International Organisation for Migration (IOM)

ANALYSIS OF FOREIGN WORKFORCE DEMAND ASSESSMENT

**Prepared by: A.N. Toxanova,
PhD, Professor**

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Contents

INTRODUCTION

Economic development of countries around the world becomes more and more dependent on global trends and social development patterns, active interaction between individual national economics. No single country can exist nowadays in isolation from the world community.

Foreign workforce demand is defined as a solvent need of employers in labour services of foreign workers with particular skills. It is defined by enterprise needs, cumulative demand, and production apparatus.

As far as demand defines labour market capacity, i.e. capability to provide potential foreign workers with paid job, dynamic of enterprises' demand for foreign workforce represents one of indicators to assess labour market situation.

Priorities to ensure social and economic development of a country include improvement of the legislative base regulating labour migration and realization of effective migration policy covering foreign workforce involved in economic sectors that are less attractive for local workforce.

To ensure that migration is beneficial for all three parties - countries of origin, destination and migrants themselves - governments should improve coordination of migration policy and thus ensure balance between workforce demand and supply by migrants through legal channels. That would be politically and socially acceptable for destination countries and presuppose protection of the rights of migrants.

There are no ready solutions for implementation of effective migration policy. However combination of temporary migration and incentives for return or cyclical migration is an option. Through cyclical migration migrants would spend short-term periods outside of their country of origin and this would not affect the scope of permanent migration.

Potential benefits from cyclical migration include:
- **destination countries** would be able to eliminate workforce shortage, increase profit and diminish social tension related to illegal and uncontrollable migration;
- **countries of origin** would be able to develop human capital, otherwise lost;
- **migrants** would be able to increase their profit, develop human capital and financial savings, maintain family relations, reduce remittance related expenses, and establish trade/investment links between countries.

Kazakhstan labour market is characterized by moderate growth of population employment. Herewith annual population employment growth for 2005-2009 was 2.0% at the average. In 2009 population employment made 7.9 million persons that was 8.2% more than in 2005 (7.3 million persons). Population employment to economically active population rate increased from 91.9% to 93.4% in this period. In 2009 employment of male population made 94.4% comparing to 92.5% of female employment. Accordingly the number of employed population grew from 4.6 million persons in 2005 to 5.2 million persons in 2009 that is by 23.8%. The number of self-employed population increased from 2.6 million to 2.7 million persons i.e. by 1.7%. The rate of self-employed population in total number of employed population made: 67.5% of men comparing to 65.0% of women. This is generally related to the fact that men are more active in employment and women are more often occupied by household and caring for children.

According to the World Bank (WB) data - Kazakhstan was in the 9th position of the general country rating in terms of workforce "exporting and importing", and in the 1st among Central

Asian countries in 2007. As provided by the Law "On Population Employment" Kazakhstan reduced the quota for foreign workforce employment from 2.4% to 0.75% of economically active population of the Republic. This measure allowed protecting the internal Kazakhstan market from labour migrants.

Table 1 – 10 top destination countries

Rating	Country
1	The USA
2	Russia
3	Germany
4	Ukraine
5	France
6	India
7	Saudi Arabia
8	Australia
9	Kazakhstan
10	Poland

Source: http://web.worldbank.org

Kazakhstan foreign workforce adjustment was accompanied by complicated social and economic development of country economics in early 90s. As Kazakhstan economic development became more stable in the last 10 years migration politics in respect to foreign workforce employment became more effective.   Basically it is related to involvement of skilled workers for implementation of the State Program on Intensive Industrial and Innovative Development of the Republic of Kazakhstan in 2010-2014.

To further develop Kazakhstan legislative base on labour migration it is crucial to explore international best practices. Analysis suggests that countries employ different approaches in assessing foreign workforce demand. Some countries apply surveys (Italy, the USA), others use application forms (Germany, Spain, Canada, France, Russia), and indirect assessment methods including various data analysis (The UK).

One of the key factors to ensure stable human development is gender equality. In recent years both quantity and quality changes are observed in female migration. They even resulted in introduction of a specific term - "feminization of migration". However migration policies do not take into consideration these processes and remain gender-neutral in terms of access, control and integration of migrants. Implementation of these policies can put specific groups of migrants in disadvantageous or on the contrary in advantageous position. And that is women migrants who are often put in unfavorable situation.

At present time approximately half of 200 million migrants around the world are represented by women. Feminization of migration is a global tendency, although its pace and intensity differ around the world. Migration processes involve increasing number of women. In destination countries the sectors with prevalence of female migrants, e.g. domestic services observe growing demand for workers.

This paper provides analysis of best practices on foreign workforce employment from developed countries around the world. The results of this research can contribute to the policy improvement in terms of assessing foreign workforce demand in Kazakhstan.

INTERNATIONAL EXPERIENCE
OF FOREIGN WORKFORCE DEMAND ASSESSMENT

1. AUSTRALIA

General analysis of immigration policy

Australia is a top destination country in Asia-Pacific region. Annually 120-140 thousand of immigrants come to Australia mainly with employment purposes.[1] In the last 40 years over 4.5 million immigrants entered the country. They mainly come from England, Ireland, Italy, Greece, Yugoslavia and New Zealand. The flow of migrants from Asia increased recently and makes one third from the annual quota. Unit weight of foreigners in overall labour resources of Australia is 24%. This figure is higher than the rate of immigrants in overall population of Australia (22.3%).

Top five countries of origin in migration processes remained the same during the period of 2007-2009. In 2008-2009 they were: The United Kingdom of Great Britain and Northern Ireland (18%), India (15%), China (13%), South Africa (9%) and Phillipins (5%). Other 31.1% of migrants come from OECD countries.

Economic development of Australia remains stable in the last 15 years. And workforce shortage is the major factor constraining its growth. This situation forces the government to attract foreign workforce including not only low-skilled workers but also various high-skilled professionals for different economic sectors.

Workforce demand assessment methodology

Currently migration status in Australia is defined by provisions of the Law on immigration, 1958 and regulatory legal acts of 1994, temporary employment program and humanitarian aid program which provide Australian residence permit to internally displaced persons and refugees that experienced discrimination and human rights violations in countries of their citizenship.[2]

Migration assessment is conducted by the Department of Employment and Workplace Relations (Australian counterpart of our Ministry of Labour). The Department compiles the Skilled Occupations List (SOL) that specifies professions of high demand in Australian labour market.

The major reason for growing migration today is large numbers of new permanent migrants that make one fifth from all persons coming into the country. Herewith one third of all permanent migration permits was issued in 2008-2009 to temporary migrants in Australia, namely to international students and skilled temporary migrants.

Current program of permanent skilled migration was cut down by 13%, i.e. 115 000 positions in 2009 and by 108 000 positions in 2010 as a result of financial crisis.

The new scheme for defining foreign workforce demand was introduced in 2009. It provides that the process starts with development of the Critical Skills List (CSL) including 58 professions. The list was reduced to 42 professions in March 2009. The general number of visas granted to skilled migrants under CSL was 29 000.

Since introduction of the CSL the number of baby-sitters, physicians, mechanical engineers and secondary school teachers grew by 50% comparing to the previous year and the number of accountants, cooks and hear dressers reduced. However the CSL was gradually reduced and

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transformed into a more targeted Skilled Occupations List (SOL). It is set and updated annually taking into consideration skills of current demand in Australian labour market. SOL is targeted to skilled occupations including trade in order to enjoy best strategic tools for solving middle and long-term skills requirements of foreign workforce demand assessment in Australia.

The priority is given to applicants that are sponsored by an employer and have experience in occupation registered in the SOL, particularly in healthcare and engineering. Similar pattern was used in development of the Migration Occupations in Demand List (MODL) that provided the same type of priorities to applicants. But it was cancelled since 2010.

Thus Australia employs application method. Priority is given to applicants who comply with requirements of the Skilled Occupations List (SOL).

There are three main criteria to assess compliance of migrants:
        - Qualification, i.e. professional experience or skills that can contribute to development of Australian economics;
        - Family members residing in Australia;
        - Exceptional circumstances for former Australian nationals.

Despite tangible decrease in number of foreign migrants and ongoing stagnation of Australian economics demand for some categories of workers remain strong. For instance demand for workforce continues to grow in mining and medical industries.

Major state migration program is the temporary occupation scheme that is used by most Australian employers for attracting critical skilled workforce from abroad. In case of workforce shortage in individual sectors of economics this program allows employers to recruit skilled foreigners to add to existing human resources. The government of Australia acknowledges the importance to attract skilled foreign workers in order to compensate human resources shortage in some industries. Temporary foreign workers employment scheme does not threaten the opportunity of unemployed nationals to be employed.

To limit labour migration the government of Australia annually sets quota for entering the country as part of the Australian migration program and employs score system to regulate labour migration.

2. THE UNITED KINGDOM

General analysis of immigration policy

Current policy of the United Kingdom is characterized by opening labour market for nine countries of Central and Eastern Europe united in European Union in 2004 and ageing of the UK population. Thus the government was urged to thoroughly examine opportunities to fill in existing gap by migrants.

The country recognized the need to develop a plan ensuring that the UK joins "major world league" in occupational training by 2020. The state labour migration policy is based on principles of selectivity in terms of labour migrants along with effective measures to combat illegal migration.

The UK strategy of assessing opportunities for labour migration starts with the stand that optimal solution for the country lies in training of local workforce and making use of labour migration as a temporary measure only. The UK government jointly with occupational skills councils and

employers' unions initiated a nationwide campaign on occupational capacity development for nationals.

Workforce demand assessment methodology

The following legal acts regulate migration processes in the UK: Aliens Restriction (Amendment) Act, 23 December 1919; British Nationality Act, 30 July 1948; Commonwealth Immigrants Act, 18 April 1962, Immigration Act, 28 October 1971; Immigration, Asylum and Nationality Act 2006; Aliens Order (SI 1920 No 448), 25 March 1920, Aliens Order (SI 1953 No 1671), 19 November 1953, Immigration and Nationality (Fees) Regulations (SI 2007 No 1158), 1 April 2007.

Immigration regulations published by the Ministry of Interior after Parliament's adoption are the major source for legislation and policies on legal migration.

Centralized control over labour migration is carried out by the UK Border Agency and it subordinate body - the Migration Advisory Committee. The Committee is responsible for:
- organization of top-down and bottom-up consultations based on national information sources and feedback from employers' organizations, trade unions and various civic groups;
- defining the list of occupation shortage;
- foreign workforce demand assessment.

The work of the Migration Advisory Committee is guided by economists specializing in labour market issues. They are experts in their field and appointed by different organizations outside of the Ministry of Interior. Actual scope of annual migration is identified based on the following:
- Assessment of international travelers' movement to calculate the number of people arriving to and departing from the UK;
- Data of the Ministry of Interior on persons with a work permit and their family members with an entry visa disaggregated by period of labour migration (long-term and short-term);
- The number of foreigners registered by the Department for Work and Pensions that applied for the state social welfare system;
- Potential sources of information also include regular nation-wide surveys on workforce and workers registration scheme. Although they do not provide comprehensive data as they do not take consideration of unemployed and self-employed persons.

Generally speaking foreign workforce demand assessment defines the occupational shortage in the country economics. The Migration Advisory Committee is responsible for this shortage assessment.

The UK and Scotland Shortage Occupation list recommended by the Migration Advisory Committee observes that no single statistical data set does not provide full picture of migration and different purposes require different sources of data.

The Migration Advisory Committee also conducts assessment of workforce shortage using 12 indicators selected from 70 possible ones. Main selection criteria for indicators were the following:
- Opportunity to disaggregate occupations for the 4-digit Standard Occupational Classification (SOC);
- Ability to serve as a key factor to define shortage (i.e. allows to assess shortage itself and not simply the scale of changes);

- Capacity to indicate the quality of information (i.e. whether population coverage was enough to ensure reliability of assessment for the 4-digit Standard Occupational Classification (SOC).

The data received from sources such as National Employers Skills Survey (NESS), Labour Force Survey (LFS), Annual Survey of Hours and Earnings (ASHE) and Jobcentre Plus are not consistent. Therefore the Migration Advisory Committee supplements them with information from employers and sector occupational skills councils ("bottom-up approach"). The table below specifies 12 indicators selected by the Migration Advisory Committee and indicates frequency of data updates for the Shortage Occupation List.

The UK indicators of shortage

Indicator	Frequency	Date/period	Source
Employer-based indicators			
Percentage of skill-shortage vacancies/ employment by occupation	Biennially	2007	NESS and LFS
Percentage of skill-shortage vacancies/all vacancies	Biennially	2007	NESS
Percentage of skill-shortage vacancies/hard-to-fill vacancies	Biennially	2007	NESS
Price-based indicators			
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
Volume-based indicators			
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
Indicators of imbalance based on administrative data			
Absolute change in median vacancy duration	Monthly	2007-08	Jobcentre Plus
Stock of vacancies/claimant count by sought occupation	Monthly	2007	Jobcentre Plus

The table points that the Migration Advisory Committee indicators include three employer-based indicators, three price-based indicators, four volume-based indicators and two indicators of imbalance.

For the set of employer-based indicators the main source of data has been the NESS and they have selected three indicators that are derived from the number of skill-shortage vacancies reported in an occupation. Looking only at the absolute number of skill-shortage vacancies does not take into account the natural vacancy rate for a given occupation. Therefore, they normalise the quantity of skill-shortage vacancies in these three ways: as a proportion of all vacancies; as a proportion of hard-to-fill vacancies; and as a proportion of employment.

Employment data are based on the LFS, as the NESS only collects employment estimates to 1-digit Standard Occupational Classification (SOC) code level.

Price-based indicators include:
- Percentage change in median hourly pay for all employees;
- Percentage change in mean hourly pay for all employees.

Assessment considers both full and part time employment to ensure the widest possible coverage of labour market. Hourly pay was selected as an aggregated sample as opposed to annual salary because it is to a lesser degree liable to variation. The Migration Advisory Committee uses median and mean pays for employees to assess overall workforce shortage in terms of payment. One more indicator of this group is a measure of the relative premium to working in a certain occupation for an individual with a level 3 qualification, after controlling for the age and region of the worker. The idea behind is that in case of growing shortage of an occupation respective employers would be able to negotiate increase in wages with their employer.

Volume-based indicators are derived from a year percentage change in unemployed by sought occupation. Data from the Labour Force Survey (LFS) is not enough therefore the Migration Advisory Committee also considers a year percentage change in hours worked for full-time employees provided by the Annual Survey of Hours and Earnings (ASHE). The third indicator refers to percentage change in employment and relies on data from the Labour Force Survey (LFS).

Indicators of imbalance refer to absolute change in median vacancy duration and stock of vacancies/claimant count by sought occupation. Data to measure both indicators come from employment centre "Jobcentre Plus" (although number of unemployed provided refers to the whole United Kingdom and the number of vacancies only to Great Britain excluding Northern Ireland). To supplement the indicators of imbalance the Migration Advisory Committee uses annual change data for respective variables. In 2008 they were based on data from March 2007 and 2008.

Each indicator was set a threshold value, where the threshold represents the point above which shortage is indicated. Note that for every indicator, apart from percentage change in unemployment, the value of the indicator must exceed the threshold for shortage to be inferred. The Migration Advisory Committee defines this threshold by a measure of the median plus 50 per cent of the median which takes into account the absolute distribution. So that an occupation has to be a given absolute distance above the median before it is considered to be in shortage. Some indicators out of 12 use the threshold of the median plus 50 per cent and others 75 per cent. Each separate indicator threshold is calculated and applied individually. Since shortage indicators had been set the Migration Advisory Committee was able to consolidate information on workforce shortage collected through analysis of data from employers, trade unions and occupational skills councils.

It is necessary to note that current UK scheme regulating labour migration entered into force in 2008. This is not a new system. It was created through a number of public consultations initiated in 2002 by publication of the "White Paper" (official policy document) on "Secure Borders, Safe Haven" which specified comprehensive strategy of the UK in terms of migration and asylum, nationality and labour migration.

At the moment there is no particular scheme for attracting workforce from third countries (i.e. EU, European Economic Area or Switzerland). Skilled workers can enter the UK if they meet the following criteria:
        - Occupation should be included in the state register;

- Applicants should go with pass mark (The UK uses score system known as PBS).

3. GERMANY

General analysis of immigration policy

Federative Republic of Germany is a country with the highest economic and demographic potential in the world. By the end of 90s population of Germany counted for 82.2 million people. By population size it is the second country in Europe (after the Russian Federation) and the first by foreign inhabitants' size.

Germany is one of the most popular destination countries for migration in the world. After the 1992 peak in immigration dynamic when the number of immigrants to Germany reached 1.2 million persons there was observed a slight decrease in migration. However by the end of 90s Germany remained the world largest center attracting international migrants. In 2000 the number of new migrants made about 700 thousand persons; the country accepted about 300 thousand of temporary workers, 96 thousand of ethnic Germans and 79 thousand of refuges.

Historically (until the beginning of XX century) Germany was the country with negative migration balance. But Germany became a European leader in terms of migrants in the second half of XX century. Access to German labour market was restricted for non-citizens of EU, European Economic Area and Switzerland according to Anwerbestopp 1973 on suspension of recruitment and high level of unemployment at the moment.

Now immigration to Germany is not forecasted to reach the level of the end of 80s - beginning of 90s in the nearest future. However despite restricting instructions and large-scale control certain number of temporary and permanent migrants is expected to come to Germany. There are at least three major reasons for this:
     - Future migration partially depends and results from growing internationalization of production, distribution and labour markets, demand for specific skills not represented in a particular country. Due to freedom of movement inside EU, Germany and other EU state-members cannot restrict labour migration from Western European countries.
     - There is 7.4 million of foreigners in Germany at the moment that will lead to "chain reaction", i.e. further inflow of German minorities willing to emigrate particularly from Siberia, Kazakhstan and Kyrgyzstan.
     - Economic and political stability of Germany and its geopolitical situation create incentives for migration increase.

Workforce demand assessment methodology

Migration processes in Germany are governed by the following regulatory legal acts: Foreigners Act, 9 July 1990; The Law on Free Movement of Persons in the European Union, 30 July 2002; Residence Act, 30 July 2002, Regulation on employment procedure, 22 November 2004, Work Permit Order, 17 September 1998, Residence Order, 25 November 2004.

The body responsible for migration assessment is the Federal Employment Agency, which welcomes labour migrants employment when it does not negatively affect local labour market and employment rights of German workers and foreign companies. Alternatively work permit can be granted to a foreign applicant to fill in existing vacancy.

Germany regulates immigration streams generally through: surveys, forecasts, supply and demand analysis aimed to identify and eliminate workforce shortage, a number of international agreements regulating three groups of labour migrants:

A. Bilateral agreements on seasonal workers. German program on seasonal workforce is implemented under a memorandum signed by the German Ministry of Labour and respective Ministries of countries of origin, Poland in particular.

B. Bilateral agreements on project staff hired for particular services - *Werkvertragsarbeitnehmer* (contracted migrant workers). According to the above agreements Eastern European companies can hire their own workers for projects coordinated by German companies. Migrant workers under this category are allowed to stay in Germany until the project is completed but no longer than 3 years. Workers contracted under *Werkvertragsarbeitnehmer* should spend equal period of time in Germany and their own country. Remuneration of workers *Werkvertragsarbeitnehmer* should be equal to German workers' payment. However the number of vacancies is limited by quotas determined individually for each year depending on the German labour market situation. If the number of *Werkvertragsarbeitnehmer* exceeds the quota for a particular country German side bans entry of workers for this year.

The Federal Employment Agency welcomes employment of labour migrants when it does not negatively affect local labour market and employment rights of German workers and foreign companies.

Work permit is granted to a labour migrant only in case of this migrant coming to Germany under bilateral inter-governmental agreements on guest workers employment. Prescribed number of guest workers from Russia is 2000 persons per year, from Poland - 1000 persons accordingly, from Czech Republic - 1400, Slovakia - 700, Hungary - 2000, Romania - 500, Bulgaria - 1000, Albania - 1000, Slovenia - 150, Estonia - 2000, Lithuania - 100 and Latvia - 200 persons. Employment under inter-governmental exchange program has a single-mission type and re-entry of the same guest worker is excluded.

The Government can establish sub-quotas, for instance by sectors (the United Kingdom), occupation (Italy), migration region (Australia) and company size (Germany). Germany uses general quota for foreign workforce by sectors as workforce supply can exceed existing demand.

Besides foreign workforce demand is defined on basis of forecasted number of graduates from German universities. In other words if the number of vacancies in a particular sector is higher than the number of current year graduates the government uses all possible measures to attract required workers from neighboring countries. Mainly they are engineers, skilled trade manages, administrators, social workers, various medical specialists, teachers, production quality experts and bank workers.

Germany also sets the threshold for foreign workforce which is regulated by bilateral agreements coordinated with countries of origin.

To recruit a freelance worker employers have to submit a written request ("Work promise/Work contract") to the Central Foreign Service Specialists Recruitment Agency which is subordinate to the Federal Employment Agency and has a number of regional offices. Documents to be submitted by an employer are:
- Suggested work contract;
- Work schedule;
- Letter from recruitment agency in the country of freelance worker's origin confirming compliance with quota requirements.

Documents to be submitted by an employer for recruiting a seasonal worker include: written request ("Work promise/Work contract") to the local employment center,[3] attached contract specifying remuneration, work conditions, accommodation, food and transportation guarantees.

Recruitment approval of a worker from a third country depends on labour market assessment findings and contract verification. In case of positive decision local employment center sends its recommendations to the German Consulate/Embassy and the visa is issued then.

When a third country national applies for a visa with employment purposes foreign workforce demand assessment is carried out through:
1) Third country national submits an application;
2) The German Consulate refers this application to the local registry office for foreign nationals in Germany;
3) Local employment agency conducts labour market assessment;
4) The agency sends its recommendations to the local registry office for foreign nationals.

Thus foreign workforce demand assessment in Germany is carried out by the local employment authorities and bases on labour market analysis. Both direct application of workers and application through employers are acceptable.

Skilled workers get permanent residence permit as soon as they enter the country.

4 Spain

General policy analysis in immigration

Among all the developed countries, Spain experienced one of the most intense migration processes. Starting 1980ies, due to economical growth combined to the immigration policy which was more restrictive compared to other European countries, Spain started to become more and more attractive for migrants from countries with low household income. In the beginning of 1990-ies, migration balance switched from negative to positive, and since then the number of immigrants continued to increase, outnumbering the people leaving the country. In Spain, uncontrolled influx of migrant workers was combined to a lack of workers in some of the sectors of economy.

Within the migrants' regularization program implemented in 2005, work permits were granted to 191570 house workers (among them, 89% of women), which represented 33,4% of all migrants that regularized their status. The regularization process started in February 2005. The demands were accepted during three month, until May 7, 2005. Migrants were divided into two groups with different procedures to follow. For one group, in order get a general stay and work permit, the application to the competent authority was done by the employer, not the migrant worker. The second category included "non-permanent" house care workers, i.e. all those who work on a non-permanent bases or part-time for several employers. As they have no permanent employer, they could apply independently.

Methodology for the workforce demand evaluation

In Spain, the issues of work migration are addressed by the Ministry of labour, the Tripartite commission on migrants' employment, the State employment service and local social parties.

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[3] See Besch V §18 (available in German at http://bundesrecht.juris.de/beschv/__18.html) and §19 (available in German at http://bundesrecht.juris.de/beschv/__19.html)
(last visit to both sites was in February 2010). Employment of seasonal workers and amusement parks workers is aimed at filling vacancies particularly in agriculture, timber mills, timber industry, seasonal hotels and amusement parks.

The main instrument to identify the migrant workforce demand in Spain is the "Catalogue of professions lacking workforce" (further called the Catalogue), presenting precise data on the "employment situation in the country" as well as on the needs of the labour market.

Such catalogue was necessary to compile to be a policy tool enhancing the capacity of management of the workforce migration process in line with the needs of the internal labour market. The catalogue was approved by the Royal edict 2393/2004 and came into power in 2005, becoming the tool to facilitate the employment of foreign workers. To fill the positions mentioned in the catalogue, no additional demand study is required on labour market.

If a profession is mentioned in the catalogue for specific province, the employer can apply for work and stay permit for a foreign worker without registering the vacancy in the State structures. If a profession is not in the Catalogue, the employer has to register the vacancy in the State employment service and prove that the position cannot be filled by a locally employed worker before applying for a permit for foreign worker.

Since 2005, the Catalogue is updated by the State employment service with data coming from the database of registered vacancies and after consultations with social parties.

In 2005, the Catalogue was published and approved (resolution of the Employment service, Nov. 14, 2005, BOE, 07/12/2005) after consultation with the Tripartite commission on employment. It's important to note that the same year the new database of State employment service was launched, becoming an important component of coordination between several State structures (province administrations, ministries) involved in Catalogue elaboration.

The Catalogue represents a list of positions that the local divisions of the State employment service identify as difficult to fill (when there are vacancies).

The Catalogue covers all Spanish provinces and is structured by profession on a quarter bases. The data is compiled following the data on four past quarters, and the professions are classified accordingly to 8-digits codes. Every edition of the Catalogue is valid between the second and the last working day of every quarter following its publication.

The formal Catalogue compilation scheme is the following: at the Government level, the local offices of the State employment service prepare the drafts based on administration's data following four indicators below:

1. **Indicator of intensity on labour market**

The indicator is reflecting the number of vacant positions along the year and officially registered contracts to fill a specific position. It shows whether the local database has enough information on a specific position. For every position, the indicator is:

IP = (number of offers concerning vacant positions/number of contracts). At the local level, the intensity for a specific position is considered acceptable if the indicator by position equals or exceeds the average indicator value for all positions nationwide.

2. **Indicator of lack of applicants**

It represents the average number of applications to a specific position and the number of offers relative to the position. For every position, the indicator is:

IE = (average number of applicants for a specific vacant position / number of offers for the specific vacant position). At the local level, the figures for every position are compared to the average national figures for the position concerned. The lack of applicants to a specific position occurs when it's IE equals or is lower than the national average figures for all the positions.

3. **Indicator of difficulty to fill a vacant position**

This indicator introduces a new measure used in evaluating the probability of finding a job in a specific position. The indicator represents the ratio between the personnel hired to fill a specific position and the number of applicants to it.

ID = (personnel hired/average number of applicants). If the indicator for the specific position is lower than the national average figures for all positions, the labour market should stop importing foreign workforce, every additional foreign worker preventing the existing applicants seeking for a job to actually find it.

4. **Indicator of internal mobility**

The present indicator shows the level of mobility within a specific local labour market. Concerning specific positions within a separate region, the indicator takes into account the mobility towards other regions, as well as the fact to be hired within the region where the applicant is registered. In the equation below, the numerator is the total number of workers coming in to a local labour market to find a job in a specific region whereas they are registered job seekers in another region. The denominator takes into account the two abovementioned variables, as well as the third one, which is the number of job seekers hired in the region where they were applying to jobs. IM = (incoming job seekers + departing job seekers) / (incoming job seekers + departing job seekers + workers staying in their initial region). It means that the indicator allows measuring the mobility level on a scale going from 0 (labour market closed or immobile) to 1 (labour market very fluid). For some jobs, the local labour market can be characterized as quite fluid, if the indicator for a specific position/job is equal or exceeding 0,3. Then, the position concerned is included in the Catalogue. The choice of such a low threshold is linked to the generally low intraregional mobility in Spain.

The draft list of vacancies that are difficult to fill is then discussed with local social parties. After the consensus is reached at this level, the draft is submitted to the Ministry of labour, where all the regional catalogues are gathered. At the national level, consultations are conducted with the Tripartite commission on migrants' employment, and the final version of the Catalogue is submitted to the Government.

Accordingly to the abovementioned definitions of the indicators established at the national level, every region calculates its own figures based on following information:

1. Average number of applicants registered by the end of every month (each candidate can apply to 10 vacancies at most).

2. Overall number of job offers filed by the employers during the year.

3. Number of contracts officially communicated to the State employment service within the last year.

4. Number of workers incoming to the local labour market: number of contracts in one of the autonomous regions for workers from the region.

5. Number of workers leaving the local labour market: number of contracts with workers of the concerned region that are going to work in another region.

6. Number of workers staying to work at their place: number of contracts for workers of a region that are staying to work in the region.

7. Number of positions filled: number of applicants hired within specific period of time.

To conclude, the database accumulating information in a continued and standardized way is an important tool developed to evaluate the needs in workforce for the Spanish economy.

In Spain, the yearly quota was identified as the main tool that allows referring the need in workers to the foreign workforce offer. At the moment of its introduction, the aim of establishing quotas was to guide the immigrant workers towards the sectors of the labour market that were the most in need. It was used between 1993 and 1995, 1997 and 999, as well as after 2002.

5. Italy

General analysis of immigration policy

During last years, Italy stopped being an emigration country and became an immigration destination. Foreign workers are allowed in the country only when the internal labour market is in demand, and incoming flow is possible if the employer publishes a job offer that stays unfilled.

After a migrants' regularization program was implemented in 2002, around 450.000 people registered as care workers (35,2% of the general number of migrants that regularized their status). 84% of them were woman.

Methodology of evaluation of workforce demand

In Italy, the migration is regulated by following legal norms: Act № 39/1990 from Feb. 28, 1990 (Regulations on asylum issues), Act № 189/2002 from July 30, 2002 (Modifications to regulations on immigration and asylum), President's Decree № 394/1999 from Aug. 31, 1999, President's Decree № 334/2004 from Feb. 10, 2005, modifying the President's Decree № 334/2004, and Legal Act 5/2007 from Jan. 8, 2007 (Implementation of the EU Directive on family reunification).

The migration process is coordinated in Italy by the Ministry of labour and social service, the Ministry of social solidarity, responsible, together with the Technical committee of the Ministry of Interior, of establishing the annual quota for third countries citizens and of funding the social projects aiming to protect their interests, as well as by the General administration for migration and local Employment centres.

The evaluation of foreign workforce demand is done based on surveys. The questionnaires filled in by employers and reports based on them are a way to measure how important is the lack of resources on the labour market. Italian database *Excelsior* belongs to that category.

Excelsior database is a synthesis of surveys of employers, conducted yearly by the Italian union of chambers of commerce. Excelsior database is used by Unioncamere (Union of chambers of commerce of Italy) within agreement with the Ministry of labour and social protection, and in cooperation with EU (more precisely, with European social fund). The overall budget of the system is around € 1,8 billion. This survey on economical activity started in 1997 and is conducted yearly since then. The employers are requested to present information on their intentions to hire staff within the forthcoming year by profession. The data of Excelsior system is incorporated to the official statistics published yearly by the National Statistical System of Italy (SISTAN).

Excelsior's yearly survey includes opinions of more that 100.000 statistically chosen respondents including private firms (among more than 1,25 million officially registered and active firms nationwide). The data collected contains detailed information provided by the representatives of Italian firms, allowing identification of labour market trends and structural changes in the context of the newly emerging professions and requirements related to the qualification level. The survey covers private firms of all sizes in almost all the sectors of economy[4]. As of the territorial coverage, the data is collected at the vertical level in all provinces. After the results are analysed, the database allows establishing estimates of the work force flows to be hired or that will lose their jobs. Also, it becomes possible to identify the professions that are the most in demand, as well as their essential characteristics. What is even more important, the survey contains information allowing the quantitative evaluation of foreign workforce that will be needed for Italian firms. In particular, the results of the survey show the need for Italian workers and foreign migrant workers by profession, age, education level, previous work experience, emphasizing the existence or absence of difficulty in finding workers of specific qualification and their need in additional training, etc.

The sampling method covers about 100 000 private firms of all sizes involved in different economy sectors and spread through Italian territory. The general number of firms taken as a base for the sample includes all the firms active within the year and registered with the Italian Chamber of commerce. The firms catalogued are the ones having at least one staff member (individual entrepreneurs are excluded)[5].

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[4] *The State sector (Government, health and education) is excluded. Nevertheless, some types of professional activity, registered in professional databases (for ex., law firms), are included if they employ at least one staff member. Agriculture sector is also included in the evaluation, even though the data comes from another survey, which takes into account the specificities of this specific sector.*

[5] *To monitor the implementation of the abovementioned instructions, a crossed conformity check of the latest issue of the Organizations' Register (i.e. 31.12.2004) is done, same for the data in other official reports in the State statistical system of Italy (SISTAN), for ex. the report of INPS (National Institute of social security), INAIL (the Workers Compensation Authority), and the report of the tax authorities.*

The yearly quota remains the main instrument of the regulation system of legal workforce migration. Nevertheless, the introduction of such quota is more of a prohibitive solution, the number of the workers hired remains low, the administrative procedures are heavy, which enhances illegal immigration.

In Italy, the annual quota is divided between general quotas (reflecting the need for specific professions as result of the consultations) and the very few privileged quotas (corresponding to the number of foreign workers from the countries Italy signed bilateral employment conventions with). The process of employment is also regulated by the employer, filing a nominal or anonymous request to hire, in which case the worker should be hired when in his/her home country, prior to his/her arrival to Italy.

6. CANADA

General analysis of immigration policy

In Canada, the immigration is seen as a way to increase the rate of population growth and enhance the economical and social development of the country. A new immigration policy is now implemented in Canada, giving preference to immigrants complying with certain criterions of education level and training.

In 2003 in Canada, women were only 28,5% of main applicants' number (15% of them got permit to enter the country as live-in care workers). In 2006, women were 58% of people entering Canada as dependants or spouses of economical migrants, representing 60% of those entering the country on family related bases.

Methodology of evaluation of workforce demand

In Canada, the migration issues are regulated by the Act on immigration and protection of refugees that came into force on June 28, 2002.

The migration processes in Canada are coordinated by the Citizenship and Immigration Canada, as well as by the Human Resources and Skills Development Canada (HRDC).

The identification of the needs in workforce is taken care of by Statistics Canada, calculating the needs of the country's economy in workforce based on Help-wanted Index.

The Help-wanted index is a way to measure the changes in workforce demand compared to a reference year, which is the year 1996 at present. The index is calculated based on the number of job offers announced in specific sections of 22 biggest newspapers in regional centres in Canada. When the economy is booming, the demand for workforce increases and employers announce job offers in newspapers to attract applicants. When the economy declines, the demand for workforce decreases, and the number of job offers published in newspapers goes down accordingly. As the need to release a newspaper ad on vacancies occurs in the beginning of the cycle of economical activity, the index measuring the changes in numbers of job offers published can be seen as an early indicator reflecting the situation at the labour market and the general trends in economical activity.

Even though there is a general correlation between the numbers of jobs needed accordingly to the ads and the vacancies actually available, the conclusion is that these correlations cannot be changed.

After the Vacancy Survey was abandoned in 1978, the index of demand in workforce became the only indicator of the demand for workforce established on regular bases by Statistics Canada. The Canadian index of workforce demand is created based on the model elaborated and published by the Conference Board in USA. The Canadian index was first established in 1973 by the Department of Finance. The next year, Statistics Canada was already publishing it.

The index is a comparison of the number of job offer ads published monthly to the correspondent average number during the reference period. The correlation between the two figures is then pondered proportionally to the fraction of population living in the regions

concerned by the survey (see Appendix 2 for the population figures and the weights). Below are listed the steps necessary to establish the index of workforce demand.

Job vacancy ads

The main measurement unit is the need in workforce expressed through ads published in relevant columns of the newspapers concerned by the survey. The data is collected on one of the Saturdays of each month. It is necessary to emphasize that the list does not include the ads corresponding to following criterions:

- the ads published outside of the specific columns/sections;
- the ads requesting money as one of the conditions to be hired;
- the ads concerning newspapers' delivery;
- the ads about rental to operators;
- the vacancies abroad.

The calculation of the untreated index:

The number of ads from each newspaper concerned by the survey is divided by the corresponding value based on 12 month in 1996, retained as reference year. As a result, untreated indexes by city are established.

Calculation of the pondered indexes of workforce demand:

The population of the region is calculated based on number of residents of city areas (municipalities) concerned by the survey. The indexes per area/region are established based on pondering the concerned population share. Separate figures are then added to establish regional indexes. The national index for Canada is established as the sum of pondered indexes of municipal regions adjusted to the share of residents of the twenty areas involved in the survey.

Adjustments to the seasonal variations:

The national index, as well as the regional ones, is first adjusted to the seasonal variations which occur every year. This process includes the "final point" of adjustment by seasonal correction of programs thanks to X-11 ARIMA. Also, after seasonal correction, the data is approximated in order to eliminate variations totally.

Seasonal indexes flattened (approximated)

It has to be emphasized that sometimes the initial data by time periods is difficult to interpret, as it's affected by the components of tendency cycles and by the consequences of seasonal and irregular modulations. As a rule, to help interpreting the monthly changes, data correction is done, eliminating the effects of seasonal fluctuations.

Experience shows that the workforce demand index reflects the monthly changes that indicate trends. To reduce the effects of irregular fluctuations, the decision was taken to approximate the data corrected accordingly to seasonal changes. This process includes four following steps:

1) three-level moving-average model is applied to the three last observations on data after seasonal correction. The calculation is repeated every month, as soon as new data is available.

2) monthly fluctuations of the calculation results are established. The procedure is usually called "first level differences".

3) standard deviation of the "first level differences" is established.

4) if the absolute value established in the step 2 is higher than the standard deviation in the step 3, the difference is transferred to the next month.

The equalization (smoothing) of indexes of workforce demand is a recurrent process, as the steps from 1 to 4 are repeated several times.

The methodology of equalization was elaborated by Guy Huot from the Time Series Research and Analysis Centre of Statistics Canada.

Changes:

Taken into account the seasonal fluctuations, the indexes are revised every year, as soon as the data on the whole calendar year becomes available. It worth mentioning that the data from last four years was revised.

Absence of data:

Unforeseen events (such as strikes and delivery problems) are rare but if they occur, it becomes impossible to get data from some of the newspapers. Than, following methods of collecting information can be used:

a) If available, the newspapers from the Saturday before are used to establish the index.

b) If the newspapers from last Saturday are unavailable, the missing data can be found as follows: the number of ads published that does not include the current month and the previous one, for the last three years, can be averaged and compared to the most accessible current month.

The modulation is calculated in percentage, and is then applied to the closest month available, obtaining as a result the data for the missing month. For ex., if the data from the newspaper of April 1990 is missing, we separately calculate the amount of ads for March and April between 1987 and 1989. We calculate the aspect ratio between the two months and then add it to the data on March 1990, obtaining as a result the data for April 1990.

Correction due to days-off and holidays in December, as well as Easter:

The number of vacancy ads published usually drops drastically, if the survey period includes Easter holidays or Christmas. For such cases, to avoid misinterpretation, following changes are introduced:

1) If the survey date falls on Easter holidays, the index is established based on vacancy ads published on previous Saturday;

2) To conduct the survey in December, the newspapers from the Saturday 10th or from Saturday before the 10th of the studied month are used.

Every month, the index for Canada, its regions, provinces and the districts of the regional centres are released on the first or second Wednesday following the surveyed month.

In general, the job offers published can be used to track changes in trends of workforce demand for a specific period of time. That way, the index can be established based on job offers published in twenty regional centres.

The reference year for establishing the index is 1996, and the reference value, equal to 100 as basis, is the average value for 12 month of job offers published in 1996.

The abovementioned value for every month is compared to the current number of job offer ads. For ex., if the reference value is 1406 and the number of offers published within the current month equals to 1780, index will be the following:

$$\frac{1780 \times 100}{1,406} = 127$$

This value is interpreted as follows: if for newspapers used for the survey and compared to the reference period in 1996, the indicator grew by 27 points, i.e. job offers' number grew by 27%.

Each index of workforce demand reflects the changes occurred within a specific period of time and by region. For ex., in December 1996, taken into account the seasonal changes, the index of workforce demand reached 105 point in the Atlantic coast provinces, and 100 points in Quebec. It means that, compared to the reference period in 1996, the number of published job offers grew by 5% in the provinces on Atlantic coast, with no change in Quebec. As the index do not show readers the actual number of vacancy ads published, it's impossible to draw direct comparisons between regions.

Quota. Every year, more than 90 000 foreigners enter Canada as temporary workers, to cover the lack in specialists and to provide considerable efforts to develop certain economy sectors. To be temporarily employed in Canada, one needs a work permit.

The decision to grant work permits is taken by two government structures: Citizenship and Immigration Canada (CIC) and Human Resources and Skills Development Canada (HRDC). CIC determines whether foreigners comply with requirements of the immigration legislation. HRDC analyses the impact the arrival of foreign workers and their employment in the country

might have on Canadian labour market. The work permits mention the specific activity area, the employer and the period of stay granted to a foreign worker in Canada.

The quota of permanent residents allowed in the country is agreed with the Governments of the provinces and with other organizations and institutions involved. The federal government and the governments of most of the provinces sign conventions on immigration, stating the number of immigrants of different categories coming to each province.

In Canada, the selection of immigrants is done based on merit points system. Immigrants entering Canada within the economical category are evaluated based on merit points system taking into account professional and personal characteristics. Within this category, two separate groups of immigrants are identified: qualified workers and business-immigrants. It should be mentioned that qualified workers and their accompanying close relatives represent the biggest category of immigrants (up to 50% of the total number), whereas the business-immigrants and their dependants represent only 6–7%.