **Tier 1** is comprised of highly skilled individuals who can contribute to growth and productivity. General entry under Tier 1 requires the applicant to satisfy point criteria in terms of age, qualifications, previous earnings and previous work experience or qualifications gained in the UK. The applicant also has to satisfy English language and maintenance requirements. Entrepreneurs, investors and those carrying out post-study work may also enter under Tier 1. This is similar to the HSMP that existed before 2008.
- **Tier 2** has four categories: 1) intra-company transferees (ICT); 2) elite sportspeople and coaches whose employment will make a significant contribution to the development of their sport; 3) foreigners coming to the UK to fill a vacancy as a Minister of Religion, missionary, or member of a religious order; 4) general

<sup>41</sup> The test was that the position had to be advertised for two weeks (or one week for jobs with a salary exceeding GBP 40,000) and if local (meaning non UK or EEA) workers were unavailable, then employers could hire a migrant to fill the vacancy.

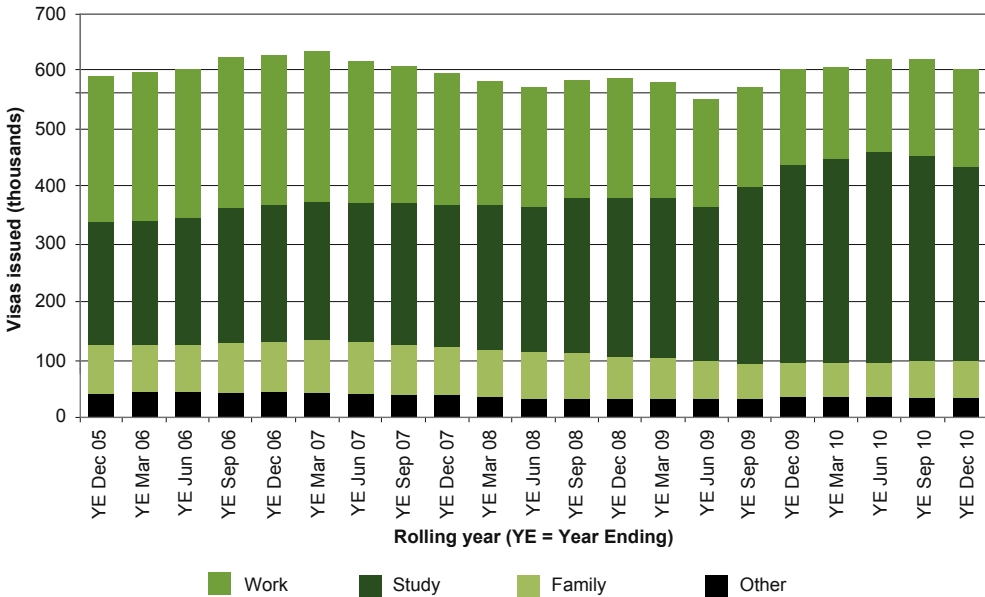
category that covers the admission of people coming to the UK with a job offer to fill a gap that cannot be filled from within the resident labour force. This category is also for applicants coming to fill shortage occupations.

Tier 2 serves as the main route for UK employers to recruit skilled non-EEA nationals into vacancies they are not able to fill from within the EEA (although it should be noted that these form a relatively small proportion of migrants admitted through this tier). These migrants earn 'points' based on factors that include prospective earnings, qualifications held by the individual, whether their occupation is included on the Migration Advisory Committee's shortages list and whether the occupation passes the resident labour market test (RLMT). The RLMT requires an employer to advertise the vacancy through Jobcentre Plus or as agreed in a sector code of practice. Employers wishing to recruit non-EEA nationals to fill skilled vacancies that are not on the shortage occupation lists must demonstrate that there are no suitably qualified settled workers to fill the post and must complete a resident labour market test. This can be done in two ways: either by advertising the vacancy for a single continuous period, with a minimum closing date of 28 calendar days from the date the advertisement first appeared, or by advertising the vacancy in two stages, where each stage lasts no less than seven calendar days and both stages added together total a minimum of 28 calendar days. If no suitable settled workers are identified through this process, the employer may appoint a Tier 2 migrant.

- **Tier 3** is comprised of low-skilled workers to fill specific temporary labour shortages. This entry route has been closed since the introduction of the PBS, as the government has judged that there is enough low-skilled labour within the UK-born and EEA populations to fill these vacancies (and indeed, the large number of EU8 migrants that came to work in these sectors in the UK following the UK's decision to fully open its labour markets to the EU8 countries was a large part of the reason for why Tier 3 has remained closed).
- **Tier 4** is comprised of foreign students. Applying through this tier is a two-stage process involving the person who wishes to come to the UK to study and the organisation that is sponsoring their application (the education provider). The education provider must first apply to the UK Border Agency (UKBA) to obtain a licence to sponsor migrants under Tier 4 and be put on an approved sponsor list. After receiving an offer of a place on a course by an approved sponsor, the student must then apply for entry clearance to the UK, demonstrating that they possess the attributes that give the level of points required for a Tier 4 visa (Gower, 2010). Students coming to the UK under Tier 4 can work up to a maximum of 20 hours a week during term time, and full time during vacations. Tier 4 visas can be extended (within limits) for further studies, and students who obtain a UK degree or higher qualification are currently use the post-study work route under Tier 1 of the PBS to stay in the UK for up to two years to seek work (after which time they must qualify under other skilled work routes in order to remain) (see Mulley and Sachrajda, 2011).
- **Tier 5** is comprised of persons coming to the UK to satisfy primarily non-economic objectives, such as those entering on youth mobility schemes and temporary workers, or asylum seekers.

As Figure I below shows, labour immigration to the UK by third country nationals has fallen since the introduction of the PBS. The number of available employment visas with the possibility of settlement (available within Tiers 1 and 2) was down almost 15 per cent in the first quarter of 2010 compared with the first quarter of 2009 (and down around 30 per cent on the first quarter of 2007). The exception to this pattern of declining flows is student migration, which has continued to increase, although recent and planned changes in policy are expected to reduce these numbers (Mulley and Sachrajda, 2011).

**Figure I: UK entry clearance visas issued, including dependants, by reason of entry (excluding visitor and transit visas), 2005-2010**



Source: ONS 2011b

**Notes:**

- 1- Figures relate to visas issued rather than actual arrivals – ie they indicate intentions to come to the UK, which may not have been fulfilled.
- 2- These statistics are based on management information from the UK Border Agency and are not subject to the detailed checks that apply to National Statistics.
- 3- Entry clearance visa statistics cover a range of permitted lengths of stay, including those for less than a year. Visas issued for study and some work-related visas, together with other visa types such as EEA family permits, allow temporary entry clearance and require the individual to renew the visa before it expires should they wish to stay longer. Some visas issued for work (under Tiers 1 and 2 and the pre-PBS equivalents) and some family visas allow an applicant to make an application for ‘indefinite leave to remain’ after a specified period. A number of other entry clearance visas, including some family visas, permit a person to stay in the UK indefinitely.

It is important to note that in addition to the official figures, there is likely a significant number of irregular migrants in the UK. Recent estimates have suggested that there may be more than 600,000 irregular migrants currently living in the UK, and potentially more than 800,000 (Gordon et al., 2009). The profile of these migrants is highly varied, with a relatively small proportion falling into the category of ‘clandestine entrants’ who come



to the UK without proper documentation. It is more common for migrants to become irregular as a result of non-compliance with the terms of their visas or changes in the visa regime itself.

While the broad objectives of the previous Labour government were to maximise the benefits and minimise the costs of migration (for example, by prioritising the selection of the most highly skilled and best paid migrants through the PBS), the new coalition administration has based its immigration policies around the Conservative Party's election pledge to reduce net immigration 'from the hundreds of thousands to the tens of thousands' (Conservative Party, 2010). This will be an exceptionally difficult target for the government to meet, given both the large size of annual net migration to the UK and the specifics of the UK's policy framework, which gives the government little or no control over the migration in and out of the country by UK and EU nationals, and limits its ability to regulate asylum and family reunification flows. Government will therefore have to reduce immigration numbers by significantly more than half in those categories over which it does have control, which generally refers to immigration from outside the EEA for the purposes of work or study.

In July 2010 the government started the process of reducing immigration numbers by introducing a temporary cap that limited the number of immigrants entering through Tiers 1 and 2 of the PBS to just over 24,000 until April 2011, a cut of five per cent on the previous year. In April 2011, a permanent cap on migration for work from outside the EEA through Tiers 1 and 2 of the PBS is set to come into effect. This cap will:

- Set an annual limit of 21,700 for those coming into the UK via Tiers 1 and 2 of the PBS.
- Raise the minimum salary for those coming through the intra-company transfer route for more than 12 months to GBP 40,000.
- Close Tier 1 of the PBS to all but entrepreneurs, investors and the exceptionally talented.
- Require occupations in Tier 2 to be at graduate level (see UKBA, 2011).

These proposals have been criticised by employers in both the private and public sectors, since the workers who come to the UK through these routes are the most economically valuable migrants and often fill skills shortages faced by particular sectors and employers. The current UK framework for identifying where skills gaps may sensibly be filled through migration is one way of addressing these concerns.

## **2. Identification of Labour and Skill Shortages in the UK**

### **2.1. National approach**

In the UK, current and future skill shortages are identified through a mix of methodologies and data sources. At the national level, the UK Commission for Employment and Skills (UKCES), which replaced and merged the functions of two predecessor organisations (the Sector Skills Development Agency and the National Employer Panel), currently acts as the central institution through which data on skills is gathered and analysed.

In 2004, the government commissioned a review of skills in the UK in response to concerns about the ability of the UK to compete in the globalised markets due to low levels of literacy and numeracy in some sections of the workforce, and the country's relatively poor international position in intermediate level skills and productivity reflected in the relatively low proportion of young people remaining in education after the age of 16, together with limited skills progression and training to higher levels once in work. One of the recommendations made by this review was that a new Commission for Employment and Skills, reporting to central Government and the devolved administrations, should be created in order to rationalise existing bodies, strengthen the collective voice and better articulate employer views on skills (Leitch, 2006).

The UKCES was therefore established by the government in 2008, jointly sponsored by the Department for Business, Innovation and Skills, the Department for Work and Pensions, the Department for Education, HM Treasury, the Department for Education and Learning in Northern Ireland, the Scottish Government and the Welsh Assembly Government. It is an independent, employer-led advisory body, tasked by the UK Government and the three Devolved Administrations with providing expert advice on the UK's progress towards becoming a world leader in skills, jobs and growth.

The UKCES' Commissioners comprise a social partnership that includes CEOs of large and small employers across a wide range of sectors, trades unions and representatives from all of the Devolved Administrations. Between 21 and 25 Directors sit on the Commission at one time, including the Chairman and Chief Executive, and these individuals work together to deliver the strategic objectives of the organisation.<sup>42</sup>

The primary functions of the CES include:

- Making an annual assessment of UK progress towards becoming a world class leader in employment and skills by 2020.
- Advising the UK Government and Devolved Administrations on policies and delivery that will contribute to increased jobs, skills and productivity.
- Monitoring the contribution and challenge the performance of each part of the UK employment and skills systems in meeting the needs of employers and individuals, and recommending improvements in policy, delivery and innovation.
- Promoting greater employer engagement, influence and investment in workforce development.
- Funding and managing the performance of the Sector Skills Councils (see below).

As of 2011, the Commission has further refined its objectives and from 2011 to 2014 will be focusing on providing detailed labour market intelligence to help businesses and people make better choices, working with businesses to develop market solutions which leverage greater investment in skills and seeking to maximise the impact of employment and skills policies and employer behaviour to support jobs and growth and secure an internationally competitive skills base (UKCES, 2011).

To date, the Commission has made a significant contribution to the evidence base on skills and employment in the UK and has played a role in the development of national

<sup>42</sup> See [www.ukces.org.uk](http://www.ukces.org.uk) for more information on current Commissioners.

policy on these issues. It has also considered the issue of skills shortages in the UK, as part of a strategic skills audit for England.<sup>43</sup> In terms of methodology, this audit drew on evidence from a number of data sources, including:

- An initial national and regional labour market information assessment drawing on a wide range of evidence sources including: The Labour Force Survey; The National Employers Skills Survey 2009; *Working Futures 2007-2017*; The UK Commission Employment and Skills Almanac 2009; The UK Commission's *Ambition 2020* report and the work of the Migration Advisory Committee.
- 25 sector skills assessment reports produced by each of the Sector Skills Councils (SSCs) on the sectors they cover. These reports draw on a mix of national data supplemented by sectoral surveys and other information and qualitative interviews with sectoral stakeholders.
- Six additional skills assessment reports focusing on 'emerging sectors', produced by SSCs working collaboratively in appropriate clusters. These reports focused on: advanced manufacturing; professional and financial services; low carbon industries; engineering construction; the digital economy; life sciences and pharmaceuticals.
- Three additional skills assessment reports on three of the emerging sectors produced for the UK Commission by experts. These were: a report on strategic skills needs in the bio-medical sector, focusing on medical technologies and pharmaceutical industries, produced by the Institute for Employment Research (IER) at Warwick University; a report on skills needs in the low carbon energy generation sector produced by PricewaterhouseCoopers (PwC) and a report on the financial services sector produced by PwC.
- A horizon scanning and scenario development report produced by the St Andrews Management Institute (SAMI): this report identifies key issues and changes taking place in the UK and globally which may impact on employment and skills over the long-term using horizon scanning techniques.

## 2.2. Regional approach

Until recently, the UK's regional development agencies (RDAs) had some involvement in identifying skills shortages across different parts of the country. The RDAs were non-departmental public bodies established to support development in England's nine Government Office regions,<sup>44</sup> funded by central government and tasked with promoting business efficiency and competitiveness, and enhancing the development

<sup>43</sup> This audit covered trends for England only (although drawing on UK-wide data sources in some instances). However, at the time of writing this paper a Strategic Skills Audit is being conducted in Wales and the UK Commission is acting as a project adviser for the Northern Ireland Strategic Skills Audit. Further, UKCES is currently conducting the first UK-wide Employer Skills Survey (ESS) as a successor to the National Employer Skills Survey in England (NESS) and the skills surveys carried out by the devolved administrations across the UK: the Scottish Employer Skills Survey (SESS), the Northern Ireland Skills Monitoring Survey (NISMS), and the Future Skills Wales Sector Skills Survey (FSW).

<sup>44</sup> The RDAs were: Advantage West Midlands, East of England Development Agency, East Midlands Development Agency, London Development Agency, Northwest Regional Development Agency, One North East, South East England Development Agency, South West RDA and Yorkshire Forward.

and application of skills relevant to employment. As part of their work, each RDA produced Regional Economic Strategies in collaboration with Sector Skills Councils and other organisations, such as the Training and Development Agency for Schools, to ascertain priority skill areas for each region.

However, in June 2010 the UK's Coalition government pledged to abolish the RDAs as part of its programme of cost-saving measures, and has since announced a plan to replace them with Local Enterprise Partnerships (LEPs), which are envisaged as locally-owned partnerships between local authorities and businesses that will play a key role in determining local economic priorities and undertaking activities to drive economic growth and the creation of local jobs. It remains to be seen how these LEPs will work in practice in terms of identifying local and regional labour and skills shortages, since they are only set to come into effect in April 2011. However, the UKCES has indicated that it will continue to play a central role in collecting and analysing key labour market information and then making this available to local areas (see Business, Innovation and Skills Select Committee, 2010), suggesting that data on skills shortages will continue to be gathered from the top-down.

### 2.3. Sectoral approach

Information on skills needs and demands in the UK is also provided by Sector Skills Councils: independent, employer-led, UK-wide organisations designed to build a skills system that is driven by employer demand. There are currently 23 SSCs<sup>45</sup> covering over 90 per cent of the economy, and these have played an important role on a range of skills issues, including by: working with employers to identify future skills needs; developing skills and training solutions; setting occupational standards; influencing and shaping the future development of qualifications; designing apprenticeship frameworks; encouraging greater investment in training and providing labour market information to assist in long-term business planning.

All Sector Skills Councils produce an annual Sector Skills Assessment (SSA) for the whole of the UK as well as each of the four nations to identify the drivers of skills demand and current skills needs (including skills gaps and shortages) and to predict the likely skills needs of the future. These draw on a mix of methodologies, including:

- qualitative group discussions and interviews about the drivers of skills and what employers may be doing in order to deal with future skills issues;
- surveys of employers;
- secondary analysis of relevant literature (such as policy documents, stakeholder and government reports from each of the devolved administrations, inspectorate reports from each nation and skills research papers) and data (from Employer Skills Survey, the Labour Force Survey and other sectoral datasets);
- Analysis and interpretation of the information and data gathered to develop common skills themes in terms of current skills gaps and shortages as well as future skills requirements.

<sup>45</sup> More information and links to individual SSC websites can be found here: <http://www.ukces.org.uk/sector-skills-councils/about-sscs/the-list-of-sscs/>

## 2.4. UK skills shortages: an overview

Evidence from recent employer skills surveys and other data sources suggest that the UK does not experience high absolute levels of shortage. According to the recent UKCES skills audit of England it is estimated that skills shortages currently affect three per cent of organisations in England (and mostly small ones – more than three in four occur where there are less than 25 staff) (UKCES, 2010a). It found the highest proportion of skill shortages in skilled trades (31 per cent) and professional occupations (25 per cent), though they are also higher than average in managerial, associate professional, and personal service occupations. Their ‘density’ (relative to the numbers employed in the occupation), is greatest in associate professional/technical, skilled trades and personal service occupations.

Nearly half of all skill shortage vacancies are in these three occupational groups, all of which require predominantly intermediate level skills (Table 1). Skill shortages are most pronounced in health and social work, in terms of absolute numbers, and more than a third of skill shortages lie in these two sectors. However, in terms of density they are most significant in agriculture, electricity, gas and water and hotels/catering (UKCES, 2010a).

**Table 1: Profile of skills shortage vacancies in England by sector and occupation, 2009**

Row percentages	Base: all SSVs			Managers	Professionals	Associate professionals	Administrative	Skilled trades	Personal service	Sales	Operatives	Elementary	Unclassified
<b>Overall</b>	<b>5,118</b>	<b>63,089</b>	%	<b>6</b>	<b>13</b>	<b>20</b>	<b>7</b>	<b>14</b>	<b>14</b>	<b>9</b>	<b>5</b>	<b>11</b>	<b>1</b>
Agriculture	59	1,374	%	3	2	1	0	48	4	0	10	31	0
Mining and quarrying	9	43	%	#	#	#	#	#	#	#	#	#	#
Manufacturing	532	4,409	%	6	20	13	4	28	0	11	13	5	*
Electricity, gas and water	21	475	%	#	#	#	#	#	#	#	#	#	#
Construction	159	2,739	%	12	11	7	5	49	0	3	9	3	*
Retail and wholesale	484	7,672	%	8	1	14	7	26	*	30	9	4	0
Hotels and catering	441	6,347	%	7	0	2	3	29	2	3	1	55	0
Transport, storage and communications	247	2,758	%	3	1	13	16	4	2	11	48	3	1
Financial intermediation	153	2,201	%	6	1	46	26	0	1	16	0	0	4
Business services	851	13,170	%	8	20	25	11	7	2	9	6	11	1
Public administration and defence	145	1,287	%	7	9	22	11	39	0	2	4	6	0
Education	481	3,961	%	1	42	24	5	1	21	1	4	1	0
Health and social work	1,185	10,442	%	3	21	30	4	1	37	1	*	2	1
Other services	351	4,605	%	3	11	32	6	3	35	2	1	8	*

Source: UKCES 2010a (taken from the 2009 National Employer Skills Survey)

**Notes:** 1. Base is all skills shortage vacancies. 2. # is used where the base size was under 25. 3. \* denotes a figure greater than 0% but less than 0.5%.

Since 2008, the global economic downturn has prompted a significant contraction in the levels of growth. In turn, this has caused vacancy levels to fall and unemployment rates and redundancy levels to rise sharply. Figures released earlier in 2011 show an increase in unemployment levels over the quarter to December 2010 and the number of unemployed people in the UK standing at 2.49 million (ONS, 2011a).

Although the recession has not caused all labour shortages in the UK to disappear, it has had a differentiated effect on particular types of shortage. Cyclical skills shortages (such as those in the engineering and construction industries) have seen the largest decline as a result of the downturn. However, structural shortages identified in Migration Advisory Committee (MAC) reviews (such as some types of medical consultant and geology specialists, for example) have remained in place, since they represent skills not currently held by the existing UK workforce. Labour shortages caused by limits on public spending (which prevent public sector employers from increasing wages and/or offering training opportunities) have also endured, since demand for these services is not responsive to the economic cycle. Similarly, shortages of highly-skilled professionals that the UK seeks to attract from around the world have persisted (MAC, 2010a).

### 3. Immigration Policies and Alleviating Labour and Skill Shortages in the UK

#### 3.1. The Migration Advisory Committee

In 2007 the Migration Advisory Committee was established as a non-departmental public body and charged with providing independent, transparent and evidence-based advice to Government on where skilled labour shortages exist that might sensibly be filled by migrants. Its recommendations have subsequently become an important part of the policy development and implementation process, particularly with respect to Tiers 1 and 2 of the Points-Based System. The following section discusses its methodologies and findings in detail.

##### *Data sources and methodological approach*

The Migration Advisory Committee (MAC) advises the government on migration issues. It is a non-statutory, non-time-limited, non-departmental public body, sponsored by the UK Border Agency (which sits within the Home Office). The Committee consists of a chair and four other independent economists, appointed under rules relating to public appointments laid down by the Office of the Commissioner for Public Appointments. Additionally, the Commission for Employment and Skills and the UK Border Agency are represented on the committee. The MAC is also supported by a secretariat made up of economists, policy and administrative staff. The MAC meets at least quarterly, and more frequently as necessary.

The MAC draws on a number of sources of top-down data to gather evidence about labour and skills shortages. Nationally, these include the Labour Force Survey (LFS), the Annual Survey of Hours and Earnings, the ONS Vacancy Survey, the Job Centre Plus NOMIS database and national employer skills surveys:

- **Labour Force Survey:** The Labour Force Survey is a quarterly household survey (of approximately 53,000 households) conducted by the Office for National Statistics. As well as households, it includes some people living in student residence halls and National Health Service accommodation but excludes some other communal residences. It is the main source for information on employment and unemployment status for the UK population that can be broken down by characteristics such as current occupation, sector, employment status, and qualifications in addition to demographic characteristic such as age, sex and nationality.
- **Annual Survey of Hours and Earnings:** The Annual Survey of Hours and Earnings (ASHE) provides information about the levels, distribution and make-up of earnings and hours paid for employees within industries, occupations and regions. ASHE tables contain UK data on earnings for employees by sex and full-time/part-time workers. Further breakdowns are available by region, occupation, industry, region by occupation and age-groups.
- **ONS Vacancy Survey:** The ONS Vacancy Survey is a monthly business survey that provides comprehensive estimates of job vacancies throughout the economy. Vacancies are defined as positions for which employers are actively seeking recruits from outside their business. Each month's headline estimates are based on three-month rolling averages, with analysis by broad industry sector and by size of business. The survey covers all industrial sectors except agriculture, forestry and fishing. This is because of the disproportionate additional costs involved and the special difficulties of measuring vacancies in these industry sectors which mainly consist of very small firms.
- **NOMIS database:** NOMIS is a web-based database of labour market statistics run on behalf of the Office for National Statistics by the University of Durham. It contains a comprehensive range of official statistics relating to the labour market including: unemployment; employment; earnings; vacancies; training; Labour Force Survey and the Census of Population.
- **National Employer Skills Surveys:** The National Employer Skills Survey for England is the largest survey of English employers' training and recruitment practices and skills needs. The first NESS was coordinated by the now-defunct Learning and Skills Council in 2003, and has taken place on an annual basis since then. UKCES assumed responsibility for administering the NESS for England in March 2010 (with an ultimate view of taking over the administration of similar employer surveys that are carried out every few years in Scotland, Wales and Northern Ireland by Futureskills Scotland, Futureskills Wales and the Northern Ireland Department for Employment and Learning, respectively). These surveys ask establishments about (1) recruitment problems, (2) skills gaps, (3) training practices and training expenditure, (4) skill updating needs in their workforce, (5) the recession, and (6) their product market strategies.

As top-down data on wage and employment indicators can sometimes be insufficiently detailed for the purpose of identifying skills shortages, the MAC has also stressed the importance of collecting bottom-up evidence from Sector Skills Councils (SSCs) and other occupational groups, including information on retirement patterns, the availability



of trained workers, areas where lack of skilled labour is affecting productivity and – where relevant – the consequences of employers being forced to use alternatives to migrant labour. The MAC gathers this bottom-up data through extensive engagement with a range of stakeholders. Specific methods of engagement include:

- Launching open calls for evidence that ask relevant stakeholders to provide opinions on the MAC’s proposals regarding occupational skill levels, shortage occupations and government policies.
- Carrying out visits to every country and region of the UK.
- Meetings with the Sector Skills Councils and Sector Advisory Panels.
- Setting up a formal Stakeholder Panel (made up of representatives from the Confederation of British Industry, the Trades Union Congress, the British Chambers of Commerce and the National Health Service) and establishing a broader Stakeholder Forum to solicit feedback from relevant individuals and organisations.
- Organising meetings with employers, employees and representative organisations, including trade unions, small and large employers, consultants, financial institutions, government departments and groups of representatives from the ethnic catering and social care industries.
- Commissioning independent research on staff shortages and immigration in key sectors and occupations in the UK.

Although this two-pronged approach has advantages in terms of developing a more rounded picture of skills and shortages in the UK labour market, it also creates methodological challenges in cases where the different sources of evidence contradict each other. Box 1 below sets out some of these issues and describes the approach taken by the MAC to address them.

### **Box 1: Dovetailing the top-down and bottom-up evidence**

In its first report, the MAC noted that in some cases there was good correspondence between the top-down and bottom-up data, but not in every case. This is largely due to variances in the levels of disaggregation for different occupations. For example, while bottom-up evidence from employers might suggest a shortage of aerospace engineers, this may not be reflected in the national data, which might not show mechanical engineers, the corresponding occupational group, as experiencing shortages. In this case, if specific skills and knowledge are required to be an aerospace engineer, the top-down and the bottom-up evidence could both have been presenting an accurate picture.

Another challenge is that the strengths of different indicators can also vary between top-down and bottom-up evidence. For instance, national level data is better able to provide comprehensive evidence on indicators like earnings growth within sectors than individual employers, but less able to measure



things like levels of on the job training. In these situations, it can be difficult to dovetail the different types of data.

To address these methodological problems, the MAC has had to make some judgements about where top-down evidence is stronger than bottom-up evidence and vice versa. In general, it has only placed occupations on the shortage list where there are clear indicators of the three S's (the 'skilled, shortage, sensible' framework described in the following sections) – noting in these cases where top-down data are highly relevant and where they are less so.

In cases where the top-down data were highly relevant, the MAC included the occupation or relevant jobs on the shortage occupation lists if, overall, there was a combination of good top-down and good bottom-up evidence. In cases where the top-down data were not highly relevant, the MAC included the occupation or relevant jobs on the lists if there was very good bottom-up evidence (although requiring a higher burden of proof in these instances).

Occupations or jobs tended not to be included on the shortage lists where bottom-up evidence did not meet the MAC's criteria (in that the evidence received indicated either that the occupation is not skilled, and/or was not in shortage, and/or that it was not sensible to fill a shortage through migration) or where appropriate evidence was insufficient, partial or inconclusive.

Where no relevant bottom-up evidence was provided, the MAC decided to omit the occupation or job title from the shortage occupation lists, although recognising the need to review this evidence if there was top-down evidence of potential shortages.

Drawing on these top-down and bottom-up sources of evidence, the MAC published its first review of skills shortage occupation lists (one for the UK and one for Scotland) in autumn 2008 (MAC, 2008b). These are lists of occupations for which the MAC has judged that there are not enough resident workers to fill available jobs. Employers hoping to appoint a worker from outside the European Economic Area to fill vacancies included on the shortage lists may do so without having to conduct a resident labour market test (see above).

The conceptual approach to drawing up the shortage lists for these areas was a three stage process. First, it considered whether individual occupations or categories of jobs were sufficiently skilled to be included on the shortage occupation list. Second, it assessed whether there was a shortage of labour within each skilled occupation. Finally, it considered whether it was sensible for immigrant labour from outside the EEA to be used to fill these shortages. These three stages are discussed in more detail below.

### *Defining “skilled”*

Different approaches to defining and measuring skill can be found in the literature. One approach relates skills to the attributes of individuals – such as their formal

qualifications and/or the skills that they say they possess. Another suggests that skills can be defined with reference to the jobs that people do and the skills that they need to possess to perform them competently (where competency may be assessed by the employee his or herself, or by their employer) (Wilson *et al* 2003). However, within these general approaches, there is room for considerable debate about what constitutes a skill, how it can be measured objectively and how to demonstrate the amount of a skill that a worker possesses or utilises when performing a particular role.

In the UK, the Leitch Review of Skills (2006) suggested that there were many different types of skills which could be categorised in various ways. Basic skills, including literacy and numeracy, and generic skills, such as communication or the ability to work as part of a team, tend to be employed in all jobs, while skills that are specific to particular occupations tend to be less transferable. The Leitch Review also noted that it was difficult to measure skills precisely. Qualifications are a common indicator of skill levels, although it is certainly possible to possess skills without having formal qualifications.

In thinking about what constitutes skilled jobs or occupations, the MAC has chosen to look at five key indicators:

- **The skill levels defined in the Standard Occupational Classification (SOC) hierarchy:** The SOC2000 has four skill levels based on the time required to become fully competent, the time taken to gain the required formal or work-based training, and the experience required to perform. The first and lowest skill level equates with the competences associated with a general education; the second level covers the occupations that require a longer period of work-related training or work experience in addition to a good general education; the third level applies to occupations that normally require a body of knowledge usually associated with a period of post-compulsory education but not at degree level; and the fourth skill level relates to the so-called ‘professional’ occupations and managerial positions that normally require a degree or equivalent qualification.
- **Formal qualifications:** in terms of qualifications, the current skill requirement for the PBS Tier 2 is that a job must be of level 3 or equivalent to be considered as skilled. In the UK, qualifications are grouped within three different frameworks and then set at different levels within these. Under the National Qualifications Framework (NQF) – which both the government and the MAC use in determining the skill that migrants must possess in order to be eligible to enter the UK through Tiers 1 or 2 of the PBS – level 3 qualifications include A levels, Advanced Extension Awards, International Baccalaureate, national vocational qualifications (NVQs) at level 3, BTEC Diplomas, Certificates and Awards. These qualifications ‘recognise the ability to gain, and where relevant apply, a range of knowledge, skills and understanding. Learning at this level involves obtaining detailed knowledge and skills. It is appropriate for people wishing to go to university, people working independently, or in some areas supervising and training others in their field of work’.
- **Earnings:** Skills and earnings do not always demonstrate a neat positive correlation. For example, a so-called ‘3D’ job (‘dirty, dangerous or demeaning’) might attract higher levels of compensation, even if they do not require high

levels of skill to carry out. Equally, some skilled jobs might pay less, but involve non-monetary forms of compensation that will not be captured in earnings data.

- **On-the-job training:** Training provided by employers may result in the job or occupation being skilled at level 3+, even in cases where job holders do not have formal qualifications. Information about this will necessarily have to come from bottom-up sources of evidence.
- **Innate ability required to carry out the job to the appropriate level:** Some occupations require skills that cannot readily be taught or learnt – depending instead on ‘innate ability’. This can imply a high level of skill, even though many in the occupation may not have formal qualifications. For example, only 30 per cent of dancers and choreographers have formal qualifications at level 3 or above, yet most people would regard these individuals as skilled practitioners. Again, bottom-up evidence will be needed to determine whether these occupations can be classed as level 3 or above.

### *Defining “shortages”*

Although the term ‘skill shortage’ is frequently used by governments and employers, there is no universally accepted definition for it. Generally speaking, shortages occur when demand exceeds supply at a given wage and there is a lack of ‘equilibrium’ in the labour market, although as the Migration Advisory Committee and others have noted, these shortages are very difficult to measure empirically.

The National Employer Skills Survey (NESS) defines skills shortage vacancies as “Hard to Fill Vacancies which result either from a low number of applicants with the required skills, or a lack of candidates with the required work experience, or a lack of candidates with the required qualifications” (MAC 2008a). However, while hard to fill vacancies may result from a lack of appropriate skills in the labour force, they can also result from poor pay or conditions of employment, or the employer being based in a remote location. To make sure that this broad range of factors is taken into consideration, analysts and policymakers therefore tend to quantify labour and skills shortages by looking at sets of indicators. The MAC considers four categories of indicators in particular:

- **Earnings:** Rapidly rising earnings within a particular occupation or high rates of return to qualifications may indicate that there is a shortage of skilled labour in certain occupations.
- **Indicators of imbalance:** Labour shortages can be indicated by vacancy level, rates, durations and changes over time, together with the proportions of establishments affected by these. Low or falling unemployment rates and vacancy to unemployment (V/U) ratios can also suggest skill shortages and labour market pressures.
- **Indirect indicators:** Employers can also respond in a variety of indirect ways to labour shortages. Some of these may include: increasing levels of overtime or an increase in its prevalence; increased recruitment efforts; reduced working standards; altering production methods to reduce the need for skills in short supply; more contracting out of work or outsourcing to other countries; increased levels of training or training expenditure.

- **Employer perceptions of shortages:** In the UK, the National Employer Skills Survey collects evidence about employer perceptions of recruitment difficulties and lack of skills in the workforce.

Within these categories, the MAC has also identified 12 specific indicators that it uses to identify shortages, relying on each to provide partial information about shortages that can then be correlated to look for significance. Table 2 below gives an overview of these indicators and their sources, the frequency with which they are available, and the dates of the evidence used by the MAC in its 2008 review. It should be noted that the MAC bases its opinions on retrospective data rather than forward-looking projections of skills and labour shortages, which has implications for the timeliness of its recommendations. One way it has sought to address this problem is through the use of bottom-up evidence about current and future trends to complement the backward-looking data collected from national level data.

**Table 2: 12 indicators of shortage**

Indicator	Frequency available	Date/period used	Source used
<b>Employer-based indicators</b>			
Percentage of skill-shortage vacancies/employment by occupation	Biannually	2007	NESS and LFS
Percentage of skill-shortage vacancies/all vacancies	Biannually	2007	NESS and LFS
Percentage of skill-shortage vacancies/hard-to-fill vacancies	Biannually	2007	NESS
<b>Price-based indicators</b>			
Percentage change in median hourly pay for all employees	Annually	2006-07	ASHE
Percentage change in mean hourly pay for all employees	Annually	2006-07	ASHE
Relative premium to an occupation, given NQF3, controlling for region and age	Quarterly	2007	LFS
<b>Volume-based indicators</b>			
Percentage change in unemployed by sought occupation	Monthly	2007-08	Jobcentre Plus
Percentage change in hours worked for full-time employees	Annually	2006-07	ASHE
Percentage change in employment	Quarterly	2006-07	LFS
Absolute change in proportion of workers in occupation less than one year	Quarterly	2006-07	LFS
<b>Indicators of imbalance based on administrative data</b>			
Absolute change in median vacancy duration	Monthly	2007-08	Jobcentre Plus
Stock of vacancies/claimant count by sought occupation	Monthly	2007	Jobcentre Plus

Note: Further details about the methodologies used to select these indicators and to assess the threshold above which they demonstrate shortage can be found in MAC 2008b.

The MAC considers there to be good top-down evidence of a potential shortage if an occupation passes on 50 per cent or more of the indicators that apply to it. When considering the bottom-up evidence for shortages the MAC looks at the same broad groups of indicators that the top-down evidence considers. This includes looking at factors such as whether wages are increasing more than average and vacancies are increasing faster than jobs are being created.

### *Defining “sensible”*

The MAC recognises that the term “sensible” can be interpreted in a number of different ways and can change based on various policy and political considerations. For example, while immigrant labour has played a significant role in supporting particular government priorities in areas such as healthcare over the years, recent political debates have pushed policymakers to look for ways to limit the levels of immigration to the UK by immigrants who do not meet the criteria for being considered “highly skilled”.

The potential tradeoffs between the short run and the long run also have a bearing on how the MAC defines ‘sensible’. While bringing in immigrants to fill shortages may be essential in the short run to ensure the survival of businesses or the provision of crucial services, this may reduce the incentives to invest in the training and up-skilling of UK resident workers over the longer term, and therefore contribute to maintaining or even increasing dependence on immigrant workers in the long term.

To address these issues, the MAC has chosen to look at four sets of indicators when assessing whether it is sensible to recommend that immigration of non-EEA nationals may be used to fill occupational shortages (MAC, 2008b):

- The first of these is the availability of alternatives to employing non-EEA immigrants in response to a shortage of skilled labour, including a consideration of whether immigrants are in some cases employed primarily because they are cheap labour, as well as the efforts being made to fill the shortage by other means.
- The second set of indicators pertains to whether bringing in immigrants would have an impact on skills policies towards the domestic workforce, such as by acting as a disincentive to up-skill existing workers.
- The third set of indicators relates to the impact on innovation, productivity growth and international competitiveness. For example, the City of London’s status as a global financial centre depends partly on the skills and resources brought in by highly skilled migrants. Furthermore, many multinational companies require employees from the countries in which they operate to work around the organisation, in order to share knowledge, build relevant skills in the workforce, and also provide the local knowledge relevant to their markets (MAC, 2008b).
- The final set relates to the wider impacts on the UK labour market and economy, including the impact on employment opportunities for UK resident workers (MAC, 2008b).

Judgements about “sensible” are very sector- and occupation-specific, but the MAC has developed a checklist of criteria that may indicate cases where it would be sensible to fill shortages with immigration (Table 3).

**Table 3: MAC key criteria for whether it would be sensible to fill shortages with immigration**

Key criteria for 'sensible'	What change might indicate 'sensible'	Possible indicators	
		Bottom-up examples	Available top-down indicators
<b>Alternatives to employing immigrants:</b> <i>What feasible alternatives to immigration have been considered? Are there obstacles for employers in pursuing alternatives to migration?</i>			
<b>Recruitment efforts</b>	High or increased spending and investment in recruitment	Spending on advertising, using different channels  Using different labour pools, e.g. unemployed, part-time workers, EEA workers	% share of non-British EEA workers
<b>Attractiveness of employment package</b>	Increased incentives for the current workforce to remain in occupation and for new recruits to enter the labour market	Holiday allowances, bonuses, other benefits	% change in earnings
<b>Increased working hours</b>	Increased working hours of current workforce		% change in working hours
<b>Capital substitution</b>	Increased investment in technology to make production less labour or skill intensive	Installing labour-saving machinery	
<b>Changing production methods</b>	Changed production methods to make production less labour or skill-intensive	Restructuring the production line	
<b>Outsourcing or offshoring</b>	Increased use of contracting in or of overseas sites	Evidence that employers are doing this	
<b>Current use of immigrants</b>	High use of immigrants may mean it is difficult to respond to shortage in other ways, but may also mean employers are not doing enough to up-skill UK resident workers	Current use of immigrants	% non-EEA immigrants in occupation
<b>Skills acquisition:</b> <i>What efforts have been, or could be, made to train and up-skill the UK resident workforce?</i>			
<b>Training</b>	High or increased investment in training of current and future UK workforce	Employers working with schools/universities  New training programmes, apprenticeships	% of employees receiving training
<b>Training length</b>	A long training period would make it harder to respond quickly to a shortage through training	Evidence of length of training required to become fully proficient	
<b>Availability of training or qualifications</b>	If training for an occupation is not readily available this may increase the need for immigrants, but it may also indicate inadequate efforts by employers to ensure that qualifications are provided	Evidence that employers are working with their Sector Skills Council to develop qualifications	

Table 3 cont.

**Productivity, innovation and international competitiveness:** What impacts will access to immigrant labour have on productivity, innovation and international competitiveness of an industry?

<b>Productivity</b>	Decreased productivity may indicate that it is sensible to bring in immigrants, but low productivity could imply scope to substitute labour with capital	Higher wastage Slower production process Reduced quality product Evidence of 'low skills equilibrium' of labour intensive production
<b>Innovation</b>	Risk of reduced innovation in a sector where immigration is a source of innovation may indicate that it is sensible to bring in immigrants	Emerging technologies overseas
<b>Competitiveness</b>	Employment of immigrants may support international competitiveness of certain sectors through their skills and innovation, but it would not be sensible to bring in immigrants to maintain competitiveness only because of their willingness to accept lower pay	Sector requires high level of skills Immigrants bring in different skills/innovation
<b>Wider economic and labour market effects:</b> What wider effects will access to immigrant labour have on the wider UK economy and labour market?		
<b>Impact on wages and employment rates</b>	No adverse impact on wages, employment conditions and/or employment levels	Steady or rising wages and employment conditions % change in unemployment/inactive % change in wages
<b>Business failure</b>	Higher numbers of businesses failing may indicate that shortages cannot be filled, but there may be other causes and it may also be a natural market correction	Closure of businesses Reduced profits
<b>Public service impacts</b>	It may be sensible to bring in immigrants if public services are jeopardised, but in the longer term it would not be sensible for public services to rely on cheap immigrant labour	Reduced quality of public services Insufficient or reduced availability of public services (e.g. increased waiting times)
<b>Other regulatory and economic context</b>	Other reasons outside the control of employers that make it difficult or impossible to pursue alternatives	

Source: MAC 2008b.

Neither the MAC nor the government want the shortage occupation route to be used as a back door for the employment of immigrants in skilled jobs or occupations where domestic shortages do not exist. The MAC has therefore stressed that their assessments of sensible occupations to add to the shortage list are predicated on the assumption that immigration policies will be stringently adhered to and that sponsored employers will employ immigrants in jobs that are skilled to the required level (as defined by the MAC).

### *MAC recommendations*

Drawing on the top-down and bottom-up evidence gathered from the range of sources and stakeholders described above, and in line with its 'skilled, shortage, sensible' framework, the MAC published its first list of recommended shortage occupations towards the end of 2008 (for its detailed examination of different occupations and a full list of shortages see MAC, 2008b). Both long-term 'structural' and short-term 'cyclical' shortages were considered as part of this process, although as the MAC observed, all occupations would be kept under review and it might be the case that shortages would only be included on the list for a short period if the evidence suggested that they had been satisfactorily addressed (MAC, 2008b).

In its first report on shortages in 2008, the MAC identified 20 occupations where the top-down and bottom-up evidence indicated shortages: officers in armed forces; moulders, core makers and die casters; photographers and audio-visual equipment operators; musicians; welding trades; ship and hovercraft officers; dispensing opticians; NCOs and other ranks; senior officials in national government; directors and chief executives of major organisations; hairdressing and beauty salon managers and proprietors; veterinarians; engineering technicians; midwives; pharmaceutical dispensers; dancers and choreographers; pipe fitters; metal machining setters and setter-operators; computer engineers, installation and maintenance; and steel erectors (MAC, 2008b).

The MAC has reviewed these lists regularly since 2008, and has also started working in closer coordination with the UKCES with a view to consider taking certain occupations off the shortage occupation list (particularly engineering roles, skilled chefs and care workers), and to link its recommendations more closely to government plans for investment in future skills. This work fed into the UKCES' 2010 National Strategic Skills Audit for England (UKCES, 2010a and 2010b), and was also used to inform the development of policy in the Department for Business, Innovation and the Prime Minister's Delivery Unit to ensure that UK skills policy was better aligned with migration policy (MAC, 2010b).

The MAC's first review recommended a revised list of healthcare and engineering occupations and jobs, with some additions and removals, and the continued inclusion of chefs, ballet dancers, work riders, veterinary surgeons, secondary teachers in maths and science, and sheep shearers. It also recommended the addition of special needs teachers and skilled meat boners and trimmers, and the removal of ship and hovercraft officers from the initial list (MAC, 2009a). A second review in 2009 recommended adding a number as well as the removal of some occupations and job titles, including: most civil engineers, consultants in various medical fields aircraft component manufacturing engineers; and ship and hovercraft officers (for a full list see MAC, 2009b).



In 2010, the government announced plans to further reform the Points Based System so as to raise the skill and qualification requirements for migrants entering through the 'general' Tier 2 category (UKBA, 2011). From April 2011, the RLMT and shortage occupation routes will be subject to an annual limit of 20,700 places for out-of-country applicants.<sup>46</sup> Migrants entering through Tier 2 of the PBS (in the 'general' category) will also need to hold occupations categorised as 'graduate-level' or above (for more information on what this means in practice see MAC, 2011a). As part of this process, the MAC was asked to reassess the current shortage occupation lists, and in March 2011 it published a revised list that removed 47 (out of a total of 121) occupations previously deemed to have shortages.

The main changes have been to amend and redefine a large number of engineering, science and health specialisations on the shortage occupation list; to allow, for legal and policy reasons, migrants already working in the UK under Tier 2 to extend their visa even if their job would no longer qualify as 'skilled'; and to alter the salary and experience requirements for vocational jobs such as skilled chefs and care workers.

### *Strengths and weaknesses of the MAC approach*

At present, the MAC is charged with conducting a partial review of occupational shortage lists every six months and a full review every two years. A Home Affairs Committee enquiry on the PBS and methods of identifying shortages questioned this approach, suggesting that even semi-annual reviews of the shortage lists might not be able to adequately capture and respond to rapid changes in the labour market. Given the fact that shortages could emerge in a sector up to six months in advance of the next list, and would then take some weeks or months following the inclusion of that occupation on the list to fill, the lists will not always represent a flexible and speedy method of responding to labour shortages. The reverse is also true: where changing economic circumstances mean that resident workers are able to fill vacancies included on the lists, those occupations may need to be removed more quickly than the process allows for (Home Affairs Committee, 2009).

Another potential problem with the way that the MAC operates is the fact that it is unable to conduct independent research and make recommendations on issues other than those it is asked to consider by the government. For instance, the issue of caps on non-EEA migration has been widely debated in the UK for a number of years, but was only looked at by the MAC after the Coalition government asked it to prepare an opinion on the issue in May 2010 (Martin and Ruhs, 2010). While the MAC could usefully contribute to other debates – such as the question of whether migration policies in the UK should be brought more closely in line with the government's overseas development strategies – its current structure does not permit this. However, these challenges are not insurmountable. For example, problems of timely advice can be partly ameliorated through the use of both top-down and bottom-up indicators and by a strategy of reviewing data on shortages on a rolling basis.

<sup>46</sup> This limit will not apply to in-country applications from individuals already in the UK, dependants of Tier 2 migrants, or applications relating to jobs attracting a salary of more than GBP 150,000. The intra-company transfer, sportsperson and minister of religion routes will also be excluded from this annual limit.

Meanwhile, the MAC's dual approach to gathering top-down and bottom-up information on skills shortages has enabled it to provide the government with comprehensive and credible recommendations, and despite the fact that it is only an advisory body, it is clear that these have had a considerable impact on the development of official policy. As noted above, its initial remit was to provide independent opinions on labour and skills shortages and migration. The government has since expanded the number of issues that it seeks advice on, and has asked the MAC to recalibrate the points for highly-skilled migrants entering through Tier 1, to determine which jobs should be on the Tier 2 shortage occupation list and to redesign the entry rules for Tier 2, to assess the economic impact of dependents, to provide advice on the rules around EU8 and EU2 migration to the UK and to recommend how many visas should be issued to non-EU skilled workers.

The MAC has also achieved a strong reputation for balanced analysis. Although its advice is not legally binding, the fact that it is published openly makes it difficult for the government to reject it without good reason. To date, most of its recommendations have been adopted. The inclusion of bottom-up evidence has also won the MAC acceptance from other stakeholders – such as employers and unions – even when they disagree with some of its recommendations (Martin and Ruhs, 2010). The fact that the MAC has not automatically recommended that labour shortages be addressed through increased levels of migration, but has also suggested ways that government and employers can support the development of local capacity to fill gaps in the labour market, particularly by increasing wage levels or through training, has also given credibility to its recommendations, and strengthened its reputation as an authoritative voice on labour shortage and migration policy issues.

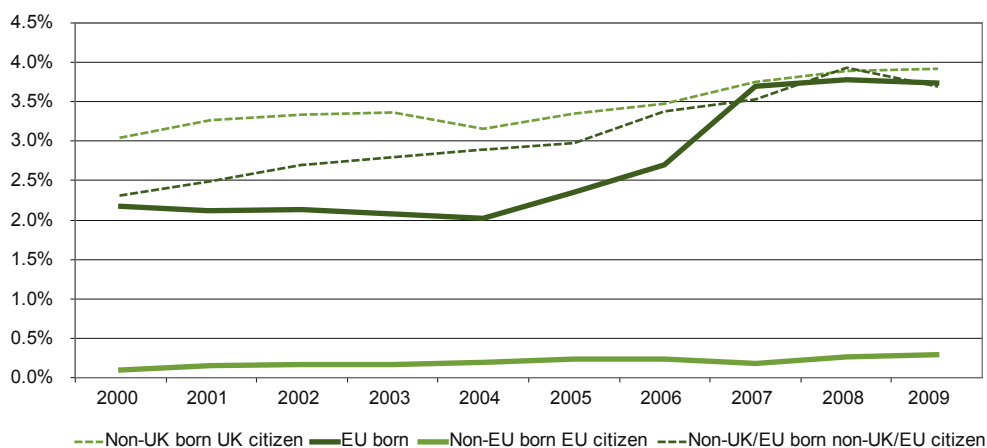
### 3.2. Migrants in the UK labour market<sup>47</sup>

Before the onset of the global financial crisis and the recession in 2008-2009, the UK experienced a sustained period of economic growth. This manifested itself in high employment levels for both UK born and non-UK born workers. Analysis from the Office of National Statistics shows that between 1997 and 2008, the total employment of people aged 16 or older in the UK increased from 26.2 to 29.4 million. Employment of UK-born people of working age increased by 1.4 million (45 per cent of the total increase) while employment of non-UK born people increased by 1.8 million (55 per cent of the total increase). Employment of UK nationals increased by 1.8 million (57 per cent of the total increase), while employment by non-UK nationals increased by 1.4 million (43 per cent of the total increase) (see Clancy, 2008).

<sup>47</sup> Unless otherwise noted, the dataset used in this paper is the Labour Force Survey, which collects detailed information on employment and earnings for a sample of households living at private addresses in Great Britain. Data on smaller groups of migrants is not reliable. For example, the non-EU born EU citizen's sample size is very low, meaning that results for this group are unreliable. Furthermore, there are also likely to be non-sampling errors, caused by factors such as potential respondents' unwillingness to take part in the survey or respondents answering questions inaccurately. Response rates tend to be lower for minority groups and in the case of migrant workers there can be under-reporting because non-private communal accommodation (in which some migrant workers have a high propensity to live) is not covered by the survey, meaning that some migrant workers are under-sampled.

Overall, the proportion of the employed workforce that was UK-born declined from 92 to 88 per cent between 2000 and 2009, matched by increases in the proportion of the employed workforce accounted for by migrants (Figure 2). However, it is important to note that the increase in the number of migrants employed in the UK reflects a rapid growth in the migrant population (and in the number of jobs), rather than a significant growth in the migrant employment rate.

**Figure 2: Percentage of employed work force by nationality, 2000-2009**



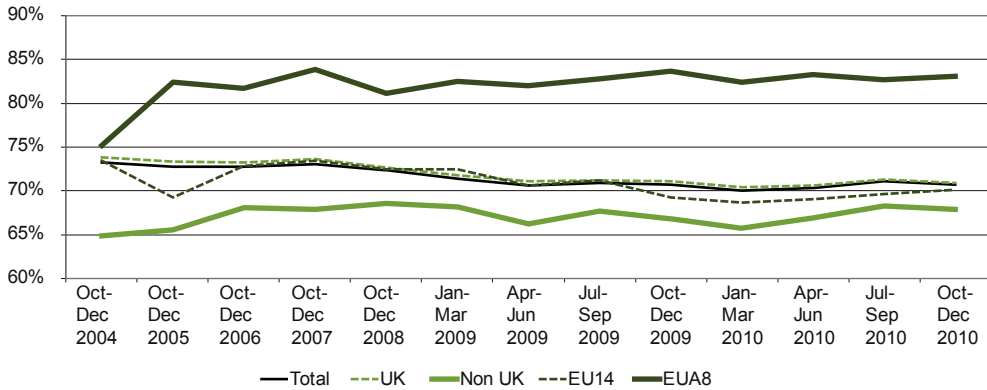
Source: Office for National Statistics

Migrants from the EU have experienced similar employment rates to those of the UK-born population and since the expansion of the EU in 2004, employment rates among this group have consistently exceeded those among the UK-born population, reflecting very high levels of employment among migrants from EU10 (see Figure 3, which shows employment rates by country of nationality). The data suggest that employment rates among migrants from the EU have held up better than those among the UK-born during the recent recession – the gap between UK-born employment and EU-born employment has widened slightly between 2007 and 2009.

This can be explained by high mobility among EU-born migrants (including high rates of return to countries of origin) and by the fact that EU-born migrants have tended to be employed in regions and sectors with high employment and vacancy rates. Even though EU-born migrants are concentrated in sectors like manufacturing, their rates of employment do not appear to have been significantly affected by the impacts of the recession.

There is significant variation in the employment rates for non-UK nationals depending on their country of origin. For example, in the period October-December 2010, Australia and New Zealand nationals had an average employment rate of 90.4 per cent, compared to 60.6 per cent for those with an African nationality (excluding South African nationals), and just 49 per cent of those with Pakistani or Bangladeshi nationality (ONS, 2011a).

**Figure 3: UK employment rates by country of nationality, 2004-2009, per cent**

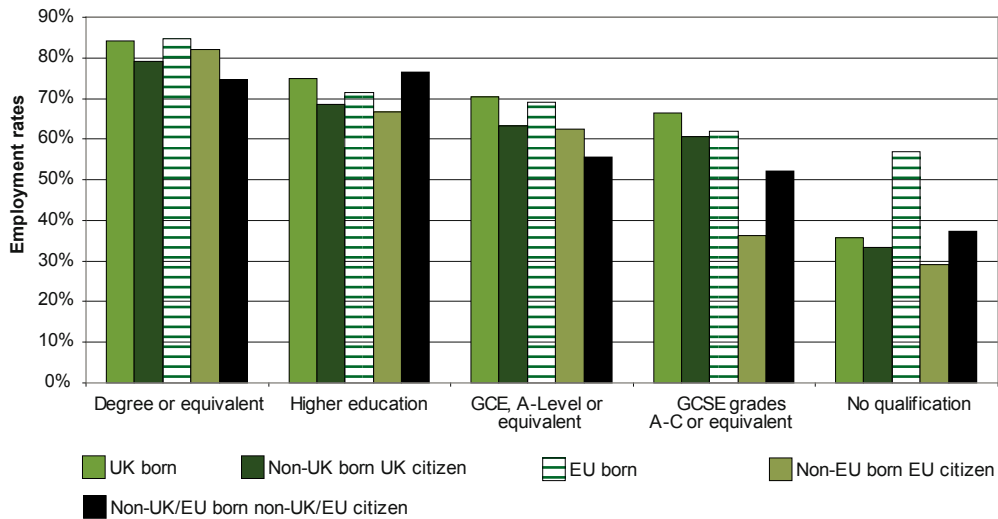


Source: Office for National Statistics

Note: This table includes data on those aged 16-64. It is not seasonally adjusted, and includes people who did not state their country of nationality.

Unsurprisingly, migrant groups with higher levels of education are more likely to have higher rates of employment. However, the impact of educational qualifications on employment rates varies significantly between groups. For example, EU-born migrants without qualifications show much higher employment rates than other migrant groups, or the UK-born population. This reflects very high rates of employment in low-skilled jobs by migrants from EU10. This group shows much higher employment among the low-skilled because it is a recently-arrived, mobile and flexible population. It is also a group for whom migration is almost always voluntary, easily reversed, and often intended to short term – as a consequence, this group is less likely to remain in the UK than others when facing unemployment.

**Figure 4: Employment rates by nationality and qualification, 2009, per cent**



Source: Office for National Statistics

It also appears that non-UK/EU born non-UK/EU citizens seem to gain less, in terms of employment rates, from degree level qualifications than other groups. This may reflect problems of translating qualifications from one labour market to another, or access to appropriately skilled jobs. It could also suggest that there are a significant number of recent graduates in this group (as overseas students stay in the UK after graduation) who might experience high levels of frictional unemployment.

## 4. Conclusions

Measuring skills shortages and evaluating the role that immigration policies can play in addressing them is a complex task. While an overreliance on foreign labour and skills can deprive local workers of jobs and delay productivity-increasing changes that keep economies competitive, restricting access to foreign workers can adversely affect particular employers and may dampen economic growth (Martin and Ruhs, 2010). In recognition of this fact, the UK government has over time become more strategic in the way it identifies labour and skills shortages that might sensibly be filled by the admission of immigrants from outside the EEA, notably through the creation of a Migration Advisory Committee capable of producing independent advice and recommendations on this issue.

The British government has ambitious objectives to become a world leader in skills, seeing this as an engine of national prosperity and growth. The recession has sharpened this focus and at present, government is emphasising the importance of up-skilling and training the domestic workforce as a means of filling shortages and reducing unemployment levels, rather than using migration policies to achieve this. However, planned spending cuts may limit the ability of government to provide training for the domestic workforce in the short term, and immigration has and will continue to play an essential role in plugging certain skills gaps and labour shortages that cannot be filled by UK nationals.

In general, the MAC's methodologies and approach to this issue have been sensible. Its use of top-down and bottom-up evidence have enabled it to develop a comprehensive picture of skills shortages in the UK, and to make confident assessments of where immigrants from outside the EEA might fill gaps in specific sectors and occupations.

However, it is important to note that the MAC's remit is relatively limited, applying largely to the highly-skilled tiers of the Points-Based System. Although these migration routes are very important for filling skills gaps in some sectors and some parts of the labour market, they apply to relatively small numbers of people – larger migration flows from the EU, through student, asylum and family routes also have significant impacts on the UK labour market and skills gaps. However, government's ability to target particular skills or labour market gaps or objectives through these other routes is limited either because they are not able to directly control flows (as with migration from the EU) or because they are unable to apply labour market or skills criteria (as with asylum and family routes). This underlines the importance of the UK's wider skills policy frameworks, taking migration into account.

One of the key issues identified in this paper is the lack of opportunity for low-skilled migrants from outside the EEA to enter and work in the UK. The government has judged that shortages in low-skilled occupations can be filled by UK and EEA nationals, which has led it to keep closed Tier 3 of the PBS, which could permit immigration for temporary labour shortages. However, as migration flows from within the EEA decline in future, the UK may need to open new legal routes for low-skilled migrants from other parts of the world. In light of this, the MAC's current inability to consider the issue of low-skilled immigration is problematic.

Finally the UK's current policy framework for work-related migration looks likely to come under increasing political pressure in coming years, as the Government seeks to drastically reduce overall net migration levels, and this may limit the UK's future ability to address skills shortages through immigration.

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# UNITED STATES

Madeleine Sumption<sup>48</sup>



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## 1. Introduction <sup>49</sup>

The idea of labour or skill “shortages” is a recurrent theme in debates about economic-stream immigration policy. Policymakers who appeal to this concept typically do so for one of two reasons. First, workers whose skills are in high demand are thought to make a disproportionate contribution to economic growth, prosperity, and competitiveness. Second, if a particular set of skills is *not* particularly scarce, employers should be able to recruit with ease from the local labour force instead of hiring foreign workers.<sup>50</sup> In practice, discussions of immigration policy and labour shortages tend to draw on both of these viewpoints.

Efforts to identify labour shortages stem from the desire to find out what the labour force “needs”, and target immigration accordingly. Labour shortages are an elusive concept with no straightforward definition, however. Indeed, the word “shortage” is itself somewhat problematic. First, it suggests an empirically verifiable and binary state of the world — that employers either find it difficult to recruit a particular skill or they do not. It also implies a normative judgment to the effect that there are “not enough” workers in a given field, whereas in practice employers’ recruiting difficulties can result not just from a simple lack of skills, but also from a failure to use available skills to their full potential or pay market-clearing wages. As a result, it is perhaps more useful to talk about cases in which skills are scarce or recruiting is difficult. Some skills are

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<sup>50</sup> In particular, there is a concern that unless there is a lack of resident workers, immigrants may undermine the opportunities of existing workforce members who would otherwise have taken the work. In practice, the empirical evidence for this is mixed. Immigrants to the United States are thought to create roughly as many jobs as they occupy, even if for the most part they work in the same occupations as natives. However, this may not be true when the labour market is weak, for example during recessions. See Giovanni Peri, “The Impact of Immigrants in Good and Bad Economic Times” (Washington DC: Migration Policy Institute, 2009), <http://www.migrationpolicy.org/pubs/Peri-June2010.pdf>.

more difficult to recruit than others, and some vacancies harder to fill than others. But there is clearly no objective, absolute threshold after which we can say with confidence that recruiting is “difficult” or “not difficult”, nor is there a single response that is appropriate in cases where recruiting problems are identified.

The United States does not perform systematic analysis of occupational skill needs for the purposes of immigration policy. It has no list of statistically defined shortage occupations (despite occasional interest among some policymakers in creating one), and with a few exceptions immigration policy does not tend to target specific occupations. The basic approach of the US employment-based immigration system, by contrast, has been to delegate the decisions about how workers should be distributed across occupations to employers, on condition that the workers and the jobs meet broad eligibility criteria primarily focused on regulating the education levels and earnings of incoming workers. The underlying rationale for this approach is that employers are best placed to correctly anticipate demand for skills and/or labour.

This delegation to employers is not absolute. First, US immigration laws have placed strict controls on the *number* of immigrants that can be admitted. Periodic adjustments to these numbers have aimed to respond to evolving or unfolding labour market needs, although so far the US has not developed an effective mechanism for doing this systematically. Second, immigration laws and policies still shape and limit immigration flows by imposing criteria on employers, workers, and their jobs. Allowing employers to determine the occupational mix of immigration flows does not eliminate the need to make strategic decisions about the circumstances under which employers should be able to hire foreign workers and the means of prioritizing between large numbers of prospective immigrants seeking admission. However, these strategic choices are much more often made on the basis of workers’ individual’s human capital than on the specific occupation they will perform in the United States. That said, a limited number of occupation-specific policies have arisen in a few cases in which there has been a specific economic, social, or political rationale for doing so, most notably in the case of agricultural workers, nurses, and a broad set of “high-tech” workers.

As this case study argues, the US approach has some strong advantages over systems that attempt to determine labour market needs through statistical analysis of occupations, especially those that admit immigrants without a job offer. It has contributed to good integration and employability among employment-based immigrants; it can respond relatively quickly to changing economic needs; and it is not held hostage to a host of technical, analytical, and operational problems inherent to analyzing occupational shortages and applying them to immigration policy. The drawbacks of the US laws and practices include *ad hoc* and highly politicized processes for adjusting work-visa policies and numbers, uncertainties over the effectiveness of the regulations governing employers’ recruitment of foreign workers, and insufficient mechanisms to ensure that within a large pool of applications, the most beneficial ones are satisfied systematically. These problems are not intractable, however, and countries wishing to emulate the US employer-driven approach would be able to resolve many of them.

## 2. Are There Shortages in the US Labour Market?

### 2.1. Defining Labour Shortages

When analyzing whether employers find it difficult to recruit a sufficient numbers of workers, and especially when devising immigration policies to address these problems, it matters not just *whether* employers face hiring difficulties, but also *why*. Moreover, analysts must consider whether the market is likely to adjust of its own accord and what the economic or social consequences would be of either intervening or not intervening through immigration policy. Answering these questions requires substantial occupation-by-occupation investigation, qualitative analysis, and a series of relatively subjective judgments that require careful consideration and experience gained over time.

Before turning to the ways in which US immigration policy has addressed these questions, this section overviews attempts to identify occupational skill or labour shortages in the United States and examines a few occupations that are commonly considered to face recruiting difficulties. These studies underscore some of the fundamental difficulties facing analysts attempting to identify shortages in a manner that is objective, systematic, and useful for the purposes of immigration policy.

Perhaps the best known effort to identify labour shortages in the US labour market is economist Malcolm Cohen's mid-1990s occupational analysis based on an indicator method that is conceptually similar to the one now used in the United Kingdom. (An earlier version of this work had been commissioned by the US Department of Labor in the early 1980s and had informed discussions at the time about the potential for creating a systematic analysis of occupational shortages for immigration purposes). Occupations were assessed according to a series of indicators including unemployment rates, recent changes in employment levels, changes in wages, employment growth as predicted by the US Bureau of Labour Statistics, and the number of months of specific vocational training.<sup>51</sup> Occupations received a score for each indicator; these scores were aggregated and the occupations ranked in order. Cohen then designated the highest ranked occupations as shortage occupations. These were primarily medical, scientific, and technical jobs, including natural scientists, physical therapists, nurses, chemists, and computer programmers (Cohen, 1995).<sup>52</sup>

A similar analysis using 1992-1997 data took a slightly different approach. Instead of designating the highest ranked occupations as shortage occupations, it sought to determine the number of occupations which met a pre-determined set of criteria

<sup>51</sup> Since the early 1970s, the Bureau of Labour Statistics has produced regular ten-year-forward projections of occupational employment. These data themselves do not attempt to identify future shortages or surpluses of workers, but rather describe where job growth is most likely to occur. High job growth does not necessarily mean shortages will occur, for example, if the *supply* of qualified workers is sufficiently high. Moreover, the forecasts are not always accurate, especially at the detailed occupational level, and are subject to unpredictable developments that affect the distribution of growth across industries. For an evaluation of BLS projections, see for example, Andrew Alpert and Jill Auyer, "The 1988-2000 Employment Projections: How Accurate Were They?" (Washington DC: Bureau of Labour Statistics, 2003), <http://www.bls.gov/opub/ooq/2003/spring/art01.pdf>.

<sup>52</sup> In order, the top ten occupations according to the baseline methodology variant used in the study were: 1) "Other natural scientists"; 2) Veterinarians; 3) Physical Therapists; 4) Physicians; 5) Registered Nurses; 6) Speech therapists; 7) Chemists, except biologists; 8) Biological and life scientists; 9) Computer programmers; 10) Computer systems analysts and scientists. Cohen, "Labour Shortages as American Approaches the Twenty-First Century".

described by the author herself as “somewhat arbitrary”: employment growth of 50 percent faster than average, wage increases of 30 percent faster than average, and unemployment rates at least 30 percent below average.<sup>53</sup> Out of 68 occupations analyzed, seven met this threshold: management analysts, special education teachers, dental hygienists, marketing managers, airplane pilots, purchasing agents, and mechanical engineers. The author argued that in all but one of these occupations (special education teachers) no anecdotal or qualitative information existed to confirm the existence of shortages, while other occupations in which complaints of shortages were routine (including some skilled trades such as plumbers, electricians, and carpenters) found no support of labour market tightness in the data. She concluded that statistical analysis alone was insufficient to gage with confidence the existence of a shortage or the lack of one (Veneri, 1999).

These two exercises illustrate some of the difficulties that arise when analyzing occupational shortages with labour market statistics. The methodologies typically appeal because they appear to be both objective and robust. In practice, however, a number of problems arise for reasons much more profound than a lack of good data.<sup>54</sup> First, the criteria used to determine whether a labour shortage exists are plausible but arbitrary. Employers’ recruiting difficulties may manifest themselves in various ways in the data, and this is why the studies described use a combination of indicators rather than one single measure. However, there is no obvious or theoretically defensible way to decide which indicators should be given most weight or which methodology to choose over another. Should the increase in an occupation’s wages be 50 percent greater than average in the exercise described above, or would 40 percent have been sufficient? Does past employment growth in an occupation show that shortages are occurring or, on the contrary, that demand for workers is being met? Questions of this nature abound.

Second, analysis of this kind relies on occupational data to group together workers who perform similar tasks. The occupation of an individual worker provides information about both broad levels of human capital and specialized knowledge required for a particular kind of work. However, it remains a relatively crude measure of the skill a job requires.<sup>55</sup> Occupational categories fail to account for a huge variety of required experience, qualifications or abilities; and earnings within a single occupation can vary quite substantially, suggesting that not all workers are equivalent or make good substitutes (Mouw and Kalleberg, 2011). Even within small occupational groups, substantial differences in the required knowledge will arise depending on the idiosyncrasies of the work in question — especially in more highly skilled occupations. As a result, unemployment might be very high among physicists, for example, but if an employer requires a very specific expertise, he or she might still not be able to find a worker with the right skills.

<sup>53</sup> Carolyn Veneri, “Can occupational labour shortages be identified using available data” *Monthly Labour Review* March 1999, <http://www.bls.gov/opub/mlr/1999/03/art2full.pdf>

<sup>54</sup> The United States has relatively good labour market data, in the form of the Current Population Survey, American Community Survey, and the Job Openings and Labour Turnover Survey. That said, the sample sizes are not always sufficient to disaggregate the data by region.

<sup>55</sup> Researchers disagree about the extent to which occupation is a good indicator of human capital. Sociologists have typically focused on occupation as the standard unit of analysis, while economists tend to focus on education (such as years of schooling or diplomas received).

Third, occupational analysis is both a backward-looking and a fundamentally static way of approaching the question of labour and skill “needs”.<sup>56</sup> When using this analysis to inform immigration or other policy areas, policymakers implicitly rely on the assumption that past trends will continue to hold in future. This is often not true: labour markets can adjust in unpredictable ways depending on the economic cycle, technological developments (including of labour-saving technologies), trade and outsourcing (which affect the demand for specific goods and services in the host country), trends in education and training provision, and employers’ efforts to recruit more effectively, to restructure jobs or to improve wages and working conditions.

These analytical problems are compounded by a set of operational ones. Even if areas of labour scarcity could be identified with reasonable accuracy, it is not clear whether governments have the means and ability to appropriately adjust the number of immigrants arriving in those occupations. Not only is the timing difficult (employers must wait for data to become available, be analyzed, be translated into immigration policies, and then lead to immigrant arrivals—by which point employers may already have changed their behavior in response to recruiting difficulties); the duration of recruiting problems is not usually known in advance, nor is the size of the flow that would best remedy them in a sensible and proportionate manner.

## 2.2. Where have US employers experienced recruiting difficulties?

A small number of occupations and industries have dominated the debates about labour scarcity in the United States.<sup>57</sup> This section describes the nature of perceived shortages and some of their causes.

### *Information Technology and Engineering*

The market for IT workers has aroused substantial debate and, at times, controversy. During the dot-com boom of the late 1990s, IT was at the center of debates about workforce shortages. Employment in the industry increased rapidly and entry-level wages rose (Capelli, 2000). Even as growing numbers of workers and students flocked towards IT (gaining bachelor’s degrees in information technology, taking IT courses as part of other degrees, and studying for a range of non-degree credentials and qualifications),<sup>58</sup> concerns persisted about a shortfall or *impending* shortfall of qualified workers. This prompted a flurry of studies on the subject of IT labour shortages, several arguing that hundreds of thousands of IT vacancies were going unfilled.<sup>59</sup>

<sup>56</sup> Labour market statistics typically become available a few or even several months after they are collected and must then be analyzed and used to update assessments about labour needs. As a result, there may be a substantial time lag between the data collection and the policy adjustment, not to mention between the data collection and the arrival of immigrants themselves.

<sup>57</sup> This may be, in part, because the employers or their associations are particularly organized and vocal.

<sup>58</sup> The number of computer science degrees conferred annually in the United States grew by almost 40 percent between 1990 and 2000, more than double the average, and by another 50 percent between 2000 and 2003. However, IT degrees are just one of several routes into IT jobs and certainly do not comprise the only source of supply of these skills. US Census Bureau, Table 298, Bachelor’s Degrees Earned by Field, [http://www.census.gov/compendia/statab/cats/education/higher\\_education\\_degrees.html](http://www.census.gov/compendia/statab/cats/education/higher_education_degrees.html).

<sup>59</sup> These studies are elegantly summarized in Cappelli, 2010.

What caused recruiting difficulties in IT, real or perceived? Some analysts argued that pay for IT workers had not risen any faster than in other specialized, professional jobs, and that employers complaining of shortages were simply not willing to pay the wages required to hire experienced IT workers.<sup>60</sup> Moreover, much of the competition for IT focused on a relatively small group of the very best individuals, rather than on IT professionals across the board (Capelli, 2010). The IT personnel problems may also have stemmed in part from managerial failures. For example, one report argues that fragmented projects, limited opportunities for systematic training and learning from others, punishing hours, and employers' inability to identify good performance and reward it meant that in many ways computer programming would qualify as a "lousy job" (Capelli, 2010). As a result, turnover was very high and substantial numbers of IT workers left the industry (Capelli, 2010). Much of the speculation about IT labour shortages came to an end with the bursting of the dot-com bubble in 2000, which rapidly reduced IT employment.

Another part of the workforce often perceived to face "shortages" is engineers, which employer surveys rank among the hardest-to-fill vacancies.<sup>61</sup> Investigations into the state of the labour market for engineers (or, more broadly, science and technology workers) have generally failed to find hard-and-fast evidence of a shortage, most notably because wages do not appear to have risen rapidly (Brown and Linden, 2008; Lowell et al., 2009). On one hand, the supply of degree-educated individuals has risen only slowly over the past decade (from 73,000 engineering degrees conferred in 2000, to 84,000 in 2008). Engineering has gradually decreased as a share of all degrees earned, and foreign-born students have made up an increasing share of their number, especially in advanced and doctoral education (US Census Bureau, 2009: Table 298). Moreover, engineering may be "leaking" workers to other occupations, including better-paid ones such as finance or law,<sup>62</sup> and once a worker has left the occupation their skills can become outdated quite quickly. In other words, employers may face recruitment difficulties not simply because of a shortfall of qualified individuals, but also at least in part because they fail to provide attractive job prospects and career development.

In both IT and engineering, concerns about labour scarcity emerge not just from evidence of recruiting difficulties, but also from the fact that regardless of whether employers *can* adjust to lower numbers of workers or higher wages, these workers are thought to have positive spillover effects for the rest of the economy. In other words, if science and technology workers help to fuel innovation and technological advances, increasing the competitiveness of the US economy, it could be a good idea to admit them even if formal indicators do not point to a particular malaise in the market. An extension of this argument is that increasing supply in science and technology fields makes sense because

<sup>60</sup> For the latter view, see for example, Peter Freeman and William Aspray, "The Supply of Information Technology Workers in the United States" (Washington DC: Computing Research Organization, 1999), available at <http://eric.ed.gov/PDFS/ED459346.pdf>.

<sup>61</sup> An annual employer survey by the employment agency, Manpower, for example, listed engineers in top place for employer recruitment difficulties in the United States in 2008 and 2009, and in eighth place in 2010 (Annex 9).

<sup>62</sup> Determining the extent of this "leakage" in scientific occupations is difficult because workers with a science or engineering education may use and apply their knowledge in their work even if they do not work in a formally classified science or engineering occupation. According to the National Science Foundation, 66 percent of those with their highest degree in engineering work "in the field" (a higher proportion than for other scientific disciplines); but a majority of those who do not work in the field report that their jobs are "related" to their degree (National Science Foundation, 2010).

it allows the United States to build or maintain a competitive advantage relative to other countries that have been rapidly developing scientific expertise. These arguments have gained particular traction in light of concerns about the outsourcing of skilled work that has traditionally been considered a US comparative advantage.<sup>63</sup>

### *Nursing*

Shortages of nurses are perhaps the most persistent and widely recognized ones in the recent history of the US labour market.<sup>64</sup> Concerns about a lack of registered nurses have arisen periodically for decades. In recent years, demand has grown considerably, sparking concerns about another nursing shortage. Employment in the nursing and residential care industry grew by 41 percent from 1990 to 2000 when total non-farm employment in the United States grew by about 20 percent, and it grew by 21 percent from 2000 to 2010, a period during which total US employment *fell* by just over 1 percent largely due to the devastating recent economic crisis.<sup>65</sup> This growth is expected to continue; Bureau of Labour Statistics projections rank registered nurses among the fastest growing occupations in the coming decade. Other indicators of a tight labour market for nurses include rapidly rising employment numbers, high vacancy rates, and employer surveys (Annex 9; Pindus et al., 2002).

Public policies designed to address these concerns face some rather complex challenges. First, the nursing profession is heterogeneous and the types of vacancies employers find hard to fill shift continuously. The need for nursing aides, licensed practical nurses, registered nurses, and nurse practitioners (in ascending order of educational level and credentials) varies over time and between hospitals. For example, financially constrained hospitals (such as Veterans Affairs [VA] hospitals or those with larger proportions of uninsured or Medicaid patients) tend to experience more systematic recruiting difficulties than their better funded counterparts.<sup>66</sup> Nurses who move up the career ladder into more desirable shifts or more qualified positions may leave hard-to-fill vacancies behind, especially in undesirable “graveyard” shifts.

Geography compounds some of these problems. Because healthcare is needed all across the country, providers cannot simply relocate to areas where skills or labour are more readily available, as if they were regular private-sector providers of a tradable good. Despite advances in communication technologies that have increased the potential for providing medical services remotely (Blinder, 2006), most health services must be provided in person (at a local clinic or hospital, or even in the home), thus creating the risk of geographic mismatches and persistent recruitment problems in rural and other “underserved” areas such as inner cities.

Second, while the labour market for nurses has traditionally responded to increasing demand through higher wages and rising enrolments in training, such response has

<sup>63</sup> By contrast, it has also been argued that the outsourcing of technical jobs will reduce the demand for workers and hence makes immigration *less* necessary. See Brown and Linden (2008).

<sup>64</sup> Incidentally, registered nurses were ranked among the occupations most likely to face a shortage in Malcolm Cohen’s statistical analyses for both the 1980s and 1990s.

<sup>65</sup> Bureau of Labour statistics, Employment, Hours, and Earnings from the Current Employment Statistics survey (National), “Nursing and residential care facilities” and “Total nonfarm employment”, available at <http://www.bls.gov/ces/#data>.

<sup>66</sup> For a more detailed analysis, see Long et al. (2008).



typically been slow. The resulting time lags have created something of a “feast or famine” labour market in which concerns about shortages are interspersed with periods of oversupply and stagnating wages (Long et al., 1990). This disequilibrium in the nursing labour market has proved persistent, prompting sporadic government interventions to subsidize training, regulate employment practices, or temporarily boost supply through immigration (Newsschaffer and Schoenman, 1990). These policies aim to smooth out the natural fluctuations in labour-market tightness. However, they also carry the risk of exacerbating labour market imbalances, if they arrive too early or too late.

The most recent studies of the labour market for nurses have identified several causes of recruiting difficulties, including high turnover rates, especially among newly graduated nurses; insufficient clinical placements and faculty to train new nurses meaning that qualified candidates are turned away; and the ongoing retirement of many of the profession’s most experienced workers (Institute of Medicine, 2011). Persistent growth in demand for nurses at a range of skill levels is expected as a result of the ageing population, and is likely to exacerbate such structural recruiting difficulties. Particularly in less skilled nursing-related positions such as health aides and assistants and health home attendants, low wages are also a barrier to recruiting and retaining staff, even as the ageing population increases the demand for their services.

The policy implications of these trends are complicated by the fact that the health sector has a strong social function in addition to its commercial role. As a result, prices matter, and higher wages could mean less widely available affordable healthcare.<sup>67</sup> This makes the argument for intervening through immigration policy more compelling. However, immigration is unlikely to solve the underlying problems of recruitment and retention; in the long run the supply of nurses is likely to depend much more on measures to make the occupation more attractive to existing workers and — critically — to bring those who have left the nursing workforce back into it.

### *Shortages in Low-wage Jobs?*

Finally, US employers have also periodically complained of recruitment difficulties at the low-wage end of the labour market — for example in hospitality, construction, and various service occupations. Discussions of labour shortages at this level have tended to coincide with times of low unemployment and robust economic growth (and employers certainly receive a more sympathetic hearing during these periods). Nevertheless, what it means for a labour market to be tight at this skill level is not straightforward, especially since unemployment is typically high among young workers, those with low levels of formal education, and certain minorities. Even when national unemployment dipped below four percent in 2000, for example, it exceeded nine percent for workers in their early 20s, and 15 percent for 20-24 year-old African Americans.<sup>68</sup> However, various factors can make it difficult to match workers to jobs. Barriers to work include childcare obligations, long commuting times or relocation costs (in other words, spatial mismatches), or the need to take on full-time, year-round

<sup>67</sup> Moreover, medical practitioners may define shortages not as an imbalance of supply and demand, but as a situation in which the provision of care falls short of what they believe to be ideal or acceptable standards (these situations have been referred to as “professional standards shortages” (Long et al., 2008).

<sup>68</sup> Current Population Survey, data available at <http://www.bls.gov/data/#unemployment>.



work (especially since welfare systems tend to penalize part-time employment). At the same time, employers may be unwilling or unable to raise wages to attract prospective employees while remaining commercially viable.

These dynamics make immigration policy at the less skilled level difficult and contentious. This is particularly true when one considers the role of illegal immigration. The number of employment-based visas for temporary foreign workers in low-wage occupations is capped and the visas come with strict regulations determining pay, working conditions, and the duration of workers' stay. However, during the economic booms of the 1990s and 2000s, large numbers of unauthorized workers flocked to the United States (the majority coming across the US-Mexico border), allowing employers to bypass these regulations entirely. By 2008, the unauthorized made up substantial shares of many of the same occupations for which employers have traditionally sought temporary foreign workers: farming occupations (25 percent), building, groundskeeping and maintenance (19 percent) and construction (17 percent) (Passel and Cohn, 2009). Unauthorized flows have clearly responded to labour demand in the United States, growing during periods of economic growth, and collapsing in the wake of the recent recession (Papademetriou and Terrazas, 2010).

Moreover, labour demand in some less skilled occupations has a strong cyclical and seasonal character. For example, construction-industry unemployment reached a low of 4.5 percent in October 2006 during the US construction boom, before skyrocketing to 18.7 percent in October 2009 with the housing collapse and economic crisis.<sup>69</sup> Even during boom years, seasonal variations meant that occupational unemployment often doubled from peak to trough over a 12 month period.<sup>70</sup> Where labour market tightness fluctuates in a regular and relatively predictable manner, immigration may be able to play a particular role in smoothing variations in the workforce needs via temporary seasonal migration programs. Indeed, allowing employers to meet these seasonal variations by hiring foreign workers may allow them to sustain a larger and more productive year-round workforce. Cyclical variations, by contrast, are much less predictable and hence more difficult to address through temporary migration programs in this way.

### *Summary*

The examples in this section illustrate the variation in the nature of recruiting difficulties employers may face and the reasons for which they arise. Behind each occupation lies a complicated story about supply and demand, reward structure that attract the most talented students to certain occupations (and away for others), incentives for training, retention and turnover, and employer recruitment practices, wages, or working conditions. This story often explains *why* employers face difficulties finding sufficient staff, and hence what might be the most feasible or appropriate response. For example, both IT and nursing have experienced retention problems, implying that the problem lies not just in the number of workers but also in the way they are managed and the way their work is structured. Increasing immigration in response may alleviate a short-term need but is unlikely to resolve the underlying retention problem.

<sup>69</sup> Bureau of Labour Statistics, "Unemployment Rate – Construction Industry, Private and Salary Workers". [http://data.bls.gov/pdq/SurveyOutputServlet?series\\_id=LNU04032231&data\\_tool=XGtable](http://data.bls.gov/pdq/SurveyOutputServlet?series_id=LNU04032231&data_tool=XGtable)

<sup>70</sup> *Ibid.*

The long run *impact* of increasing immigration in these cases will also depend on the extent to which immigration either gives employers breathing space in which to make the necessary adjustments, or simply delays the adjustment process by reducing their need to undertake more fundamental changes to employment and training practices. Deciding on the best response to specific occupational problems — and especially whether increasing immigration in a given case is desirable and sensible — will in many cases be a qualitative decision requiring subjective judgments on which reasonable analysts will not necessarily agree.

### 3. How Have US Immigration Policies Responded?

Most immigration to the United States is not explicitly designed to meet labour market needs, but instead to enable family unification (two thirds of permanent immigration comes via family routes, and just six percent comes as economic-stream principals; see Annex 1a and 1b).<sup>71</sup> However, the idea that certain types of labour or skills are scarce in the US labour market has been central to policy debates over employment-based immigration, forming the philosophical basis for most economic-stream flows.

As mentioned earlier, the rationale for considering shortages can be framed in two somewhat different ways: as a means to bring in the skills that are most scarce and hence most needed and/or beneficial; and as a means reduce flows of immigrants into (primarily low-wage) jobs in which labour is not considered scarce and in which employers *could* recruit local workers (even if determining whether employers can recruit locally is difficult to impossible). In practice, this means that sharp distinctions exist between skill levels: policies are much more open at the highly skilled level (and especially for the exceptionally talented), while tighter regulations prevail for workers with lower levels of formal education or expertise. At the highly skilled level, it is assumed that immigrants are unlikely to displace US workers; as a result, the need to identify and demonstrate that recruiting difficulties exist receives much less emphasis.

By contrast, at the less skilled level the lack of willing and able workers in the local labour force is seen, *at least in theory*, as both the precondition for employment-based immigration and the primary mechanism to reduce the risk that immigrants displace members of the existing labour force. In practice though, most economists believe that the impact of less skilled immigration on job prospects of US-born workers is small even if immigrants work in occupations that local workers are able and willing to do. The US restricts the inflows of less skilled economic migrants, but experiences substantial unauthorized flows and admits large numbers of less skilled family immigrants, many of whom work in low- and middle-wage occupations. Empirical studies (for a review see Holzer, 2011) suggest that the impact of these workers on the US-born is modest.

US immigration laws and regulations do not include an explicit definition of a labour shortage. Perhaps the closest thing to an implicit definition can be found in the labour certification conditions. Labour certification is the process through which employers

<sup>71</sup> Department of Homeland Security, *Yearbook of Immigration Statistics 2009* (Washington DC: Department of Homeland Security, 2010), [http://www.dhs.gov/xlibrary/assets/statistics/yearbook/2009/ois\\_yb\\_2009.pdf](http://www.dhs.gov/xlibrary/assets/statistics/yearbook/2009/ois_yb_2009.pdf).

gain permission to petition for workers on certain types of temporary or permanent visa; it is designed to determine that “there are not sufficient workers who are able, willing, and qualified, and who will be available at the time and place needed, to perform the labour or services involved.”<sup>72</sup> In practice, as described shortly, this definition of labour scarcity almost always applies on a case-by-case (or employer-by-employer) basis rather than to whole occupations. That is, the employer must demonstrate that *in this case* he or she was unable to recruit locally (having advertised the job), but is not required to demonstrate that there is an occupation-wide recruitment problem.

US policymakers have for the most part remained skeptical about the value of relying on statistical measures of labour needs or scarcity. This has not been for want of discussion. The idea of attempting to identify shortages has recurred periodically in the immigration debate, and the 1990 Immigration Act in fact mandated a pilot program within the Department of Labour to test the idea. But it has never been considered sufficiently palatable or feasible to make its way into law.

However, the goal of meeting specific labour needs is nonetheless built into the design of work-based visas in the form of the principle of employer selection. For almost all economic-stream flows, employers identify the individual candidates (or in some cases, especially for low-wage jobs, delegate this task to recruitment agents) and then sponsor them for admission.<sup>73</sup> As a result, employment-based immigrants cannot enter unless there is proven demand for their skills, in the form of a job offer from an employer.<sup>74</sup>

Given the difficulty in creating objective or reliable assessments of an economy’s labour needs that can match demand with supply in an efficient and timely manner, this mechanism represents a means of “aggregating” diffuse information that individual employers hold about their labour needs. Employer selection alone is not necessarily *sufficient* to determine that an employer faces recruitment difficulties or that immigration is a sensible response, as discussed shortly. However, it does have the overwhelming advantage of removing the need for policymakers to decide, on the basis of highly flawed data and techniques, how to allocate immigration flows across the economy. Equally importantly, because employers’ assessment of skill needs is dynamic and continuously updated, their decisions can react more quickly to changing circumstances than statistical measures relying on past data. (One could even go as far as to say that employer selection is or can be *forward looking*. That is, if any actors are able to *anticipate* skill needs, it is likely to be employers).

Another way in which immigration policy can respond to labour market demand is through the adjustment of numerical limits. The US experience with this process has

<sup>72</sup> This language is taken from the rules on H-2A temporary agricultural workers, but the legislative language for permanent labour certification is almost identical. 8 USC § 1188, “Admission of temporary H-2A workers”. For permanent certification, see 8 USC § 1182, “Inadmissible aliens”.

<sup>73</sup> The exception to this rule is for permanent immigrants with “extraordinary ability” in the arts or sciences, who enter on EB-1(a) visas and do not require an employer sponsor.

<sup>74</sup> Within each category, visas are considered in the order they are received, on a first-come first-served basis. Processing times for temporary work authorization varies from 1-3 months, and workers coming from abroad must then apply at a US consulate for a physical visa. Employers with more urgent needs who are willing and able to pay a \$1,000 fee for premium processing can have their applications processed within 15 calendar days. USCIS “USCIS Processing Time Information”, [https://egov.uscis.gov/cris/processTimesDisplayInit.do?jsessionid=cba2cdj7Co\\_zwbb8hNs1s](https://egov.uscis.gov/cris/processTimesDisplayInit.do?jsessionid=cba2cdj7Co_zwbb8hNs1s).

been more troubled. Periodic adjustments have been made over the past two decades in response to perceptions of labour demand, and in some cases, explicit links have been drawn between immigration flows and efforts to increase the supply of certain skills at home through education and workforce development. But these processes have been highly politicized and far from systematic, as described later in this section.

### 3.1. Work Visa Regulations and the Concept of Labour Scarcity

Admission policies aim to meet employers' skill needs by relying on the principle of employer sponsorship. In addition, employer-driven systems also raise an inevitable question: how can one prevent or at least discourage employers from hiring foreign workers when they *could have* hired locally, simply out of preference, in order to pay lower wages, or to avoid training members of the existing labour force?

Most of the tools used in the United States to discourage the “unnecessary” hiring of foreign workers are familiar to policymakers across the world, although concrete evidence on their effectiveness remains limited. In practice, they comprise a series of rules determining employers' and workers' eligibility for work visas. These rules vary by visa type and are most strict at the less skilled level. Annex 2 provides an overview of visa categories, and Annex 10 summarizes their requirements.

First, employers may be required to test the labour market by advertising vacancies to local workers before hiring workers on temporary visas. This labour market test is designed to show that no US workers<sup>75</sup> are able, willing, qualified and available to perform the work; in other words, that the employer has a vacancy which he or she cannot fill from within the local labour force. Labour market tests are widely used in immigrant-receiving countries, although their impact is relatively uncertain. On the one hand, the process of advertising a vacancy may help to make hiring locally the default option for employers. If employers exist who are determined to hire foreign workers regardless of the state of the local labour market, they may simply reject any candidates who apply on the basis that they are not qualified. For government agencies, determining whether this is true is rather difficult; active efforts to do so are limited.

A complicated set of regulations governs the labour certification process. One feature of interest is that current law requires employers to offer jobs to any US worker who meets the advertised job's minimum qualifications (who is “minimally qualified”), before they can hire a better qualified foreign worker. Employers of course prefer to hire the *best* candidates, even if other candidates are available who would perform the work to an acceptable but lesser standard. Problematically, they not only have more information than government enforcers on the actual abilities of the candidate; they have an incentive to require of job applicants skills and experience that will reduce the pool of eligible candidates and thus make it more likely that the regulators will approve their preferred candidate.<sup>76</sup> In other words, one cannot expect a high level of compliance with this rule.

<sup>75</sup> US workers is defined as all those authorized to work in the United States (primarily, US citizens and green-card holders).

<sup>76</sup> Of course, regulators are very aware of this tendency on the part of employers, a situation that creates “cat-and-mouse” games that is one of the labour certification system's most undesirable features.

However, employers are not required to “test” the labour market when hiring highly skilled workers for highly skilled H-1B visas, for “extraordinary ability” O-1 visas, or for permanent residence in the highest skill category (the “first preference” employment-based green card).<sup>77</sup> This reflects the underlying assumption — one that receives considerable empirical support — that skilled immigrants do not tend to displace US workers or jeopardize their wages and working conditions (Sommerville and Sumption, 2009). In other words, identifying a shortage is less necessary at higher skill levels because the benefits and positive spillovers of these workers are considered significant and the risk of adverse effects on the existing labour force small.

A second mechanism to discourage employers from hiring a foreign worker where they could have recruited locally is to regulate the cost of doing so. First, employers are required to pay foreign workers the amount that they would pay to other workers in the same position or the regulated “prevailing wage” for their occupation and area (whichever is higher). This requirement was introduced in 1990 to prevent employers from hiring foreign workers simply in order to pay lower wages. The methodology for determining what the prevailing wage should be has occasionally provoked debate, however.<sup>78</sup>

Visa fees also serve to increase the cost of hiring a foreign worker, making this a less attractive option in cases where local workers are, in fact, available. Visa fees have fluctuated over time, although the basic trajectory has been upwards. In addition to a processing fee for all temporary visas (currently USD 325), employers pay separate fees for certain work visas. Most notably, Congress introduced an additional H-1B visa fee of USD 500 in 1998,<sup>79</sup> increasing it to USD 1,000 in 2000<sup>80</sup> and to USD 2,000 in 2004 (the latter included a new USD 500 fee to fund “fraud detection”).<sup>81</sup> In 2010, a further USD 2,000 was added to these amounts for employers considered “dependent” on temporary foreign workers (defined as employers with more than 50 employees and more than 50 percent of their employees on H-1B or L-1 visas).<sup>82</sup>

In some cases, visa fees have also been used to create an explicit link between immigration and other policies to address labour scarcity, such as workforce development. Most of the additional fees introduced since 1998 for H-1B employers have been earmarked for education and training programs designed to increase the supply of qualified US workers. These fees have been used for a variety of purposes,

<sup>77</sup> For various historical reasons, employers who hire workers on temporary visas without the requirement to advertise their job are often required to look for local replacements after the foreign employee has worked with the firm for several years, in order to receive labour certification for a permanent visa. In other words, employers must advertise vacancies that they do not wish to fill. Further complicating the process, they are not allowed to require skills or knowledge that the foreign employee learned on the job. And they may be required to offer prospective “minimally qualified” workers the same salary that their existing, more experienced employee is *currently* paid. These provisions have received considerable criticism. See Lee, 2011; Papademetriou and Yale-Loehr, 1996.

<sup>78</sup> Migration Policy Institute, “Regulating the Recruitment of Foreign Workers” (Washington DC: Migration Policy Institute, forthcoming).

<sup>79</sup> The American Competitiveness and Workforce Improvement Act of 1998 (P.L. 105-277).

<sup>80</sup> American Competitiveness in the Twenty-First Century Act (P.L. 106-313)

<sup>81</sup> *H-1B Visa Reform Act of 2004*. This legislation also created a lower fee of \$750 for small businesses (those with 25 or fewer employees).

<sup>82</sup> L-1 visas are for intracompany transferees moving between offices of a multinational firm. Intracompany transfers are not discussed in any detail in this paper, since their main purpose is to allow intra-corporate mobility rather than to provide scarce skills to the US labour market more generally.

including scholarships for low-income students (especially in science, technology, engineering, and math [STEM] fields) and grants for training programs disbursed by the National Science Foundation and the US Department of Labour — although the total revenues from the fees is relatively modest.<sup>83</sup> New or increased fees have typically been introduced at the same time as increases in the number of H-1B visas available. (The 1998 and 2000 legislation increased fees while raising the basic H-1B cap, while the 2004 fee increase came at the same time as an extra 20,000 visas for US-educated master’s students).

Finally, US law imposes restrictions on the duration of visa holders’ stays. At the highly skilled level, workers receive temporary visas lasting several years and are able to apply for permanent residence if an employer is willing to sponsor them. Employers seeking to hire foreign workers in less skilled or low-wage jobs (on H-2B visas), however, can retain workers for no more than one year (renewable twice under “extraordinary circumstances”). As part of the application, they must provide evidence that the employee is needed for seasonal, intermittent, peak-load or one-off work.<sup>84</sup> In practice, this requirement limits the number of occupations in which employers are able to hire less skilled workers, albeit without specifying particular occupations that are or are not eligible. The economic rationale behind it is that meeting large variations in staffing is difficult when the local labour force is small and its members typically prefer year-round work (this is especially the case in rural areas — for example, in hotels or ski resorts with very large workload fluctuations). As a result, temporary seasonal workers are thought less likely to undermine the wages or job prospects of existing workers, although labour unions and groups advocating restricted immigration strongly contest this presumption.

As in many other immigrant-receiving countries, strictly temporary migration programs at the low-skilled level are partly based on the assumption that at this level shortages of labour for ongoing, year-round jobs are rare. In other words, there is a sense among some analysts and advocacy groups that seasonal and other fluctuations in labour demand may make it difficult to hire locally. However, as long as there remain unemployed workers with low levels of formal education, employers should be able to find and train sufficient employees for ongoing, year-round jobs.<sup>85</sup> Economists disagree about the extent to which this is the case (and whether local workers are willing to take certain work (Holzer, 2011)). In practice, however, the desire to restrict less skilled migration to temporary jobs stems not just from economic reasoning, but also from uncertainty about less skilled immigrants’ long-term integration prospects.

<sup>83</sup> A small proportion of the “training” fee also went to US Citizenship and Immigration Services in order to speed up processing times. For more details on the allocation of the fees, see Levine, 2007.

<sup>84</sup> H-2B visas are for non-agricultural work. As discussed earlier, a separate temporary visa exists for agricultural workers. For more details on H-2B visas, see US Department of Labour, “H-2B Certification for Temporary Non-Agricultural Work”, <http://www.foreignlabourcert.doleta.gov/h-2b.cfm>.

<sup>85</sup> Note that even if training is easy and feasible, local workers may be unwilling to take up certain work or may face barriers to doing so, as discussed earlier. In many cases, however, it is difficult to determine whether jobs are undesirable because of the nature of the tasks they involve or because they pay low wages. In the most clear-cut example, employers in throughout advanced industrialized economies find it difficult to attract local workers into agricultural occupations, which are no longer considered particularly desirable to members of an increasingly educated workforce.

### 3.2. Occupation-Specific Immigration Policies

For the most part, therefore, the US system does not attempt to channel immigration into specific types of job, but relies on employer sponsorship to determine the occupational mix.<sup>86</sup> Some notable exceptions to this principle exist, however.

Like most immigrant receiving countries, the United States recognizes the specific circumstances of certain components of the agricultural sector in its work authorization laws.<sup>87</sup> A dedicated temporary agricultural visa (the H-2A visa) was carved out of the existing H-2 visa (whose origins go back to 1952 legislation) as part of a 1986 law that legalized 2.6 million unauthorized workers, including 1.1 million agricultural workers (see Papademetriou and Heppel, 1999). This “new” visa program was in large part designed to allay concerns about a potential reduction in the numbers of agricultural labourers if the legalized population took advantage of their new status to leave for other, more attractive, occupations. The same law also foresaw an additional “replenishment agricultural worker” program, which would be activated during the 1990-1993 period if it was determined that an agricultural labour shortage existed (this determination would take place according to a complicated formula comparing projected supply and demand, laid out in detail in the legislation).<sup>88</sup> No such shortage was ever identified.<sup>89</sup> The basic H-2A visa for temporary agricultural workers, however, remains in place today.

The nursing profession has also been the subject of periodic occupation-specific visa arrangements. In 1989, the *Immigration Nursing Relief Act* (INRA) responded to widespread concerns about an inadequate nursing workforce by creating a dedicated temporary visa for registered nurses (RNs). This provision was allowed to expire in 1995, but a similar visa (known as the H-IC) was created again in 1999, albeit limited to 500 places per year, exclusively for nurses working in “disadvantaged areas”.<sup>90</sup> Authorization for this visa was renewed once in 2005,<sup>91</sup> before expiring in 2009.<sup>92</sup> A bill to extend the visa further was introduced in the House of Representatives in 2010, but died in committee.<sup>93</sup> While no longer in force, one interesting feature of these nursing provisions is that the conditions attached to the visas created an explicit link between immigration and other policies to address labour supply problems. Employers hiring nurses under the H-IA or H-IC were required to attest that they had made efforts to develop the nursing workforce, such as by operating or financing a training program for RNs, providing career development to prospective nurses, restructuring work schedules or workloads, and various other activities.<sup>94</sup> In practice, however, many

<sup>86</sup> A distinction is made between the skill levels required for specific jobs. In order to qualify for an H-1B visa (designed to bring skilled workers into areas of strong employer demand) workers must work in a “professional” occupation; however, these occupations are defined broadly and justified on a case-by-case basis, rather than through a specific list of “approved” occupations.

<sup>87</sup> See Demetrios G. Papademetriou and Monica L. Heppel, “Balancing Acts: Toward a Fair Bargain on Seasonal Agricultural Workers” (Washington DC: Brookings Institution Press 1999).

<sup>88</sup> Sec. 210A of the *Immigration and Nationality Act*.

<sup>89</sup> Federal Register vol 61 no 19, January 29, 1996, <http://www.gpo.gov/fdsys/pkg/FR-1996-01-29/pdf/96-1294.pdf>

<sup>90</sup> Under the *Nursing Relief for Disadvantaged Areas Act of 1999* (NRDAA), H.R. 441. 106<sup>th</sup> Cong.

<sup>91</sup> Under the *Nursing Relief for Disadvantaged Areas Reauthorization Act of 2005* (NRDARA).

<sup>92</sup> US Department of Labour, “H-1C Nurses in Disadvantaged Areas” <http://www.foreignlabourcert.doleta.gov/h-1c.cfm>.

<sup>93</sup> *Underserved Area Nursing Relief Restoration Act*, H.R. 5687, 111<sup>th</sup> Congress, 2<sup>nd</sup> Session, <http://www.gpo.gov/fdsys/pkg/BILLS-111hr5687ih/pdf/BILLS-111hr5687ih.pdf>

<sup>94</sup> 20 CFR 655.3.



immigration policy practitioners believe that these provisions have had little impact, serving primarily to raise the barriers to recruiting foreign workers rather than to make a genuine impact on the supply of trained nurses.

Currently, nurses must typically enter on permanent visas since most do not meet the skill criteria for the H-1B temporary visa, which requires that they have a bachelor's degree or higher and work in a job that demands this level of education (for example, they might work in a specialisation within the nursing profession, such as acute care).<sup>95</sup> The numbers entering on H-1B visas are in practice therefore quite small.<sup>96</sup> A pathway also exists for Mexican and Canadian nurses, who can enter on the TN visa created as part of the North American Free Trade Agreement. However, the majority of employment-based immigrants in nursing must wait for a permanent visa, and waiting times can be quite substantial (often several years). As a result, employment-based immigration is not the main route for foreign health professionals to enter the country (Capps et al., 2010; Paparemetriou and Sumption, forthcoming). Instead, healthcare employers appear to rely more heavily on immigrants already in the country who arrived through other routes: family unification, humanitarian migrants, or the unauthorized immigrants (the latter especially in occupations that require little training or few credentials, such as home health aides and attendants).<sup>97</sup>

Finally, occupations in science, technology, engineering and mathematics (popularly known as STEM) receive special treatment in various ways. For student visaholders with a US education in STEM subjects, post-study work authorization is extended from the standard 12 months to a total of 29 months.<sup>98</sup> This makes it easier for US employers to hire science and technology graduates and to sponsor them for permanent residence. Over the past few years, several legislative proposals aiming to retain STEM graduates or increase their flows have attracted attention but have not become law. The best-known of these would exempt STEM PhD graduates from US universities from numerical limits on both green cards and H-1B visas.<sup>99</sup> Others would provide cap-exempt visas to immigrants with master's degrees in STEM subjects and some US work experience.<sup>100</sup>

<sup>95</sup> US Department of Labour, "H-1C Nurses in Disadvantaged Areas", <http://www.foreignlabourcert.doleta.gov/h-1c.cfm>.

<sup>96</sup> In fiscal year 2010, just over 1,000 H-1B labour condition applications were approved for registered nurses, the vast majority of which were for a specific nursing specialization. A much smaller number is likely to have entered on H-1B visas, since fewer than half of all labour condition applications lead to an employer visa petition and subsequently to a worker entering the United States.

<sup>97</sup> Note that US law also includes some limited provisions exempting employers from the labour market test when sponsoring immigrants for permanent residence in occupations deemed to face a shortage. These occupations are known as "Schedule A" occupations, in which the US Department of Labour has "determined that there are not sufficient United States workers who are able, willing, qualified and available". Only physical therapists and nurses are included on Schedule A. See US Department of Labour, "Permanent Labour Certification", <http://www.foreignlabourcert.doleta.gov/perm.cfm>. More unusually, a lighter certification burden is also in place for sheepherders; see 20 CFR ch V, 656.16.

<sup>98</sup> This extension took effect in April 2008 and employers can only take advantage of it if they are signed up to participate in E-Verify, a program for verifying employees' work authorization status. Federal Register, 73 no 68, April 8, 2008, <http://www.gpo.gov/fdsys/pkg/FR-2008-04-08/pdf/E8-7427.pdf>.

<sup>99</sup> *Staple Act*, H.R. 1791, 111<sup>th</sup> Congress, 1<sup>st</sup> sess., <http://www.gpo.gov/fdsys/pkg/BILLS-111hr1791ih/pdf/BILLS-111hr1791ih.pdf>.

<sup>100</sup> S. 3932, *Comprehensive Immigration Reform Act*, 111<sup>th</sup> Congress, 2<sup>nd</sup> Session, <http://www.gpo.gov/fdsys/pkg/BILLS-111s3932is/pdf/BILLS-111s3932is.pdf>.



### 3.3. Periodic Changes to Numerical Limits

The US legislature determines the number of visas that can be issued annually. Over the years, it has periodically acted to adjust these limits, often in response to concerns about labour scarcity. For example, the last major changes to immigration law took place under the *Immigration Act of 1990*, which increased the limits on permanent employment-based immigration from 54,000 per year to 140,000, upgraded the eligibility requirements for all such visaholders (allocating only 10,000 green cards to low-wage workers, a number subsequently reduced to 5,000), and revised and established new categories of temporary work visas. At the time of the 1990 act, unemployment had been falling steadily since 1983 and concerns about the tight supply of certain skills loomed large in the policy debate (Papademetriou and Lowell, 1991). A decade later, in 2000, a temporary increase in the numerical limit on H-1B visas came upon the heels of widespread reports about insufficient numbers of workers in the high-tech and IT industries, discussed earlier. A similar rationale lay behind a law enacted at the height of the economic boom in 2005, exempting employers from numerical limits when they rehired workers who had previously worked in the United States under the temporary H-2B program.

However, numerical limits do not respond *systematically* to the country's economic circumstances or labour demand. Inflexibility stems in part from the fact that immigration laws are strongly codified (by contrast with other countries where regulations rather than action by the legislative branch are sufficient to make even relatively significant policy changes). Numerical visa limits are written into law and are only revisited when sufficient political consensus can be gathered to do so.

The current numerical limit of 140,000 employment-based visas per year, for example, has been in place for more than two decades (since the 1990 Immigration Act). The cap on H-1B visas has changed more often, but not in response to any systematic evaluation of need. Legislation in 2000, for example, temporarily raised the cap to 195,000 until fiscal year 2004,<sup>101</sup> when the increase automatically expired and the number returned to the 65,000 visa baseline established in 1990. In November 2004 Congress supplemented this number with 20,000 visas for master's graduates from US universities,<sup>102</sup> both as an effort to retain talented foreign students, and in order to reduce the pressure on the baseline 65,000 limit. These adjustments were made on the basis of political compromise and did not result from any statistical or systematic assessment of needs. Similarly, the 66,000 limit on H-2B workers has also remained constant since 1990, with the exception of the temporary exemption for "returning" low-wage workers (described above).<sup>103</sup> Another noteworthy adjustment was a temporary fix designed to reduce the backlog of nurses waiting for green cards in 2005. This latter measure allocated nurses, physical therapists, and their families 50,000 green cards that had gone "unused" (for various administrative reasons) between 2001 and 2004.<sup>104</sup> This limit was exhausted by the end of 2007.

<sup>101</sup> *American Competitiveness in the 21st Century Act.*

<sup>102</sup> *The H-1B Visa Reform Act of 2004.*

<sup>103</sup> *The Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Tsunami Relief, 2005, P.L. 109-13, 119 Stat. 231.*

<sup>104</sup> US Department of State, "Visa Bulletin for July 2005" (Washington DC: US Department of State, June 2005) [http://travel.state.gov/visa/frvi/bulletin/bulletin\\_2539.html](http://travel.state.gov/visa/frvi/bulletin/bulletin_2539.html).

In other words, policy adjustments are generally *ad hoc* and are often temporary. Increases in visa numbers for specific visas or categories of worker have occurred where political coalitions were able to bring them about — in part in response to evidence of very strong economic demand, but also as a result of organized lobbying efforts by technology industry and employer associations such as the Information Technology Association of America (ITAA). To a certain extent, this is a natural result of US political and legal structures.

However, one policy proposal to introduce greater institutional flexibility is the creation of an independent government agency, or Standing Commission, which would provide systematic evaluation of numerical limits and other employment-based immigration policies, as well as analytical support and regular recommendations to Congress.<sup>105</sup> Recent legislative proposals for “comprehensive immigration reform” incorporated a Standing Commission of this kind, although the prospects for their enactment are no longer considered favorable.<sup>106</sup>

### 3.4. Summary: The US Immigration System’s Approach to Labour Scarcity

For the most part, the US employment-based immigration system has prioritized applicants’ *employment skills* rather than their proposed occupations, by requiring a job offer and making admission easiest for those with high levels of human capital, documented accomplishments, and in some cases, US education. Meanwhile, the United States relies of a familiar set of tools designed to encourage employers to use the immigration system only where their need to do so is demonstrably genuine; these include the labour market test (that is, the requirement to advertise vacancies), visa fees, and required minimum earnings for foreign workers. Moreover, explicit links are made in some cases between immigration and other efforts to increase the supply of workers through education and training, primarily in the form of visa-fee-funded training grants (although the total sums they raise are relatively modest).

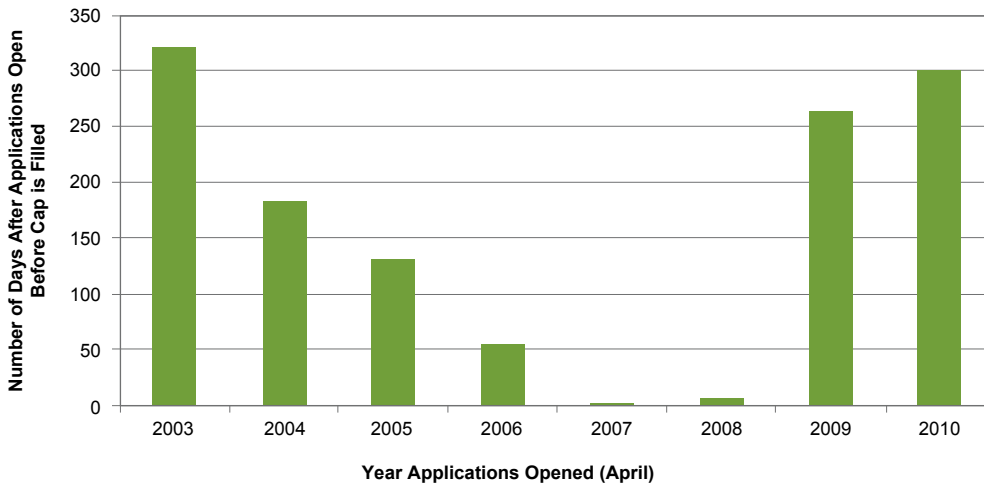
The regulations restricting the conditions for hiring foreign workers have clearly not been sufficient to prevent oversubscription of the numerical visa limits. In years of strong economic growth, numerical limits on both H-1B and H-2B visas have been exhausted quickly — in some cases so quickly that visas had to be allocated by lottery and no visas were available at all for most of the year (Figure 1). The visa cap remained constant from 2004 to 2010, but the time taken to meet it varied dramatically with the economic cycle and employers’ demand for labour.<sup>107</sup>

<sup>105</sup> Demetrios G. Papademetriou, Doris Meissner, Marc Rosenblum and Madeleine Sumption, “Harnessing the Advantages of Immigration for a Twenty-First Century Economy: A Standing Commission on Labour Markets, Economic Competitiveness, and Immigration” (Washington DC: Migration Policy Institute, May 2009), [http://www.migrationpolicy.org/pubs/StandingCommission\\_May09.pdf](http://www.migrationpolicy.org/pubs/StandingCommission_May09.pdf).

<sup>106</sup> See, for example, S. 3932 *To provide for Comprehensive Immigration Reform and for other purposes*. <http://www.gpo.gov/fdsys/pkg/BILLS-111s3932is/pdf/BILLS-111s3932is.pdf>

<sup>107</sup> The increasingly rapid exhaustion of the H-1B visa limit also presumably stems from employers’ expectations about when visas would be available, based on experiences from previous years. In other words, employers knew that visas would run out quickly and responded by making sure to submit applications as early as possible.

**Figure I: Time taken to fill H-IB cap, 2003-2010**



Source: USCIS Press Releases, 2003-2010.

Note: Employers can apply for H-IB visas in April for employment start dates during the next fiscal year, beginning October. This chart tracks the Congressionally-mandated H-IB cap of 65,000 as of 2004, and does not include the 20,000 additional visas set aside for Master's graduates of US Universities. In 2003 the cap was at 195,000.

Many argue that this is simply because the limits are unrealistically low. Short of relatively substantial increases in the number of visas, however, the limits are likely to remain oversubscribed under current rules. This implies that more effective mechanisms would be needed to prioritize the flows of foreign workers and ensure that the most compelling applications are satisfied systematically. For example, immigration policies could: enable employers to “pierce” the cap by paying a higher fee (thus demonstrating the value of their sponsored worker); exempt high-earning or particularly highly qualified workers from the cap; or raise the bar for entry by specifying sets of criteria that would qualify a prospective immigrant for admission.

At the less skilled level, the greatest malaise of the US system is the large number of unauthorized workers (an estimated 10.8 million individuals were illegally resident in 2010, or just under 30 percent of the foreign-born population) (Hoefler et al., 2011). Policymakers disagree about the extent to which increasing the number of employment-based visas at the low-skilled level would reduce the pressure for illegal immigration, and little convincing evidence exists in either direction.<sup>108</sup> In any case, governments are typically reluctant to provide more employment-based visas in low-wage jobs, even if this would reduce the pressures for illegal immigration, because of concerns about the impact of low-wage immigration on already resident workers. A significant unresolved challenge in the US immigration system, therefore, is to create a set of policies that discourages illegal employment and makes legal immigration a viable and preferred option for employers, while maintaining control over the number of legal visas and the conditions attached to them.

<sup>108</sup> This question is discussed in more detail in Madeleine Sumption, “Policies to Curb Unauthorized Employment” (Washington DC: Migration Policy Institute, forthcoming).

## 4. The Impact of Selection Mechanisms and Immigrants' Economic Integration

One way of defining the employment-based immigration system's effectiveness is to ask whether it prioritizes the most economically beneficial flows and/or whether it admits workers who complement the existing workforce rather than providing direct substitutes. This, after all, is the underlying goal of attempts to identify labour market shortages for immigration purposes.

Assessing the US immigration system directly on the basis of these criteria is not straightforward, particularly since relatively little evidence exists on the labour market impact of immigration by entry route. (By contrast, the labour market impact of total immigration, including family, humanitarian, and unauthorized flows, has been studied in depth) (for a review, see Holzer, 2011).<sup>109</sup> However, a somewhat clearer picture of employment-based immigrants' labour market integration is available.

Employment-based immigrants tend to fare significantly better in the labour market than other groups of immigrants, with higher employment rates and a higher incidence of skilled employment. The main source of information identifying immigrants by entry route is a survey of green-card recipients from 2003.<sup>110</sup> This survey shows that a few months after receiving their green cards, 93 percent of working-age employer-sponsored green-card recipients in 2003 were working compared to about half of family-based entrants and the spouses of employment-based principals (Figure 2; Annexes 8a and 8b show the evolution of employment and unemployment among immigrants and the US born since 2000).<sup>111</sup> Immigrants with bachelor's degrees were three times more likely to be in a highly skilled job if they were employer sponsored.<sup>112</sup> More generally, employer-sponsored workers are concentrated in highly skilled occupations such as mathematical and computer scientists, executive and managerial jobs, health diagnosis, engineers, architects and surveyors; by contrast, the most common occupations among family-based immigrants are middle- and low-skilled including food preparation and serving, sales, and office and administrative support (Annex 7).

This suggests that broadly speaking, employment-based immigrants' skills are in demand and they are able to make good use of them.<sup>113</sup> However, the advantages that the employer-sponsored enjoy persist over time: even after some years in the United States, university-educated immigrants who initially entered on a work visa or as a graduate student earned significantly more than those who entered under other routes.<sup>114</sup>

<sup>109</sup> For a review, see Holzer, 2011.

<sup>110</sup> The New Immigrant Survey. Guillermina Jasso, Douglas S. Massey, Mark R. Rosenzweig and James P. Smith "The New Immigrant Survey 2003 Round 1 (NIS-2003-1) Public Release Data." March 2006. Retrieved October 2009, <http://nis.princeton.edu>.

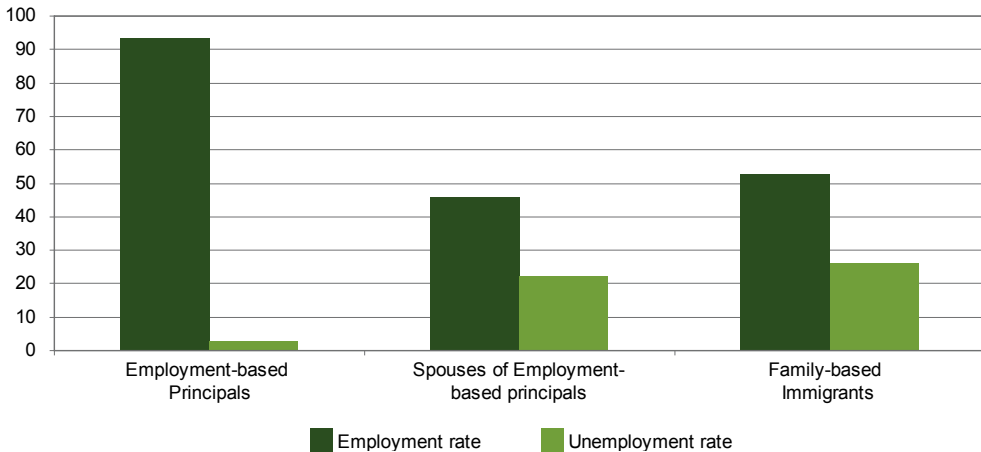
<sup>111</sup> Author's calculations from the New Immigrant Survey microdata. Note that the spouses of employment-based immigrants receive employment-based visas but have not been directly selected by employers.

<sup>112</sup> Highly skilled jobs are defined as those requiring a minimum of a bachelor's degree (e.g. scientists and engineers, doctors, financial managers, postsecondary teachers) (Batalova and Fix, 2008).

<sup>113</sup> Note that employment-based principals also fare better because the vast majority has prior work experience in the United States.

<sup>114</sup> According to the National Survey of College Graduates, 2003 cohort (Hunt, 2009).

**Figure 2: Employment and unemployment rates, employment-based and family green card recipients, 2003 cohort**



Source: *New Immigrant Survey 2003 (public release 2006)*.

Furthermore, earnings among highly skilled economic-stream immigrants coming on temporary visas are roughly comparable to those of educated US-born workers. Since H-1B visa beneficiaries are relatively young (two-thirds of petitions are for workers between the ages of 25 and 34; see Annex 6) one might expect them to earn less. However, the median wage on approved H-1B visa petitions in 2009 was USD 64,000 and 99 percent of the workers had a bachelor’s degree or above (USCIS, 2010). By way of comparison, the median annual income for all full-time workers in the US labour force with a bachelor’s degree or above was approximately USD 60,000.<sup>115</sup> That said, some analysts argue that H-1Bs are underpaid relative to what their labour is really worth, and that employers use the program to access highly qualified workers at a discount; empirically, this question remains unresolved.

On the other hand, the wages of temporary workers in non-professional, less skilled jobs — workers entering under the H-2B program for non-agricultural seasonal or temporary employment — tend to be low. In 2008, the median wage for positions with approved H-2B labour certifications was USD 8.13,<sup>116</sup> compared to approximately USD 9.50 for full-time unauthorized workers with a high-school diploma or less and just over USD 10 for authorized foreign-born workers with the same educational qualifications.<sup>117</sup>

As far as occupational distribution is concerned, employers in a number of occupations across the skill spectrum that are thought to face recruiting difficulties have turned to

<sup>115</sup> Includes all employed workers with positive incomes whose usual hours were at least 35 hours per week; data from 2009 American Community Survey.

<sup>116</sup> One reason this wage is lower could be that employment-based immigrants under this program are not as highly concentrated in large metropolitan areas such as New York, Los Angeles and Chicago, where overall wage levels are high by national standards. Estimate based on petitions with hourly wage rate provided. MPI calculations from Foreign Labour Certification Data Center, “H-2B Program Data”, <http://www.flcdatacenter.com/CaseH2B.aspx>.

<sup>117</sup> Includes full time workers only. Migration Policy Institute analysis of Current Population Survey data with imputations of legal status, provided courtesy of the Pew Hispanic Center.

immigrant workers.<sup>118</sup> For example, immigrants are strongly represented in engineering and IT occupations, and make up a disproportionate share of several healthcare occupations from medical scientists to home health aides. Immigrants are also strongly concentrated in construction, an industry known for its large cyclical and seasonal variations. In perishable-crop and related agricultural jobs, which are widely thought to be too undesirable, too physically demanding, and too itinerant to appeal to US born workers, the immigrant share is a staggering three-quarters (Kandel, 2008).

## 5. Conclusions

The US immigration system is structured primarily to admit workers with high human capital and earnings potential for whom employer demand is most clear and who are considered least likely to affect the job prospects of US workers. The employer-driven selection mechanism also ensures that immigrants cannot enter where there is no demand for their individual skills and abilities. On the other hand, the US system has almost certainly not done enough to set standards and criteria for admissions which are sufficiently high to prevent the very rapid exhaustion of numerical limits. When these limits are exhausted early in the year, it makes the admissions less selective, as very highly qualified candidates may be turned away simply because there were no visas left when employers identified them.

The lessons other countries can draw from the US approach depend in part on the counterfactual — what alternative system for using immigration to meet specific labour needs is proposed. Policies that attempt to identify shortages and use this information for immigration purposes typically do so by creating occupational lists and using them to increase immigration into designated shortage occupations and/or decreasing immigration outside of them (Sumption, 2011). In countries with lists of this kind, designated shortage occupations can be used in any one of the following ways:

- In some points systems, points can be allocated to workers in shortage occupations, making it easier to migrate into these occupations despite receiving a lower number of points for other characteristics for which points are earned (Papademetriou et al., 2009b).
- In employer-led systems, employers sponsoring workers in occupations on the shortage list might be exempt from the requirement to advertise the vacancy in the local labour market, might be relieved of other administrative or financial requirements (such as visa fees), or might receive exemptions from numerical limits.
- In either system, immigration can be *restricted* to occupations on the list, although this is typically only done in cases where other avenues for immigration exist

<sup>118</sup> Note that the employment-based immigration system does not provide the majority of the immigrant workforce in the United States. As a general rule, the lower the occupation's skill level, the more likely it is that immigrant workers came through other routes, such as family unification or illegal immigration. Immigrants in less skilled occupations are strongly represented in some of the country's most rapidly changing occupations. Of the occupations with the largest projected job growth over the next ten years, for example, many of the ones with high immigrant shares require, notably home health aides and nursing aides, construction labourers, and groundskeepers, relatively low levels of formal education (Annex 4). Interestingly, immigrants are also concentrated in a few of the fastest *declining* occupations, including some in the increasingly capital-intensive US manufacturing industry (Annex 5).

and/or where the list is very broad and is primarily used to exclude low-wage occupations from highly skilled visa programs.

The way in which a shortage list is used crucially determines its impact on flows and on employers. For example, the primary effect of exempting employers from the labour market test in a system without numerical limits would be to save them the time and effort associated with advertising jobs. To the extent that this reduces the costs employers face, it may somewhat increase immigration into shortage occupations. A greater impact is likely in a system that actively prioritizes immigration into shortage occupations at the expense of non-shortage ones. Systems that do this raise the costs of inaccuracies in the analysis. They also run greater risks that the immigration response will have perverse consequences, such as over-correcting for the problem and sending disproportionate numbers of immigrants to some occupations while barring others from access to immigration entirely.

Perhaps the most important lesson from the US case is that creating occupational shortage lists is not the only way to guide immigration flows to the places in which they are most beneficial, and probably not the most effective. More specifically:

- Employers might face recruiting difficulties regardless of whether their occupation is on a shortage list. This is especially the case at the higher skill levels where the combinations of abilities they seek for a given vacancy may be quite idiosyncratic.<sup>119</sup> Relative to systems that rely on shortage lists, therefore, the US case-by-case approach has the advantage of vastly superior *information*, leading to better outcomes for both employers and their workers.
- Individual employers may be able to demonstrate that they face recruiting difficulties by meeting certain criteria, including by paying a fee. Fees have their drawbacks (in particular, they may disproportionately prevent small businesses from hiring foreign workers, although the US system addresses this concern to some extent by charging lower fees to these firms). However, they also have the advantage of providing a “sorting” mechanism that can be applied on a case-by-case basis without relying on statistically determined assessments of where immigration is needed.
- Workers themselves can be required to meet eligibility criteria based on broad human capital levels, language acquisition, and employment history. These criteria have a strong influence on their long-term prospects for integration, perhaps more so than the specific occupation they practice. In particular, immigration systems that admit workers initially on temporary visas and grant permanent residence after a few years, can use information about economic and other forms of integration (such as language acquisition) during the initial period in order to select for permanent residence (Papademetriou et al., 2009a).

Despite these advantages, employers-driven systems face some significant challenges. Foremost among them is the need to determine appropriate parameters governing employers’ ability to hire foreign workers and to resolve the government’s role in

<sup>119</sup> Even if the average accuracy of the shortage list can be increased using subjective information and judgments specific to each occupation (as in the United Kingdom, for example), this does not remove the underlying need to group jobs into a manageable number of occupations.



regulating this process. The United States, like many other countries, relies in part on policies such as the labour market test whose effectiveness is far from clear. Employer-driven selection also raises gnawing concerns about the fate of workers who are dismissed or whose employers go out of business.

One of the US system's greatest drawbacks is that tight numerical limits restrict the aggregate number of visas issued, but immigration policies do not appear to be doing enough to prioritize flows within those limits in the ways described. Temporary work visas are typically issued on a first-come first-served basis and even the "best and the brightest" may be turned away once the cap has been exhausted. Given inevitable constraints on the number of immigrants that can be admitted, countries considering adopting an admission system based on the US approach must carefully consider the criteria they will use to prioritize the flows to ensure that the highest-value applications are systematically satisfied. Where possible, these judgments should be based on empirical evidence about immigrants' outcomes in the labour market.

A second observation arising from the US case is that the concept of "shortages" is both most useful and most difficult to apply in the case of low- and middle-skilled jobs. In highly skilled or highly paid jobs (especially at the very top of the skill spectrum), there is often little need for governments to identify particular occupational skills to prioritize in the immigration system. This is because (at least in well-designed systems) immigrants tend to qualify for immigration *anyway* once they have the skill levels and attributes that are required to practice the occupation. Above a certain skill level, statistical analysis is also likely to be less accurate than simpler, more broad-based criteria such as the worker's human capital, ability to secure a job offer, and earnings (or the employer's willingness to pay a fee).

In lower-wage, less skilled jobs, many economists agree that at least some employment-based immigration can be beneficial. However, deciding which workers to admit for which jobs is much more difficult: one cannot, by definition, require high levels of human capital; and higher employer fees might simply encourage employers to opt out of the legal immigration system and hire from the large pool of unauthorized workers in the United States. At the same time, decisions about the occupations in which immigration is most necessary depend in part on subjective judgments. For example, one could argue that poultry processing is an inherently unattractive occupation to which native-born workers are unlikely to aspire, while some other initially low-wage jobs in construction or manufacturing, for example, are both more appealing and offer greater opportunities for long-term wage and skill growth. Does this mean that low-wage or low-skilled immigration should only be allowed into "undesirable" occupations? If so, how would policymakers possibly distinguish systematically between the two?

At the low-skilled level, the US response to this dilemma has been to restrict immigration to seasonal, one-off, or otherwise temporary work. This position has strong theoretical appeal and is common among immigrant-receiving countries. However, the presence of a large unauthorized workforce suggests that temporary worker programs alone have not met strong demand for immigration into less skilled occupations.

Finally, many workers admitted for employment ultimately gain permanent residence. If workers are brought to the country to perform specific tasks or occupations, therefore, it matters whether that demand is transient or persistent. On one hand, complaints about

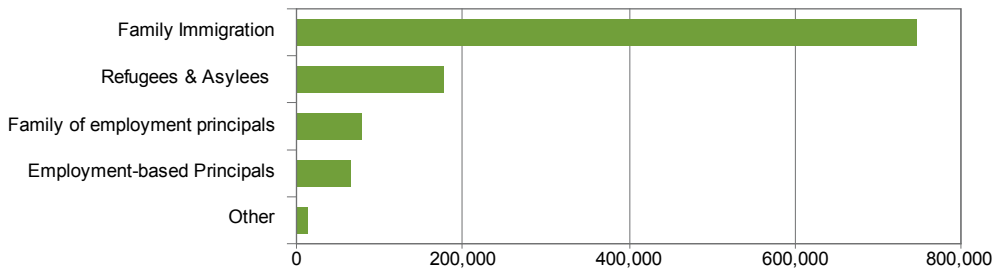


the insufficient pipeline of nurses have persisted for decades and are likely only to intensify in coming years. By contrast, some specialized and relatively well-paid construction jobs which experienced extremely high demand just a few years ago now have been decimated in the wake of the housing crash, deep economic crisis, and prolonged jobless recovery. Indeed, the recent economic turmoil in the United States has underscored the dramatic and unpredictable instability of certain occupations compared to others.<sup>120</sup>

As a result, employment-based immigration systems that allow a transition to long-term or permanent residence must not only admit workers who meet current labour demand, but also select and retain those with the potential to integrate and find sustainable employment opportunities in the long run. Ultimately, this ability is likely to rest on language proficiency, human capital, and the ability to learn and adapt to a changing labour market, and not just from specific occupational skills.

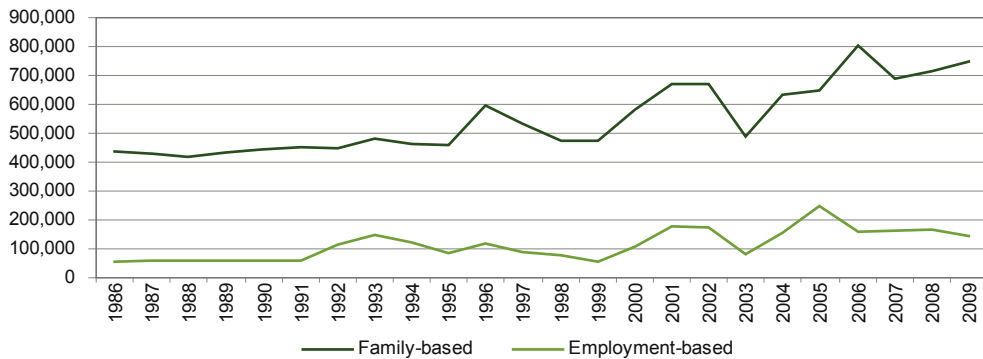
## Annexes

### Annex 1a: Green cards issued in 2009, by type



Source: Department of Homeland Security, *Yearbook of Immigration Statistics 2009* (Washington DC: Department of Homeland Security, 2010).

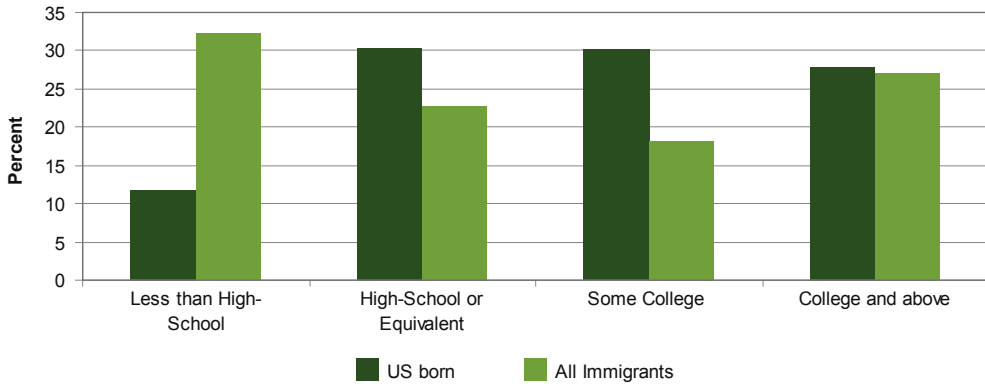
### Annex 1b: Family- and employment-based permanent immigration, 1986-2009



Source: Department of Homeland Security, *Yearbook of Immigration Statistics, various years*

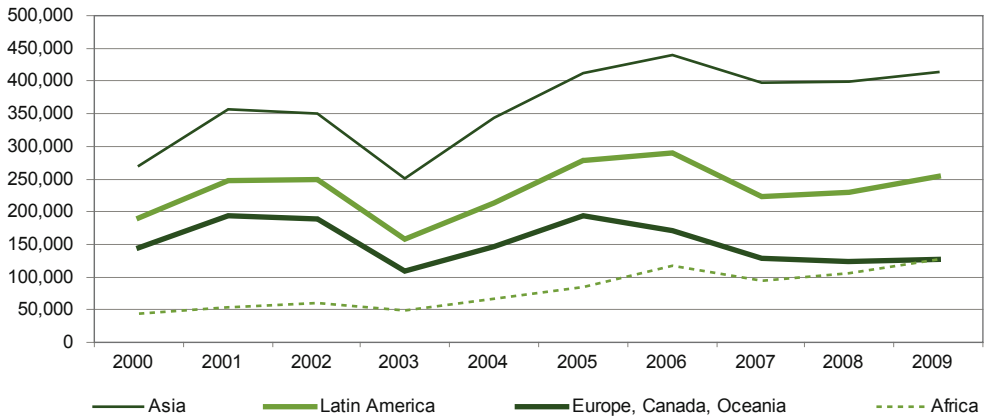
<sup>120</sup> Large numbers of young immigrant men from Latin America, for example, flocked to the country during the economic boom and worked their way up career ladders in construction, but have subsequently faced soaring rates of unemployment. Of course, most of the immigrant construction workforce did not come on employment-based visas (more than half — an estimated 1.7 million individuals — were unauthorized in 2008) (Passel and Cohn, 2009) For a broader discussion of the economic crisis and its effects on immigrant employment in the United States, see Papademetriou and Terrazas, 2010 and Capps et al., 2010.

**Annex Ic: Education level of immigrants and the US-born, 2007-2009**



Source: American Community Survey, 2007-2009.

**Annex Id: Permanent immigration to the United States by region of birth, 2000-2009**



Source: Department of Homeland Security, Yearbook of Immigration Statistics, 2009.

**Annex Ie: Permanent immigration flows, top 10 countries of origin, 2009**

Country	2009 Green Card Issuances
Mexico	164,920
China, People's Republic	64,238
Philippines	60,029
India	57,304
Dominican Republic	49,414
Cuba	38,954
Vietnam	29,234
Colombia	27,849
Korea, South	25,859
Haiti	24,280

Source: Department of Homeland Security, Yearbook of Immigration Statistics, 2009.

## Annex 2 (2a): Temporary visa categories and visas issued for fiscal year 2009

Visa Category	2009 Visa Issuances
A: Ambassadors (A-1), other government officials (A-2), and employees (A-3)	102,825
B: Business visitors (B-1) or tourists (B-2)	3,409,729
C: Transit visa (pass-through at an airport or seaport) (C1-4)	244,280
D: Crewmember (air or sea) (D1-2)	23,634
E: Treaty-Traders (E-1) or Treaty-Investors (E-2) from countries where the United States has a treaty of commerce and investment	30,465
F: Students (F-1) and spouses (F-2)	353,025
G: Employees of International Organizations (IMF, IPIC, OAS, IRC, etc.) (G1-5)	43,876
H: Temporary Workers	
H-1A: Registered nurses	0
H-1B: Specialty occupations	110,367
H-1B1: Chile/Singapore Free Trade Agreement	621
H-1C: Registered nurses participating in Nurse Relief for Disadvantaged Areas	128
H-2A: Agricultural workers	60,112
H-2B: Non-agricultural workers	44,847
H-3: Industrial trainees	2,084
H-4: Spouses and children of H-1, H-2, and H-3 workers	60,009
I: Representatives of international media and families (I-1)	15,219
J: Exchange visitors (J-1) (educational exchange students, au pairs, graduate medical trainees, practical training students, professors and researchers, short-term scholars, camp counsellors) and spouses (J-2)	345,541
K: Fiancés and fiancées (K-1); spouses of US citizens (K-3), and children (K-2 and K-4)	40,645
L: Intracompany transferees (L-1A and L-1B) (executives, managers, persons with proprietary knowledge) and families (L-2)	124,275
M: Language and vocational students (M-1) and families (M-2)	9,507
NATO: NATO officials and employees (NATO1-6) and families (NATO-7)	7,312
N: Parents or children of special immigrants (N8-9)	12
O: Extraordinary ability aliens in science, arts, business, and athletics (O-1), families (O2-3)	16,466
P: Athletes, entertainment groups, support personnel (P1-3), and spouses (P-4)	34,010
Q: Cultural exchange visitors (Q1-2) and spouses (Q-3)	1,626
R: Religious workers (R-1) and families (R-2)	3,931
S: Criminal informants (S5-6)	0
T: Victims of international trafficking in persons (T-1) and families (T2-4)	92
U: Victims of spousal or child abuse (U-1) and families (U2-4)	13
V: Spouses and minor children of permanent residents with pending green cards (V1-3)	0
TN: Professional workers NAFTA and families (TD)	3,203
TC: Professional workers US-Canada Free Trade Agreement and families (TB)	N/A
<b>TOTAL</b>	<b>5,087,854</b>

Source: US Department of State, "Nonimmigrant visa statistics".

**Annex 3: Immigrant share and median income for occupations with largest projected job growth, 2008-2018**

Occupation	Projected 2008-2018 Growth, Thousands	Percentage Increase, 2008-2018	Immigrant Share in Occupation	Median income, 2009 USD
Registered nurses	581.5	22.2	14.1	55,000
Home health aides <sup>1</sup>	460.9	50.0	21.4	20,000
Customer service representatives	399.5	17.7	10.6	25,500
Combined food preparation and serving workers	394.3	14.6	12.7	12,000
Personal and home care aides	375.8	46.0	23.4	15,800
Retail salespersons	374.7	8.4	12.1	20,000
Office clerks, general	358.7	11.9	11.3	26,000
Accountants and auditors	279.4	21.7	16.4	54,000
Nursing aides, orderlies, and attendants <sup>1</sup>	276	18.8	21.4	20,000
Postsecondary teachers	256.9	15.1	21.0	50,000
Construction labourers	255.9	20.5	37.4	24,000
Elementary school teachers, except special education <sup>2</sup>	244.2	15.8	5.8	45,000
Truck drivers, heavy and tractor-trailer	232.9	13.0	16.7	35,000
Landscaping and groundskeeping workers <sup>3</sup>	217.1	18.0	40.1	18,000
Bookkeeping, accounting, and auditing clerks	212.4	10.3	9.7	31,000
	204.4	12.8	7.3	30,000
	178.3	23.9	13.3	75,000
	175.1	34.0	34.4	85,000
	172.9	15.2	8.7	21,000
	165.4	12.9	26.3	29,000
	163.9	33.9	12.4	24,000
	160.3	11.0	10.0	42,000
	155.8	53.4	14.0	60,000
	155.6	20.7	11.3	35,000
	152.5	14.2	14.0	26,900
	151.6	6.4	16.0	12,000
	147.9	10.9	15.4	39,400
	144.1	21.8	26.5	160,000
	142.1	10.9	19.5	12,000
	134.9	10.3	11.1	16,000

Source: Job growth data from Bureau of Labor Statistics; immigrant share and median income from American Community Survey

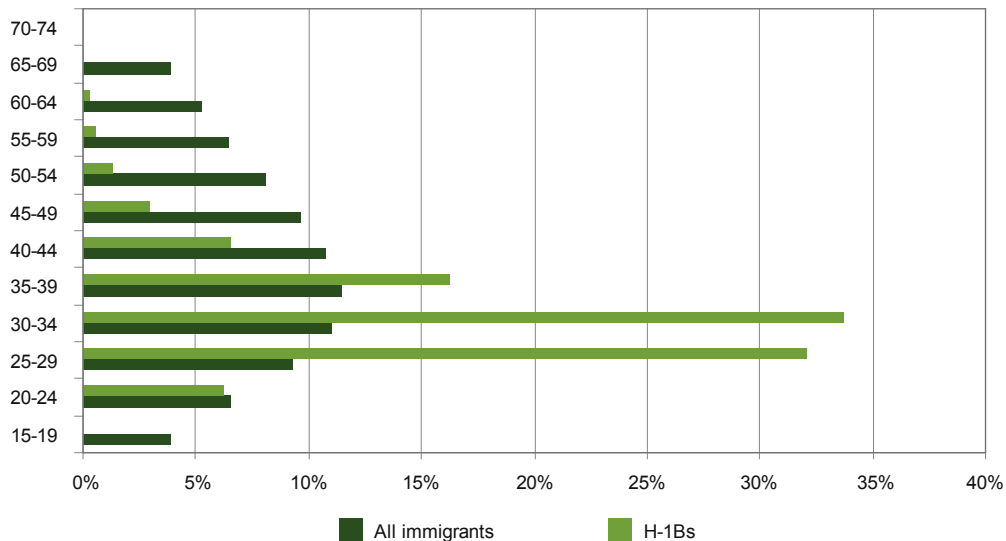
Note: Where indicated with subscript digits, immigrant share and earnings data refer to a larger occupational subgroup because more detailed occupational information was not available from the American Community Survey public use microsamples. These groups, respectively, are: 1) “Nursing, Psychiatric and Home Health Aides”, 2) “Elementary and Middle School Teachers”, 3) “Grounds Maintenance Workers”, 4) “Secretaries and Administrative Assistants”, 5) “Computer Software Engineers”, 5) “Medical Assistants and Healthcare Support Occupations”, and 6) “Security Guards and Gaming Surveillance Officers.”

**Annex 4: Immigrant share and median income for occupations with largest projected job declines, 2008-2018**

Occupation	Occupation's Projected Loss	Percentage Decrease, 2008-2018	Immigrant Share in Occupation	Median Income, USD
Farmers and ranchers	-79.2	-8.0	3.5	34,290
Sewing machine operators	-71.5	-33.7	52.9	18,000
Order clerks	-64.2	-26.1	14.0	27,000
Postal service mail sorters, processors, and processing machine operators	-54.5	-30.3	14.1	50,380
File clerks	-49.6	-23.4	10.8	23,000
Shipping, receiving, and traffic clerks	-49.3	-6.6	17.0	26,000
Telemarketers	-37.8	-11.1	6.4	15,000
Office and administrative support workers, all other	-35.7	-11.7	9.8	34,000
First-line supervisors/managers of production and operating workers	-35.7	-5.2	14.0	49,000
Packers and packagers, hand	-34	-4.5	43.1	18,000
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	-33.3	-14.1	15.2	28,000
Electrical and electronic equipment assemblers	-31.3	-14.7	35.2	26,000
Machine feeders and offbearers	-31.2	-22.2	N/A	N/A
Door-to-door sales workers, news and street vendors, and related workers	-26.9	-14.8	17.9	14,500
Information and record clerks, all other	-26.7	-11.8	9.3	31,000
Paper goods machine setters, operators, and tenders	-22.2	-21.5	N/A	N/A
Computer operators	-20.5	-18.6	12.4	35,000
Machinists	-19.3	-4.6	15.3	41,000
Labourers and freight, stock, and material movers, hand	-18.7	-0.8	16.6	21,000
Miscellaneous agricultural workers	-18.2	-2.3	50.7	16,500
Data entry keyers	-17.4	-6.1	10.0	26,900
Switchboard operators, including answering service	-16.9	-10.9	4.6	22,500
Inspectors, testers, sorters, samplers, and weighers	-16.9	-3.6	17.3	35,000
Mail clerks and mail machine operators, except postal service	-16.6	-11.8	15.3	23,200
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	-14.9	-26.7	N/A	N/A
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	-14.8	-15.9	N/A	N/A
Textile winding, twisting, and drawing out machine setters, operators, and tenders	-14.2	-40.7	N/A	N/A
Postal service clerks	-13.7	-18.0	14.3	50,000
Multiple machine tool setters, operators, and tenders, metal and plastic	-12.6	-14.7	28.5	30,000
Photographic processing machine operators	-12.5	-24.3	N/A	N/A

Source: Projected job loss data from Bureau of Labor Statistics; immigrant share and median income from American Community Survey.

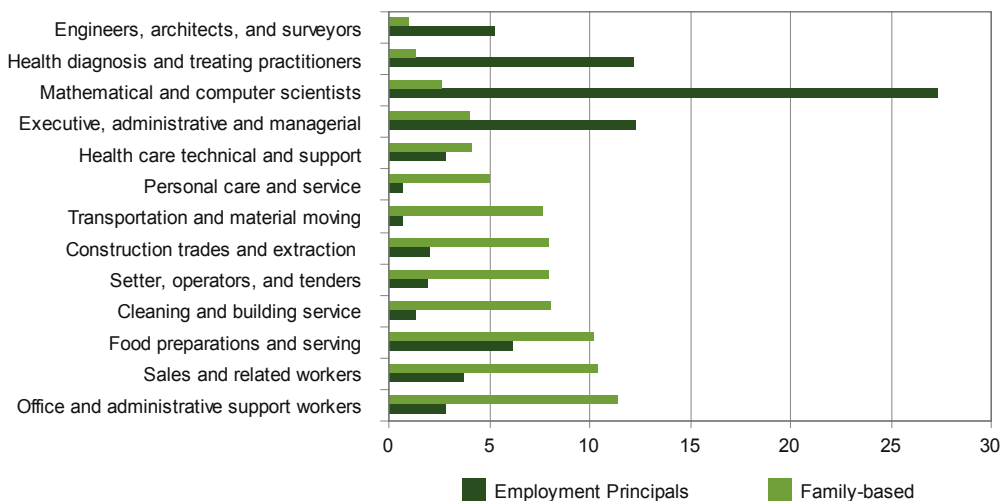
**Annex 6: Age distribution of H-1B beneficiaries compared to total immigrant population**



Source: USCIS and American Community Survey, 2009.

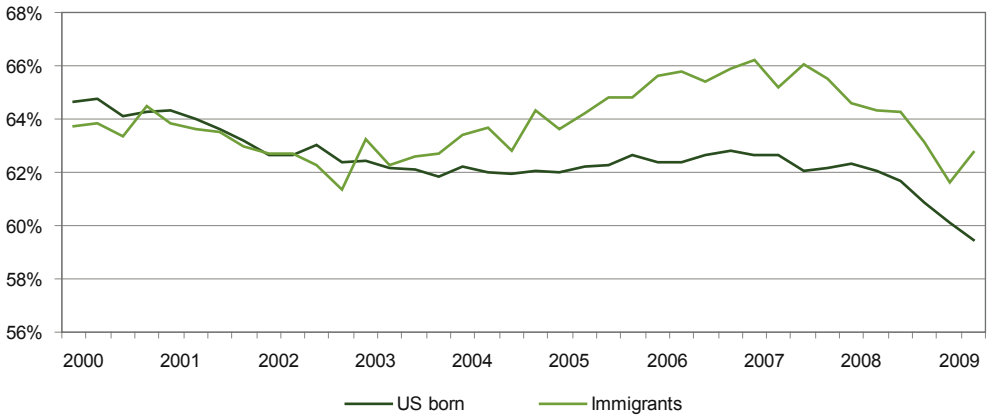
Note: H-1B beneficiaries includes data from petitions for both initial and continuing employment.

**Annex 7: Employment of family- and employment-based green-card recipients, selected occupations, 2003 cohort**

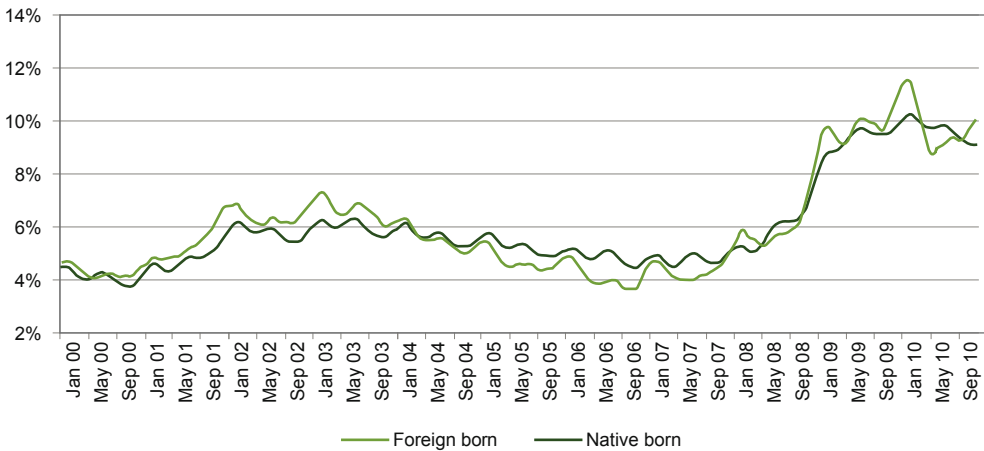


Source: New Immigrant Survey, 2003.

**Annex 8a: Employment rate by for foreign- and US-born, 2000-2009**



**Annex 8b: Unemployment rate for foreign- and US-born, 2000-2010**



Source: MPI tabulations of Current Population Survey Data

**Annex 8c: Employment, unemployment and labour force participation, by region of birth, 2008**

	Participation Rate	Employment Rate	Unemployment Rate
Middle East	68.6%	61.1%	8.2%
Africa	79.8%	71.7%	7.0%
US Born	75.0%	67.7%	6.6%
Latin America	77.1%	70.2%	6.4%
Europe	76.2%	70.3%	4.9%
Asia	75.2%	69.7%	4.8%
Canada, Australia, NZ	74.9%	70.3%	3.1%

Source: American Community Survey, 2008.

Note: Working age (16-65) population only.

**Annex 9: Top ten job categories in which surveyed employers reported difficulty filling positions, according to Manpower Talent Shortage Surveys, United States**

Rank	2007	2008	2009	2010
1	Sales Representatives	Engineers	Engineers	Skilled Trades
2	Teachers	Machinists/Machine Operators	Nurses	Sales Representatives
3	Mechanics	Skilled Manual Trades (primarily welders or carpeters/joiners)	Skilled Trades	Nurses
4	Technicians	Technicians	Teachers	Technicians
5	Management	Sales Representatives	Sales Representatives	Drivers
6	Truck Drivers - Freight	Accounting & Finance Staff	Technicians	Restaurant & Hotel Staff
7	Drivers - Delivery	Mechanics	Drivers	Management/Executives
8	Accountants	Labourers	IT Staff	Engineers
9	Labourers	IT Staff	Labourers	Doctors & other Non-Nursing professionals
10	Machine Operators	Production Operators	Machinists/Machine Operators	Customer Service Representatives and Support Staff

Source: Manpower Talent Shortage Surveys, various years.  
<http://us.manpower.com/us/en/multimedia/Global-Shortage-Survey-Results.pdf>.



## Annex 10: Employment-based visas in the United States: application and eligibility requirements

Visa Type	Visas Issued in 2008	Cap	Duration	Worker Requirements	Employer Requirements (including certification)	Employment Conditions
<b>Exceptionally skilled</b>						
EB-1 Extraordinary Ability (EB-1a); Outstanding Professor or Researcher (EB-1b); or Multinational Executives (EB-1c)	35,000	Approx. 40,000	Permanent	Sustained national or international acclaim as evidenced through extensive documentation (EB-1a); outstanding academic achievements or original scientific research (EB-1b); or significant managerial/ executive responsibility (EB-1c).	None EB-1a workers may self-petition (without an employer sponsor).	None
EB-2 with National Interest Waiver	See EB-2, below		Permanent	“Exceptional ability” and ability to show that his/her immigration is in the national interest.	None Workers may self-petition.	None
O Extraordinary Ability	14,000	None	Temporary: 3 years, extensions granted in 1-year intervals. Dual intent permitted.	Sustained national or international acclaim as evidenced through extensive documentation.	None	None
<b>Highly skilled</b>						
EB-2 Advanced degree or exceptional ability	69,000 (including EB-2 with National Interest Waiver, above)	Approx. 40,000	Permanent	Advanced degree or equivalent; or “exceptional ability”, with documented qualifications and achievements.	Place 2 print ads in Sunday newspaper and job order with State Workforce Agency (SWA) for at least 30 days. For professional occupations, undertake 3 out of 10 further eligible activities, including job fairs, online or radio/TV ads, on- campus recruiting. Report the number of US workers rejected and the reasons for rejection; keep rejected applicants’ resumes on record.	Prevailing wage

Visa Type	Visas Issued in 2008	Cap	Duration	Worker Requirements	Employer Requirements (including certification)	Employment Conditions
EB-3(A) or (B) Professionals and skilled workers	39,000	Approx. 35,000	Permanent	Bachelor's degree, for "professional workers"; or at least 2 years training or experience, for "skilled workers".	Same as EB-2, above.	Prevailing wage
H-1B Bachelor's or equivalent - specialty occupation	129,000	65,000 + 20,000 workers with US master's degree	Temporary: 3 years with one 3-year extension. Dual intent permitted.	Bachelor's degree or equivalent.	Notify current employees and union representatives. "H-1B-dependent" employers: attest to good faith efforts to hire US workers, and no layoffs in similar positions within 90 days.	Prevailing wage  Must work in a professional occupation.
L-1A Intra-company transferee – manager	84,000 (L-1A and L-1B)	None	Temporary: 1 year, extensions up to 7 years total. Dual intent permitted	Employed by sponsor company at "managerial or executive" level for at least 1 of the past 3 years.	None	No prevailing wage. Must perform managerial or executive role.
L-1B Intra-company transferee- specialty occupation		None	Temporary: 1 year, renewable up to 5 years total. Dual intent permitted	Employed by sponsor company for at least 1 of the past 3 years. Must have unique or specialized knowledge of the company/product.	None	No prevailing wage. Must work in position requiring specialized knowledge.

Visa Type	Visas Issued in 2008	Cap	Duration	Worker Requirements	Employer Requirements (including certification)	Employment Conditions
TN NAFTA professional	Not available	None	Temporary: up to 3 years, unlimited extensions	Must be Mexican or Canadian, typically with bachelor's degree.	None	None
<b>Low skilled</b>						
H-2A	64,000	None	Temporary: up to 1 year	None	Place SWA job order for 30 days; cooperate with SWA's recruitment efforts; place two print ads (including 1 on a Sunday; make recruitment efforts comparable to those of non-H-2A employers. Agree to: pay workers for at least ¾ of contracted work days, even if fewer days are worked; hire any qualified US worker who applies before 50 percent of the work period has elapsed.	Prevailing wage or Adverse Effect Wage. Employer must provide housing, transportation and meals; and provide necessary tools or supplies.
H-2B	94,000	66,000	Temporary: up to 1 year	None	Place 2 print ads (including 1 on a Sunday) and job order with SWA for at least 10 days; contact labour unions. Prepare recruitment report detailing rejected US applicants and justification for rejecting each. Show that the labour need is temporary; attest that no workers have been laid off within 120 days.	Prevailing wage

Note: Data for visas issued in 2008 are from US Department of State for temporary visas, and from Department of Homeland Security for green cards. Caps for EB green cards can be pierced if sufficient visas in a given year go unused in other (employment and family-based) categories.

Sources: US Department of State, *Department of Homeland Security, 20 CFR 655, 8 CFR 214*; US Department of Labour, *Code of Federal Regulation*.

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The International Organization for Migration (IOM) study *Labour Shortages and Migration Policy* investigates and assesses the existing pathways for identification of labour and skill shortages, as well as linking labour market needs and labour immigration policy development based on the experience within and outside the European Union (EU). The study aims at placing migration within a broader strategic economic and employment policy discourse and overall goals of boosting growth and competitiveness.

The publication addresses three main research questions:

- How can policymakers assess current and anticipate future skills and labour shortages?
- When are these shortages to be addressed through labour immigration?
- Whether and how can labour market analysis be linked to the development of labour immigration policy to ensure timely, accurate and relevant reflection of labour market needs in admission regulations for the economic migrants?

In order to investigate these issues, IOM conducted seven country case studies intended to capture the various strategies and lessons learnt in Australia, Canada, Germany, Spain, Sweden, the United Kingdom and the United States. This publication presents the findings of these country reports, as well as the summary of the comparative analysis for policy development purposes.

The study has been commissioned and funded by the Directorate-General for Employment, Social Affairs and Inclusion of the European Commission in the framework of the IOM Independent Network of Labour Migration and Integration Experts (LINET).

The full text of this publication is available for free download online at:  
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