GLOBAL MIGRATION BAROMETER

Sponsored by
Western Union

METHODOLOGY, RESULTS & FINDINGS

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Prepared by the
Economist Intelligence Unit

METHODOLOGY AND DATA SOURCES

Global Migration Barometer

1. Attractiveness to Migrants

1.1 Nominal GDP
1.2 Nominal GDP per head at PPP
1.3 Historic/commercial links
1.4 Regional integration
1.5 Quality of healthcare
1.6 Quality of education
1.7 Meritocratic remuneration
1.8 Foreign direct investment
1.9 Ability/ease of remitting money
1.10 Access to financial services
1.11 Access to capital
1.12 Ease of starting a business
1.13 Civil liberties
1.14 Social unrest

2. Accessibility for Migrants

2.1 Government policy towards migration
2.2 Ease of hiring foreign nationals
2.3 Licencing requirement for migrants
2.4 Ease of family reunification
2.5 Programmes to integrate migrants
2.6 Openness of host country culture to migrants
2.7 Power of trade unions
2.8 *De jure* or *de facto* discrimination

Need for Migrants

1.1 Old age dependency ratio
1.2 Natural increase
1.3 Employment ratio
1.4 Rigidity of employment
1.5 Labour productivity
1.6 Unfu /TT1 1 Tf0.0009 Tc 1.6065 Tw 34 n98 0u8tP1.tductivity 1.5 rem1y/P /0005 Tw 10.98 0 0 10.98

Data Issues

Some indicators that may have enhanced and influenced the results of the migration model have not been included. In some cases this was due to a lack of available data for all the 61 countries assessed in the model; in other cases, comprehensive data were available only for the advanced OECD countries. Despite these data limitations, the Economist Intelligence Unit believes the model's findings represent a useful start at setting the parameters for the discussion on migration. The Economist Intelligence Unit will be pleased to consider additions and improvements in future versions of the index, as and when more comprehensive data becomes available.

For example, in the Accessibility for Migrants category, it would have been desirable to include indicators on supply and demand for work permits—that is, the number of applicants for work permits and the number of work permits actually issued. Other data – such as a breakdown of host country demand for labour with specific skill-sets or for particular occupations—would have been useful to include, and might potentially have changed some of the scores. The Economist Intelligence Unit would have welcomed the opportunity to include some of the following metrics, none of which were available on a comprehensive basis for emerging markets: the employment rate of migrants in the host country, in total and by occupation/sector of activity; the number of migrants who are self-employed; the percent of migrants obtaining legal permanent residence or citizenship; and the causes of migration, such as whether it is driven by economic factors or family reunification issues.

The nature of the modeling process itself also restricted the choice of indicators, particularly in the Attractiveness to Migrants category. Because a benchmarking model was used to arrive at the results, it could not adequately consider specific relations between a host country and a particular country of origin. Rather, the model attempts to capture which countries are most attractive to migrants globally, regardless of factors such as geographical proximity or the existence of bilateral labour agreements. As discussed above, the Attractiveness to Migrants category aims to capture migrant aspirations, rather than assessing the ease of migration, which would be based on factors such as the cost of moving, geographical distance or any special arrangements between two countries. These country specific factors can only be captured using a "gravity" model, which predicts the movement of people between two places, based on indicators such as geographical distance and population size, among others. A gravity model would predict the movement of people between the US and Mexico only, or the US and the UK.

Data Modelling

Quantitative data

Indicator scores are normalised and then aggregated across categories to enable a comparison of broader concepts across countries. Normalisation rebases the raw indicator data to a common unit so that it can be aggregated.

Indicators of quantitative data where a higher value indicates greater attractiveness, accessibility or need for migrants—such as GDP per head at PPP, Openness of host

Details of the external panel of experts have been included in Appendix 4.

Calculating the Global Migration Barometer

Modelling and weighting the indicators and categories in the model results in scores of 0-100 for each country, where 100 represents the highest attractiveness, accessibility or need for migrants and 0 the lowest. This is the same for the Global Migration Barometer. The 61 countries assessed, which include the developed economies and the largest

RESULTS OF THE GLOBAL MIGRATION BAROMETER

The table below provides the scores and rankings for the Global Migration Barometer (GMB) and its composite categories, Attractiveness to Migrants and Accessibility for Migrants. Countries with the highest (best) scores are ranked first:

Global Migration Barometer

Rank	Country	Score
1	Australia	84.4
2	Canada	82.7
3	United States	80.3
4	United Kingdom	78.2

Attractiveness to Migrants

Rank	Country	Score
1	United States	87.4
2	United Kingdom	85.8
3	Australia	83.8
4	Norway	82.8

Accessibility for Migrants

Rank	Country	Score
1	Australia	85.0
2	Canada	83.1
3	Singapore	81.9
4	New Zealand	79.4

Rank	Country	Score
35	Brazil	59.8
36	Qatar	59.3
37	Argentina	59.3
38	Kazakhstan	58.6
39	Peru	57.8
40	Thailand	57.1
41	Latvia	57.0
42	Russian Federation	56.3
43	Estonia	55.7
44	Turkey	55.3
44	Ukraine	55.0
46	Romania	55.0
46	United Arab Emirates	54.7
48	Kuwait	54.4
49	Botswana	54.3
50	Ecuador	54.2
51	China	53.7

Rank	Country	Score
34	Hungary	59.0
36	Poland	58.4
37	Malaysia	58.3
38	Costa Rica	58.2
39	United Arab Emirates	58.2
40	Argentina	57.3
41	Kazakhstan	56.6
42	Russian Federation	54.4
43	South Africa	54.4
44	Romania	53.8
45	Turkey	53.7
46	Bulgaria	53.2
47	Brazil	52.7
48	Jordan	52.7
49	Botswana	52.4
50	Peru	49.9
51	Saudi Arabia	49.7

Rank	Country	Score
35	Kazakhstan	60.6
36	Mexico	60.0
37	Netherlands	58.8
37	Cote D'Ivoire	58.8
39	Russian Federation	58.1
39	India	58.1
39	China	58.1
39	Austria	58.1
43	Turkey	56.9
43	France	56.9
45	Romania	56.3
45	Botswana	56.3
47	Korea, Rep. Of	55.6
47	Greece	55.6
47	Denmark	55.6
50	Qatar	54.4
51	Jordan	53.8

RESULTS OF THE NEED FOR MIGRANTS CATEGORY

The table below provides the scores and rankings for the Need for Migrants category. Countries with the greatest need are ranked first. The GMB is included for comparative purposes.

Global Migration Barometer			Need for Migrants		
Rank	**Country**	**Score**	**Rank**	**Country**	**Score**
1	Australia	84.4	1	Japan	68.5
2	Canada	82.7	2	Italy	67.6
3	United States	80.3	3	Portugal	66.7
4	United Kingdom	78.2	4	Finland	66.7
5	Singapore	77.8	5	Czech Republic	65.5
5	New Zealand	76.5	6	Greece	64.4
7	Sweden	76.3	7	France	63.5
8	Hong Kong	76.0	8	Latvia	62.6
9	Norway	74.2	9	Belgium	62.4
10	Belgium	73.9	9	Austria	62.2
11	Ireland	73.8	11	Hungary	62.2
12	Portugal	73.1	11	Ukraine	62.1
13	Switzerland	73.0	13	Lithuania	62.0
14	Spain	72.8	72.8 Hungary ary ary ary ad2y0a0 10612 110.82 379.2 Tm(14)TjET64.7		

Rank	Country	Score
35	Brazil	59.8
36	Qatar	59.3
37	Argentina	59.3
38	Kazakhstan	58.6
39	Peru	57.8
40	Thailand	57.1
41	Latvia	57.0
42	Russian Federation	56.3
43	Estonia	55.7
44	Turkey	55.3

Rank	Country	Score
35	Australia	53.3
36	New Zealand	52.9
37	Costa Rica	52.4
38	Venezuela	51.5
39	Canada	51.4
40	China	51.0
41	Thailand	50.4
42	Ecuador	49.8
43	Ireland	48.7

ANALYSIS OF THE RESULTS

Global Migration Barometer

The only two countries in the top 20 that are not in Europe, developed North America or Australasia are **Hong Kong**, which ranks 10th, and **Singapore**, which ranks 18th. Hong Kong is a small, rich and developed economy, and has transformed itself from a base for manufacturing to a world-class financial centre. The territory also boasts a strong position in high-value fields such as legal and accounting services, publishing and logistics. Furthermore, it has been able to exploit the economic boom in China for its own benefit. As a result, it is very attractive to highly skilled migrants. Singapore is also highly attractive to migrants, owing to its open immigration policies and its competitive advantage in higher value-added manufacturing and services.

Accessibility for Migrants

Countries that score well in this category are in the developed part of the so-called New World, for example, Australia, Canada, New Zealand and the US. These countries are relatively new, with youth-oriented cultures, which may make it easier for migrants to integrate into society, compared with the entrenched cultures or less multicultural societies of other countries. They have a liberal attitude towards migrant family reunification and a solid legal environment, which helps to protect the rights of legal migrants. In addition, the governments of some of these countries have policies in place that favour raising the overall level of migration—this is the case in Canada, New Zealand and Australia.

The small, dynamic, economies of Hong Kong and Singapore also score well on this measure. **Singapore** has an open-door policy and welcomes foreign talent. Recognising the constraint of a small population and the need to become more competitive, the government continues to attract foreign personnel. **Hong Kong,** too, is characterised by high levels of skilled migrants, and the territory has an open attitude towards migration.

Israel is at number five in the rankings. Government policy encourages a high rate of migration by people who have sufficient Jewish ancestry to meet the requirements of the Law of Return (that at least one grandparent must be Jewish). However, the desire to maintain a clear Jewish majority has limited access to citizenship, and to a lesser extent, visas, for other groups. Among the other countries that rank in the top ten in this category is **Sweden,** at number nine. It has one of the most open public attitudes towards migrants in Europe.

There are several countries in **Latin America** that fall into the top 20 ranking. The region has an emerging middle class that is better traveled, and as a result has a more liberal attitude towards migrants. In addition, the ruling elite, which until recently was conservative, is increasingly globalised and more tolerant of migrants. Costa Rica, Chile, Brazil and Peru all score well in terms of accessibility for migrants.

Other countries that score well on this measure are experiencing labour shortages and their governments are gradually taking steps to ease the process of obtaining work permits.

Need for Migrants

With the exception of Japan, the 20 countries that most need migrants are in western and eastern Europe. This is largely because the ageing process is well underway in most advanced economies (resulting in a shrinking working-age population—one of the key drivers of economic performance, along with productivity), as well as in the developing economies of eastern Europe and some Asian economies. However, by and large, working-age populations are expected to increase in many other emerging markets, such as India. And unlike many developed economies, the US is expected to retain a favourable demographic profile, owing to higher birth rates than in Europe.

Japan ranks first in need for migrants, as it faces severe demographic problems. Its birth rate has been declining sharply, and stood at 1.3 in 2007, well below the 2.1 needed to maintain the current population. In the developed world, only Italy and Germany produce fewer children. The declining birth rate, coupled with a rise in life expectancy since the end of the second world war, has also pushed up the average age of the population. Although this is not an unusual phenomenon in many developed countries, its speed in Japan is worrying. In the 33 years to 2003, for example, the percentage of Japan's population aged 65 and over more than doubled, from 7.1% to 19%, a process that took around 100 years in many developed European countries. A high old-age dependency ratio and a shrinking labour force will put pressure on public finances, which are already among the worst in the industrialised world.

Like Japan, western Europe is facing similar, albeit less pronounced, changes in its demographic structure. Italy, Portugal, Finland, Greece and France will have a particularly high need for labour in the future. However, demographic trends are even worse in eastern Europe, and these will offset relatively strong labour productivity performance. This will reduce eastern Europe's economic growth potential and its ability, therefore, to rapidly converge with west European living standards.

Some east European countries have among the lowest birth rates in the world. The Czech Republic's rate of 1.2 per woman is lower even than Italy's, which is the lowest in western Europe. In many Eastern European countries, the current demographic decline is part of a long-term trend. In Hungary, for example, the population started to shrink in the 1980s, and the Czech Republic was more or less stagnant throughout the 1970s and 1980s. In others, however, demographic change owed much to the economic and political upheavals that accompanied the dissolution of the Soviet Union. At present, the populations of some countries, such as Poland, are still, on average, younger than those in many EU15 countries. Other countries, such as the Czech Republic and Lithuania, already face a shrinking workforce. Another negative factor affecting the functioning of labour markets is low regional mobility (this also applies to western Europe), which has contributed to a very high inter-regional dispersion in unemployment rates. This is caused by several factors, the most important of which are the combination of significant social transfers and the rigidity of housing markets.

Russia's demographic profile in particular is very unfavourable, combining the worst features of the developed and developing worlds (a falling and ageing population, low life expectancy, and a declining working-age population). Russia faces a severe demographic challenge resulting from low birth rates, poor medical care, and a potentially explosive AIDS situation. In the absence of large-scale immigration, Russia

will not have the labour resources to sustain high economic growth rates. Poor health will affect the quality of the workforce and make it all the more difficult to sustain the productivity improvements needed for catch-up growth. Finally, Russia's rapidly ageing workforce will result in increasing pension and healthcare costs, which will exert strong pressure on the budget and divert resources away from economic development.

On the other side of the spectrum is **India**, whose working-age population will continue to grow. This will prove to be a catalyst for sustained, rapid economic growth, but also for social discontent. If growth remains concentrated in high technology areas, such as telecommunications, IT and pharmaceuticals, India's demographic bonus may prove to be a hindrance as the economy fails to generate sufficient employment opportunities for the rapidly expanding labour force. Nevertheless, India's workforce is likely to fill the gaps in the labour markets of other countries, either through the outsourcing of manufacturing and services operations to India, or by the migration of Indian workers to other countries. However for this to occur, there will need to be a match with the skills offered by Indian workers, and at present only India's most highly skilled workers are globally competitive.

APPENDIX 1

6	Quality of education	United Nations Educational, Scientific and Cultural Organisation	2006. If 2006 data are not available, the latest available data has been selected. Data for Ecuador, Saudi Arabia and Singapore are

				press; freedom of religion; freedom of assembly and association; and the right to due judicial process. Each country assessed on this indicator is ranked on a 0-10 scale

Attractiveness to Migrants: Qualitative indicator details

The score for each indicator is on a scale from 1 (less attractive) to 5 (very attractive)

Indicator	Notes	Guidance	Scores				
			5	4	3	2	1
Ability/ease of remitting money	Considers if money can easily be moved in and out of the country for financial transactions?		Full liberalisation	Almost all capital flows are free; minor administrative procedures	Inward/outward investment are allowed, but there are significant regulatory restrictions	Government approval required for outward investment; heavy restrictions on inward flows	Tightly controlled capital flows
Access to financial services	Percentage of households with a bank account		More than 80% of households have a bank account	60-79% have a bank account	40-59% have a bank account	20-39% have a bank account	Less than 19% have a bank account
Meritocratic remuneration	To what extent are increases in wages directly related to productivity increases?	Considers the extent to which wage setting is done at the company rather than national, regional, provincial or industry level	Very high	High	Moderate	Low	Very low
Social unrest	Assesses the risk of significant social unrest	Social unrest can include large-scale demonstrations, political strikes, inter-					

Historic/commercial links	Assesses whether the host country attracts migrants owing to strong historic or commercial links	Criteria determining whether the host country attracts migrants due to strong historic or commercial links: 1. The host country is a former colonial power. 2. The host country speaks one of the 6 UN languages (English, Russian, French, Spanish, Arabic or Chinese). 3. The host country is a world financial/commercial centre. 4. There is an existing large presence of national/ethnic groups in the host country.	Very high: The host country meets all 4 criteria	High: The host country meets 3 criteria	Moderate: The host country meets 2 of the criteria	Low: The host country meets 1 criterion	Very low: The host country does not meet any of the criteria
Regional integration	Assesses the extent of regional integration		The country belongs to an economic union. There is freedom of movement for goods, capital and people. (e.g. the EU)	The country is part of a free trade area, (e.g. NAFTA) and there are few sectoral restrictions. Or the country enjoys a very high level of preferential access to a major regional trade area	The RTA is formally a free trade area, but there are a large number of sectoral and other restrictions (e.g. Mercosur and ASEAN). Or the country enjoys a considerable level of preferential access to a major regional trade area	Formally may be a member of a regional trade grouping, but, in practice, intra-bloc trade remains significantly restricted and any preferential access to major regional trade areas is limited	Not a member of any regional trade grouping

2. Accessibility for Migrants

All the data in this category are qualitative and have been scored on a scale of 1-5 (very low accessibility for migrants-very high accessibility for migrants) by Economist Intelligence Unit analysts, unless otherwise indicated. The only exception is Government policy towards migration, which has been scored on a scale of 1-3.

Indicator	Central Source

8	Government policy towards migration	United Nations, World Population Policies	2007; Data for Hong Kong is an Economist Intelligence Unit estimate	Worli ovirall level TJ-f5(i(-0.0009 Tw610.02 0 0 1

Accessibility for Migrants: Qualitative indicator details

The score for each indicator is on a scale from 1 (less access) to 5 (very accessible)

Indicator	Notes	Guidance	Scores				
			5	4	3	2	1
Degree of openness of national (host country) culture to migrants		Considers public attitudes to migration	Very open	Open	Moderate	Closed	Very closed
Do migrants face *de jure* or *de facto* discrimination in economic or social affairs		Considers discrimination in the workplace, property ownership and religious rights	Very low discrimination	Low levels of discrimination	Moderate	High levels of discrimination	Very high discrimination
Programmes to integrate migrants		Considers whether the host country actively promotes migrant integration through programmes such as language classes, provision of practical advice on country administration systems and formalities that need to be fulfilled	Very high	High	Moderate	Low	Very low
Ease of hiring foreign nationals		Considers migration barriers and rules on employment of local nationals	The hiring of foreign nationals is done very easily	The hiring of foreign nationals is done easily	The hiring of foreign nationals is done with some difficulty	The hiring of foreign nationals is done with great difficulty	The hiring of foreign nationals is done is almost impossible

Licencing requirements for migrants	Assesses if there are private or government professional licencing/certification agencies for foreigners, and if migrants need to meet stringent licencing requirements if they are to work in the host country	Considers education requirements for professions such as engineering, medicine and technology (e.g. there may only be a few universities in the migrant's home country whose degrees are accredited/recognised by the home country), minimum years of work experience required to be eligible for a licence, "protectionist" attitudes by local professionals	There are no licencing requirements	Licencing requirements are not onerous	Licencing requirements are moderately onerous	Licencing requirements are very onerous	Virtually impossible to meet licencing requirements
Ease of family reunification	Assesses the ease with which migrants can bring their families to the host country	Considers factors such as whether family members need to take a language test prior to moving to the host country; whether an migrant needs to spend a minimum amount of time in the host country before becoming eligible to bring family members to the host country; the possibility of sponsorship etc	Very easy	Easy	Moderate	Difficult	

Need for Migrants

Seven of the indicators in this category are quantitative and have been normalized (with the exception of the Rigidity of Employment Index, which is already an index, and, therefore, normalized). Where the quantitative indicators have data missing, the Economist Intelligence Unit has estimated them. The remaining data are qualitative and have been scored on a scale of 1-5 (very low need for migrants-very high need for migrants) by Economist Intelligence Unit analysts.

	Indicator	**Central Source**	**Year**	**Definition/Coding**
1	Old age dependency ratio	US Bureau of Census	2015	Ratio of people over the age of 65 to those aged 15-64
2	Employment ratio	International Labour Organisation	2006	Calculated by dividing the number of people employed who are over the age of 15, by the population over the age of 15
3	Natural increase	US Bureau of Census	2008-15; average	Births minus deaths per 100 people
4	Rigidity of Employment Index	World Bank, *Doing Business*	2008; Data for Qatar is an Economist Intelligence Unit estimate	Average of three indices: Rigidity of Hours Index (restrictions on expanding or contracting the number of working hours); Difficulty of Hiring Index (difficulty of hiring a new worker); Difficulty of Firing Index (difficulty and expense of firing a redundant worker)
5	Labour productivity (%)	International Labour Organisation	2002-06 or 2001-05 (if 2006 data are not available); average. Economist Intelligence Unit estimate	PPPr. Pre n(m)29(b)-3(e( )]TJ-0.0026 Tc 010539 T

6	Public spending on pensions	World Bank, *World Development Indicators*; Economist Intelligence Unit estimates	Latest data available. Data for Botswana, Hong Kong, India, Qatar, Saudi Arabia, South Africa, Thailand and the United Arab Emirates are Economist Intelligence Unit estimates	Public spending on pensions divided by gross domestic product (%)
7	Unfunded pension and healthcare liabilities	Economist Intelligence Unit	2007	Qualitative assessment by Economist Intelligence Unit analysts of the constraints on a government's current or future payments capacity stemming from unfunded pension and healthcare liabilities. See next table for details
8	Unemployment benefits	Economist Intelligence Unit	2007	Qualitative assessment by Economist Intelligence Unit analysts of whether out-of-work benefits reduce incentives for unemployed host country nationals to look for new jobs. See next table for details
9	Internal regional mobility	Economist Intelligence Unit	2007	Qualitative assessment by Economist Intelligence Unit analysts of whether internal labour mobility is high for host country nationals. See next table for details
10	Labour force	US Bureau of Census; Economist Intelligence Unit calculations	2007-2015	Measures the change in the working-age population between 2007 and 2015. Calculated by estimating the

Need for Migrants: Qualitative indicator details

The score for each indicator is on a scale from 1 (low need) to 5 (high need)

Indicator	Notes	Guidance	Scores				
			1	2	3	4	5
Unfunded pension and healthcare liabilities	Assesses any constraints on the government's current and/or future payments capacity stemming from unfunded pension and healthcare liabilities	Takes into account both the level of underfunding and the timeframe in which the liabilities fall due. For example, a country with unfunded liabilities already generating costs of more than 3% of GDP per year should score a 1	Healthcare and pensions fully funded or privatised	Unfunded liabilities that are not large and do not fall due until beyond the medium-term	Unfunded liabilities that are not large but are already due or fall due within the medium-term	Large unfunded liabilities but which do not fall due until the medium or long term	Large unfunded liabilities that are already being funded out of general government revenue
Welfare benefits for the unemployed	Assesses if out-of-work benefits reduce incentives (for unemployed host country nationals) to look for new jobs	Consider the duration and level of unemployment compensation (cash and non-cash) relative to last salary, healthcare coverage for the unemployed and other social benefits	Very high incentive for the unemployed to seek re-employment, for the				

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APPENDIX 3

Category and indicator weights

Indicator weights:

Indicator	Weight (%)
Attractiveness to Migrants	
Nominal GDP	2.2%
Nominal GDP per head	13.0%
Historic/commercial links	13.0%
Regional integration	4.3%
Quality of healthcare	4.3%
Quality of education	8.7%
Meritocratic remuneration	8.7%
Foreign direct investment	2.2%
Ability/ease of remitting money	10.9%
Access to financial services	4.3%
Access to capital	4.3%
Ease of starting a business	8.7%
Civil liberties	8.7%
Social unrest	6.5%
Accessibility for Migrants	
Openness of host country culture to migrants	18.8%
Power of trade unions	9.4%
De jure or *de facto* discrimination	15.6%
Government policy towards migration	18.8%
Ease of hiring foreign nationals	15.6%
Licencing requirements for migrants	3.1%
Ease of family reunification	15.6%
Programmes to integrate migrants	3.1%
Need for Migrants	
Old age dependency ratio	13.6%
Natural increase	13.6%
Employment ratio	13.6%
Rigidity of Employment Index	6.8%
Labour productivity	9.1%
Unfunded pension and healthcare liabilities	13.6%
Public spending on pensions	2.3%
Unemployment benefits	9.1%
Internal labour mobility	9.1%
Labour force	9.1%

Category weights:

Global Migration Barometer

Category	Weight (%)
Attractiveness to Migrants	50%
Accessibility for Migrants	50%

Need for Migrants

Category	Weight (%)
Need for Migrants	100%

APPENDIX 4

Migration experts

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Dr Demetrios Papademetriou
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Senior Advisor, Remittances and Diaspora, Global Development Alliance
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