

Stimulating Economies through Fostering Talent Mobility



in collaboration with
The Boston Consulting Group

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Foreword

When we decided to support the Forum's Talent Mobility project in early summer 2009, we recognized the complexity of the human capital environment and shared a desire to address at least some of its aspects in an interdisciplinary way, reflecting the nature of the observed challenges.

Today we are richer in research, systematic input gathering, contributions of more than 80 experts and practitioners and outstanding commitment of involved parties. The impact of talent mobility on both developed and developing countries has been summarized and systematized. The landscape of the most critical talent shortages across countries and industries by 2020 and 2030 has been assessed and reviewed in a truly innovative way, reflecting the complexity of connections among geographical and sector trends on increasingly globalizing human capital markets.

We have also challenged our assumptions against contradictory perspectives stating that the perceived skills gaps illustrate the exaggerated expectations of businesses.

The project research as well as input from the discussions held at the Forum events in New York, 1 October; New Delhi, 7 November; Dubai, 20-22 November; and Davos-Klosters, 27-31 January provide evidence that, unless companies, policy-makers and academic institutions ally forces in an effort to design inclusive, modern human capital strategies, we might in less than one decade face a real talent crisis, becoming a barrier to sustainable growth and post-crisis recovery.

As emphasized in Davos, "it's not just a Skills Gap, it is also a Jobs Gap" and talent mobility, together with retraining and rebranding vocational education, will have a critical importance on both combating unemployment and job creation.



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There is a need for a concerted, multistakeholder, systematic process of cooperation and dialogue among policy-makers, relevant international institutions, governments and businesses. This should enable coordination of mutually relevant policies and consultations of newly designed regulations so they can be more comprehensive and better adjusted to the reality of the global economy.

The proposals for Stimulating Economies through Fostering Talent Mobility refer to the project's main study areas: understanding the impact of talent mobility on countries, identifying the most critical skills gaps across regions and industry sectors, reviewing migration policies, challenges of employability and trends observed in the most advanced industries, as well as at the globalizing human capital market in general. Finally, facilitating talent mobility is one way – not the only way, though – to provide missing skills where they are

needed. As one of the project participants said, “Buying foreign talent does not replace – but complements – investing in the development of domestic human resources.”

It is now critical to raise awareness of the severity of the upcoming talent crisis before it strikes in less than a decade from now, so comprehensive preventive actions can be taken.

Moreover, we can set a direction for the business-driven, multistakeholder dialogue on human capital issues for the years to come. This way, the current achievements and commitments allow us to address further talent challenges, going beyond the talent mobility study. The immediate outcomes can transform into a long-term legacy.

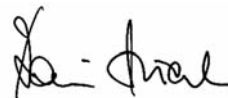
Thank you very much for joining us in this important effort.



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The Financial Wall Street Journal Times

Monday, 28 January 2030 – Sudha wanted a new challenge. Educated at a second-tier Indian university, she gained valuable international experience during a series of internships at multinational companies. These opportunities were available to Sudha because 10 years ago, in 2020, business, universities and the Ministry of Human Resource Development of India formed a public-private partnership, initiated at the 2019 India Economic Summit, to help prepare students for careers and establish international recognition of skills. Sudha contacted The Global Talent Agency to have her skills assessed and certified against global standards. She was on par with graduates of very good Western universities.

A publicly available database operated by the Global Talent Agency helped Sudha identify where her skills were in high demand. Based on this information, she applied for a job in a Norwegian-based IT company focused on healthcare services. She was offered a job, took her **Professional Passport** and jumped on a plane to Oslo.

Sudha left India with the confidence that her healthcare insurance and pension plan would travel with her as part of her Global Talent Plan, so she could focus on applying her skills to her new, fascinating challenge.

The close collaboration among countries, businesses, academia and international organizations has created a global workforce of professionals, allowing Sudha and other talented individuals to develop their full potential for the benefit of business and economies. **Companies are now able to access the talent they need to boost innovation, and growth – and consequently job creation.**

When the Global Talent Agency was awarded the Nobel Prize in 2028, the presenters outlined, among others, the following achievements:

Educational Opportunities. The agency helped create intensive education programmes to supply the market quickly with skills in high demand. The agency also helped to align education curricula with the market needs that, among others benefits, lowered unemployment.

Global Talent Agency for Employment. The institution gathered information about labour supply and demand globally, regionally and within industries. As Sudha's example shows, it has allowed an individual from one country to easily find a job in another. More broadly, it has helped to fill skills gaps and foster talent mobility. Unemployed individuals in one country or region can now find work in other markets. The database has accelerated the creation of a global human capital market by forecasting skills in demand.

A Coordinated Social Protection System. The system has enabled all mobile, highly skilled workers to work in many countries and carry their health protection and pension plans with them. The portability of pension plans, health protection and other social protection has helped increase talent mobility and the return of expatriates to their country of origin.

In 2010, these measures looked unrealistic but, now in 2030, it is **the legacy of Baby Boomers and Generation X leaders** who made the major transformation of the global labour market possible.

Executive Summary

The global economy is approaching a demographic shock of a scale not observed since the Middle Ages. The working-age populations of many developed economies will start to decline shortly. Numerous organizations will be unable to find enough employees in their home markets to sustain profitability and growth. By 2050, the global population of those 60 years old and older will exceed the number of young (less than 15 years old) people for the first time in history.

Human capital will soon rival – and may even surpass – financial capital as the critical economic engine of the future. The scope of the challenge is so broad that no single stakeholder can solve it alone. Education institutions, business, governments and non-governmental organizations must come together to propose new frameworks and solutions that will create a new talent environment, suitable for the era of workforce scarcity and balancing the needs of both developed and developing economies.

In Germany in 2030, there will be 50 people aged 65 and over for every 100 of working age. Today, that ratio is 34%. The United States will need to add 26 million workers to its talent pool by 2030 to sustain the average economic growth of the two past decades (1988-2008) unless a technological breakthrough replaces manpower, while Western Europe would need to add 46 million employees. While most developing nations will have growing populations, they may face increased difficulties in filling the jobs with the right skills. Continued economic growth paired with a limited employability of the workforce (only 10-20% of graduate students are employable by international standards) is a recipe for large skills gaps.

There are no simple answers to the complex workforce challenges of the 21st century. However, increased talent mobility will certainly be part of the solution. Contrary to conventional wisdom, greater mobility can benefit both nations that receive talent (typically developed economies) and sending nations, especially large nations such as India. In addition to fuelling their countries of origin with remittance funds, many expatriates that decide to return home are armed with skills and business acumen developed abroad. Highly skilled expatriates can also transfer skills, capital and technology back to their home countries.

Considering more closely the highly skilled – which includes both very highly educated people and people that perform specialized occupations where particular expertise is crucial to value creation – skills gaps affect nations in one way and industries in other ways. Some industries, such as healthcare, education, IT or business services, are likely to experience smaller or bigger – but significant – skills shortages regardless of geography. Certain countries (Japan, for instance), will face highly skilled shortages in many industries.

To solve these challenges, countries and companies alike need to make effective forecasts of both supply and demand for job categories, in order to acquire skills in short supply and retrain workers appropriately. Given the scale of the approaching talent crisis, strategic decisions need to be taken now, as implementation will take years to bring the desired results.

Countries need to prepare to face the challenges of demographic shifts and a fast-changing labour market environment by defining adequate education and migration policies. First, they have to invest in their own supply of highly skilled workers. There are several ways:

- **Assess current and anticipate future skills shortages through strategic skills planning.** Governments should analyse capacity and productivity risks for each job type (e.g. mechanical engineers) and develop policies to mitigate anticipated shortfalls. Australia, for example, has set up an independent, multistakeholder body that advises the Minister for Education, Employment and Workplace Relations on Australia's current, emerging and future workforce skills needs.
- **Develop skills recognition mechanisms for both native born and migrant workers.** Governments should ensure development of their workforces' skills, particularly critically needed skills. For instance, the United Kingdom's government, industry associations, training providers and other important skills stakeholders have established 25 Sector Skills Councils to develop training solutions and influence and shape the future development of qualifications.
- **Provide tax incentives for businesses to train employees.** Tax incentives can be used to encourage companies to train new employees and retrain current employees whose skills need an upgrade. Germany, the Netherlands and Austria, for example, have developed special corporate tax incentives for training current employees for both present and future jobs.
- **Develop public-private partnerships (PPP) for promoting education and training.** Governments should encourage partnerships between businesses and academic institutions that improve the match between supply and demand of skills.
- **Promote student mobility.** Portability of loans and grants and better cooperation among universities would increase the quality of higher education and give students international exposure.

Countries should attract highly skilled migrants by designing appropriate migration policies:

- **Design migration policies in collaboration with employment and social agencies.** It is critical to properly integrate migrants into society through employment and language support, among others. Countries should also create multilateral agreements that facilitate the portability of pension benefits and other social benefits. For example, Australia state governments and employers have developed a skill-matching database accessible by visa applicants and employers to facilitate employment of migrants and address skills shortages.
- **Create a new category of short-term visa targeting the highly skilled.** Such programmes should offer solutions that are low cost, with fast turnaround and less bureaucracy.
- **Create inclusive societies and working environments.** Government policies need to foster equal opportunities, provide access to high-quality education and enforce antidiscrimination laws.
- **Promote appropriate representation of foreign workers in both political and corporate decision-making bodies.** It is important for leaders to promote a diverse workforce from the factory floor up to the boardroom. Leaders need to have the courage to encourage diversity, and this has to start with the chief executive.
- **Integrate migration into development strategies of sending countries.** Hosting and sending countries must collaborate to ensure that sending countries can benefit from the transfer of their highly skilled workers to other countries through sharing of knowledge developed by these individuals.

Companies need to improve their talent management processes and make them globally applicable. Corporations should develop a better and more granular understanding of their needs for skills over the next 20 years as, within five to ten years, many companies will face much worse talent shortages than today.

- **Develop global talent management processes: set talent planning and management as a priority of the CEO and invest in global leadership development and management.** Talent planning should be inextricably linked with strategic planning and, as such, regularly addressed by top executives. Companies need to develop leaders capable of generating growth and effectively managing a multicultural workforce. Leaders themselves need to represent diverse cultures, backgrounds, genders, ages, etc., so the structure of the decision-making bodies within organizations reflects a more diverse composition of the marketplace.

- **Assess current and anticipate future skills shortages through strategic skills planning.** Like countries, companies should analyse their workforce supply and demand by job category, determined by strategy and productivity. This will help them to assess the long-term impact of actions taken by the company related to talent management. Some companies, such as RWE (Germany-based), are already performing demographic risk management analyses to anticipate population shifts in their workforce.
- **Design and promote talent mobility programmes inside the company.** Mobility programmes – such as cross-office projects, temporary transfers or rotational programmes – should be pursued to ensure cross-fertilization of ideas and commitment by all employees to the global talent mindset of the company.
- **Expand the talent pool for recruitment and grow talent internally.** Companies need to move outside their comfort zone and recruit from broader pools of talent. Corporations should build relationships with second- and third-tier universities to tap into the great potential talent that did not have the opportunity to attend top schools and leverage the fact that graduates from these schools can be more loyal than those from elite schools. Wipro, (India-based), for example, has strongly invested in lifelong training to bridge the skills gap of its graduates hired from second- and third-tier universities. The cost of this investment is then shared with employees through lower compensation levels.

Finally, governments, companies, educational institutions and international organizations should collaborate on a systematic basis to address the talent shortages and encourage innovation through redesigned talent mobility.

The talent shock is coming. It will arrive in years, not decades, regardless of the current economic crisis. It is now time for all involved stakeholders to ally forces and prepare for the era of extreme labour scarcity, significant talent mobility and a truly global workforce.

1. Introduction

The current economic crisis and high unemployment levels have not disguised the existence of talent shortages. Most global businesses recognize that their long-term needs for talent are not disappearing. Moreover, the crisis has highlighted inefficiencies in the global talent market, gaps in governance systems and the need for more effective collaboration among business, government, nongovernmental organizations and universities.

The solutions to talent shortages, both today and in the future, are wide ranging. The Global Agenda Council on the Skills Gap has identified three main factors underlying potential answers to talent shortages: education, innovation and talent mobility. Moreover, it is important to tap into broader talent pools through increased diversity and inclusion.

There is a consensus among experts that international migration can positively contribute to global economic growth and development. Migration of highly skilled labour has been a popular topic of discussion at the World Economic Forum in recent years. This project is entitled “Stimulating Economies through Fostering Talent Mobility” to specify a focus on clear, concrete and actionable recommendations and to steer the dialogue about high-skills migration towards content and data and away from unnecessary politics.

Project Context and Objectives

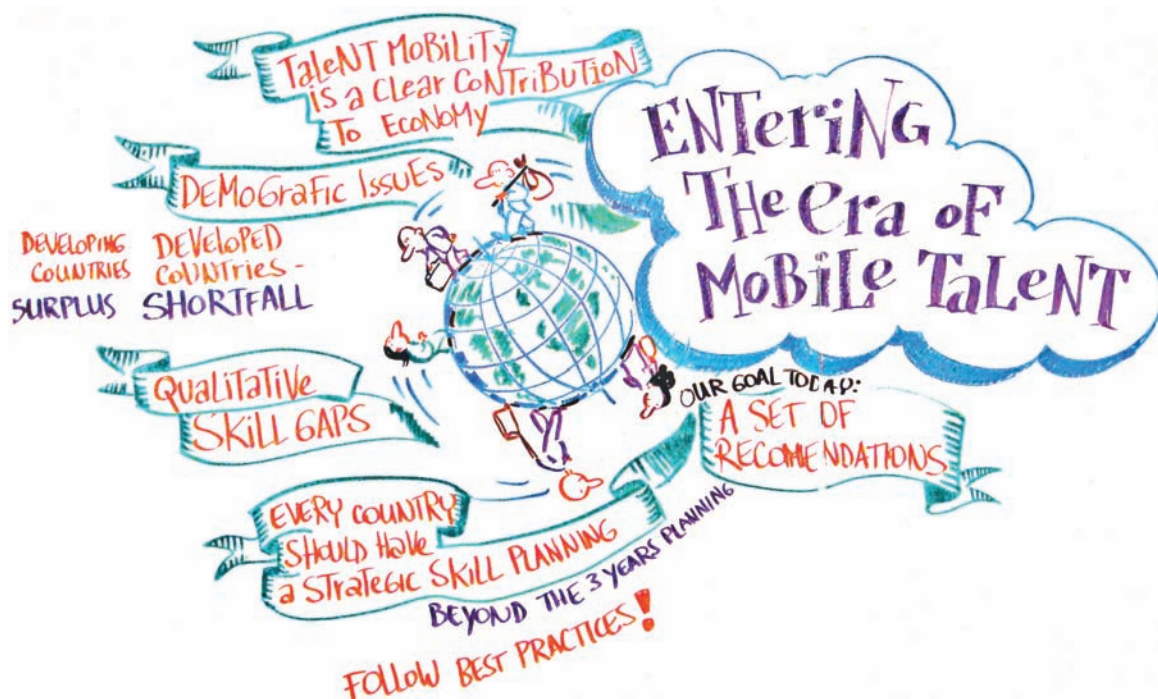
With the initiative and support of the Forum’s Partners and faculty, two cross-industry discussions were developed in 2008: skills gap and workforce diversity, and the rule of law

and business regulation (see the discussions highlights in the appendix). At the World Economic Forum Annual Meeting 2009, these independent discussions took a similar angle. This has created an opportunity to address the issue of talent mobility in a comprehensive and interdisciplinary way, to the benefit of society at large.

At the same time, the Forum has created the Global Agenda Council on the Skills Gap and the Global Agenda Council on Talent and Diversity as part of the network of 77 Global Agenda Councils, each of which convenes 15-20 of the world’s leading experts in the related field. Since the challenges faced by the world today are more complex and interrelated than ever before, these global challenges require collaborative thinking, creative solutions and, most importantly, systematic implementation.

The broader, cross-industry business community and the two above-mentioned Global Agenda Councils have been actively involved in the human capital dialogue and have allowed the design and discussions of the Stimulating of Economies through Talent Mobility project to move forward. Increasingly, experts from the Global Agenda Council on Migration have been contributing to the dialogue.

The objective of this project is to engage businesses from various sectors and faculty in developing recommendations on facilitating talent mobility across geographical and industrial boundaries, and to share these recommendations with governments.



Objectives of the Report

The report presents the findings of the research and summarizes the recommendations developed throughout the project which were finalized at the World Economic Forum Annual Meeting 2010 in Davos-Klosters, Switzerland. The report demonstrates the positive impact of talent mobility on economies, and then quantitatively analyses talent shortages across industries and countries, which requires talent mobility to be developed. Proposals for targeting countries are outlined, including improving the employability of the workforce and attracting highly skilled workers through redesigned migration policies. Finally, the report presents recommendations for multinational companies seeking to build a global workforce.

These proposals will also feed into the Forum's Global Redesign Initiative as appropriate.

Recommendations will be shared with policy-makers at World Economic Forum regional meetings, particularly at the World Economic Forum on Europe and the Annual Meeting of the New Champions 2010 in Tianjin, People's Republic of China.

We believe that business can play a positive role in fostering talent mobility, stimulating businesses and economies, and improving the state of the world.

2. Impact of Talent Mobility on Economies

“Today we recognize and appreciate the enormous contributions made by women and men migrant workers to the prosperity of their home and destination countries.”

Juan Somavia, Director-General, International Labour Organization (ILO), Geneva, in 2007

The impact of talent mobility on economies is significant and will grow with the time. Globalization of business, trade and services creates greater demand for skilled employees. The upsides of enhanced talent mobility are breathtaking and can help the response to many economic challenges. However, there can be downsides, too. It is important to enhance the ability of talent mobility to stimulate economic growth while minimizing possible downsides.

In the short term, talent mobility can have detrimental side effects, such as difficulties in smooth integration of immigrants into the hosting countries or the loss of skills by sending countries. However, in the long term, both hosting and sending countries can take advantage of talent mobility. In the long run, talent mobility has a positive effect on the quality of workforces, levels of innovation and higher degrees of

understanding among people from different cultures. It is thus critical to avoid implementing short-term protectionist policies that might hinder talent mobility and stay focused on the strategic, longer-term opportunities. Overall, it is crucial to underline the importance of the effective implementation of labour and migrants’ rights as foundations of the positive impact of talent mobility.

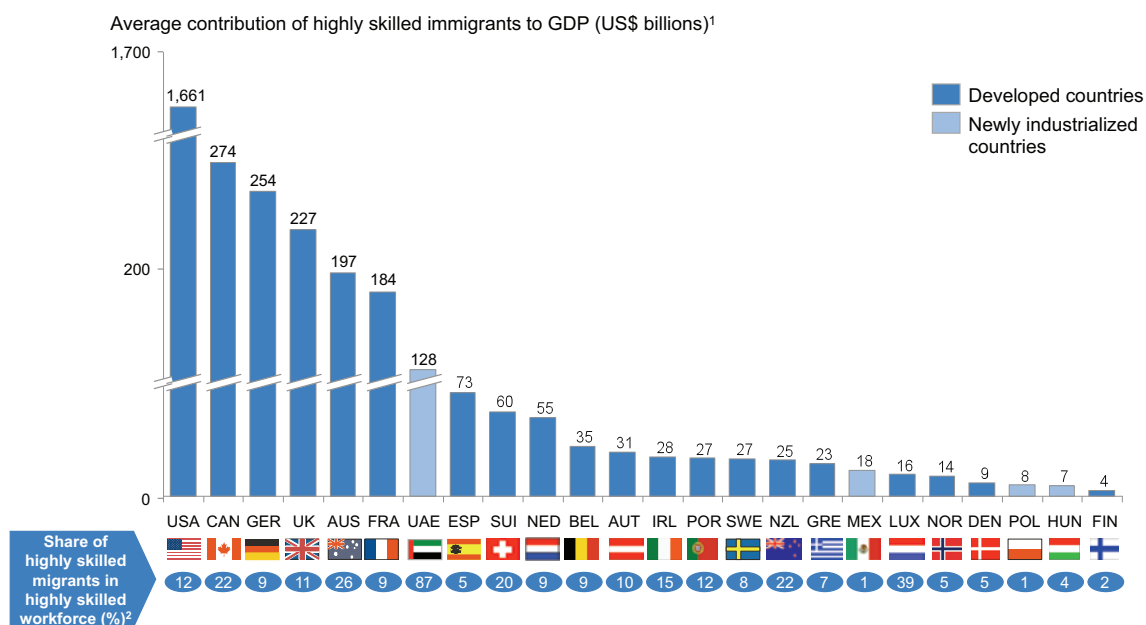
The impact of talent mobility is determined by various qualitative and quantitative factors that should be considered when analysing its importance.

Impact on Hosting Countries

The contributions of highly skilled immigrants enhance hosting countries’ productivity and competitiveness, which subsequently attracts other talented people. Talent mobility improves a workforce’s quality and productivity. Still, countries attracting the majority of high-skilled migrants are most often the industrialized ones.

Highly skilled migrants actively participate in economies of hosting countries and significantly contribute to their GDP (see Exhibit 1). As much as countries can drive value from an inflow of highly skilled migrants, economies can also benefit from rotation of people and intellectual circulation. Ideally, talent mobility exchanges people between countries (or industries) in a way that is positive for two – or more – countries.

Exhibit 1: Significant Contribution of Highly Skilled Immigrants to Economies



1. 2007 GDP at PPP

2. Share of highly skilled workforce based on most recent available data on level of occupations of highly skilled migrants

Source: OECD International Migration Database; EIU; destatis; National statistical institutes; The Boston Consulting Group analysis

Exhibit 2: Impact of Immigration on Wages

Public opinion polls show that there is significant concern that immigration lowers wages. There have also been lively academic debates on the subject, notably in the United States. Yet, it is striking that most empirical studies conducted by the OECD draw more moderate conclusions, namely, that the aggregate effect of immigration on the wages of local workers may be positive or negative but is fairly small in both the short and long run.

In Europe, both multi- and single-country studies find little or no impact of migration on the average wages of the domestic workforce. At the same time, it must be recognized that wage responses to immigration are unlikely

to be distributed evenly across all workers and will be most pronounced where locally born workers compete with immigrants.

The kinds of skills that immigrants bring affect the wages and employment opportunities of different segments of the local population, sometimes in subtle ways. If the skills of migrant workers complement those of locally born workers, then both groups will benefit. If their skills duplicate, locally born workers may face greater competition.

*Source: United Nations Human Development Report, 2009
Overcoming Barriers: Human Mobility and Development*

The results of Manpower's survey, "Talent Crunch Campaign: 2009", exemplify this situation: there is a strong need for skilled project managers across Poland, whereas Germany urgently requires IT staff. Attracting German project managers to Poland and Polish IT developers to Germany could be a potential win-win situation – however, orchestrating the right policies and incentives remains a challenge.

Talent Mobility can have a complex effect on the level of wages and unemployment rate of the hosting countries. Protectionists often claim that immigrants take jobs from local individuals. However, research shows that, for example, in the EU, migration has had only a limited impact on the unemployment rate. A 10% increase in the share of immigrants in the employment pool would lower the employment of residents by only 0.2% to 0.7%. Unfortunately, immigrants are disproportionately affected by layoffs during a crisis. For example, in Spain, unemployment of native workers grew by 2.7% in Q4 2008, whereas among migrant workers it reached 7.1% for the same period.

Talent mobility creates a positive impact by filling the shortages and it can stimulate economies of the hosting country (see Exhibit 2).

Impact on Sending Countries

In past decades, the emigration of human capital from developing countries raised concerns because of the associated brain drain. As much as some regions are still challenged by the exodus of talent, many of these beliefs are outdated given the reverse migration of the highly skilled, the importance of remittance funds and the development of transnational networks of migrants.

The return migration of highly skilled workers to their home countries is an emerging trend for developing countries. Brain circulation between India and the United States is a good example. Both countries take advantage of increased talent mobility – India through increased employability of its

workforce and the United States through participation of Indian migrants in the economy for some years after their graduation. In 2007, 40,000 non-resident Indians (NRI) returned to India. In 2006, 32,000 second-generation Indians born in the United States or Europe returned to India. In addition, about 50,000 Western executives are now working in India.

There are several explanations for this reverse talent flow, including an increased number of top challenging jobs in India, a strong demand for experienced workers in India and the promise of strong future economic growth. These numbers may look small, given the scale of Indian emigration; nevertheless, they show the positive trend that is likely to increase in the coming years.

The return migration is not yet a dominating factor though, and it is not occurring in the poorest countries. In particular, sub-Saharan African countries are experiencing massive emigration of healthcare professionals and other highly skilled individuals. In these cases, ethical agreements or partnerships between governments should be established to find optimal solutions. Agreements are now being developed, for example, between South Africa and United Kingdom, and should be further encouraged.

The remittance funds from migrants into sending countries are critical for the economies of those countries and are one of the greatest positive impacts of migration on developing countries. They constitute one of the largest sources of external financial capital in developing countries. In 2009, the overall remittance flows to developing countries are expected to reach US\$ 304 billion, exceeding one-quarter of the total GDP of some small economies such as Tajikistan, Moldova, Tonga, Lesotho and Guyana.

Remittances are partly sent by diasporas, the transnational networks of expatriates having an increasingly positive impact on the development of their countries of origin. These networks are often well organized and contribute significantly

to the transfer of skills and technology between countries. Diasporas can influence the decisions of companies in developed countries to outsource some operations to home countries. They also provide mentoring and venture capital knowledge to highly skilled workers of their countries of origin and can facilitate access of their home country to companies from developed markets.

Impact on Competitiveness – Findings from The Global Competitiveness Report

High-quality human resources and the availability of talent are important building blocks for a nation's long-term competitiveness and sustained growth. The top performers in the Global Competitiveness Index make it a priority to nurture a pool of top talent, and this focus has represented an important element of their successful competitiveness strategies. This is true for Switzerland, the United States, the Nordic countries, Israel, Singapore and South Korea, among others.

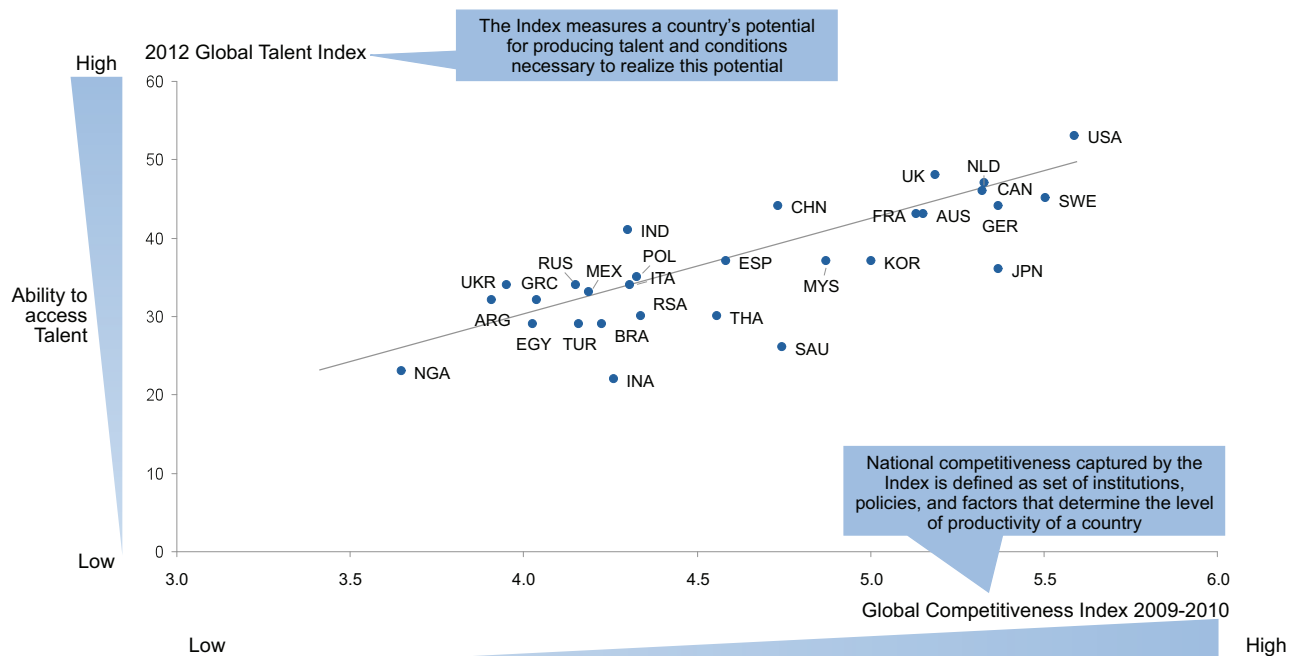
The Global Competitiveness Index covers selected dimensions related to talent creation and availability in higher education, labour market efficiency and innovation. The index analyses, among others, the quality of the education system, enrolment rates, brain drain, and the availability of scientists and engineers.

While some of the variables measure quantitative dimensions, others capture the perceptions of businesses in such areas as the quality of the educational system, the extent of brain drain and the ease of hiring foreign labour. These qualitative variables come from the World Economic Forum's original dataset on competitiveness derived from the Executive Opinion Survey conducted annually in more than 130 countries.

The relevance of talent-related dimensions for overall national competitiveness is also suggested by the high correlation between the Global Competitiveness Index and selected variables, notably the extent of brain drain and the quality of the educational system. Comparison of the Global Competitiveness Index and the Global Talent Index developed by Heidrick & Struggles and the Economist Intelligence Unit also bring a positive message on the impact of talent mobility on economies (see Exhibit 3)¹.

¹ See <http://www.weknowglobaltalent.com/gti/window/gti/> for more detailed information on the Global Talent Index.

Exhibit 3: Strong Correlation between Competitiveness and Ability to Access Talent



Note: R2= 0.62

MYS: Malaysia, KOR: Republic of Korea, JPN: Japan, POL: Poland, ITA: Italy, UKR: Ukraine, RUS: Russia, MEX: Mexico, GRC: Greece, ARG: Argentina, THA: Thailand, RSA: South Africa, EGY: Egypt, BRA: Brazil, TUR: Turkey, SAU: Saudi Arabia, NGA: Nigeria, INA: Indonesia, IRN: Iran

Source: World Economic Forum The Global Competitiveness Index 2009-2010; Heidrick & Struggles; Economist Intelligence Unit

Summary of Impact on Countries

Talent Mobility can be beneficial to both hosting and sending countries. The impact on hosting countries is already well acknowledged by most countries. The loss of talent in developing countries can still occur, but sometimes that lost capital returns to home countries, bringing back education, resources and connections. Short-term brain drain can result in a long-term beneficial brain circulation.

The importance of talent mobility for stable and peaceful coexistence of nations should not be underestimated. Rotation of labour facilitates strong economic connections between citizens from both sending and hosting countries. It also contributes to better mutual understanding and tolerance and helps overcome negative stereotypes and biases, especially if migration policies and talent mobility strategies of corporations are inclusive towards women and underprivileged groups.

The impact of talent mobility on economies and the wealth of societies must be understood before making any recommendations in this area. It is equally important to understand the strategic perspectives on talent shortages

across countries and industries. With that in mind, the next chapter assesses the global landscape of talent and the scale of skills gaps in the mid to long term.

Mobility is a central part of life. It can be seen in biology where cells in the body compete with each other and as well in history and geopolitics when regions switch nations without any physical movement. In addition, mobility in languages, writing and teaching moves – and enriches - ideas.

“Life is mobility,” said Elie Wiesel, Andrew W. Mellon Professor in the Humanities, Boston University, USA, at the WorkSpace session “Entering the Era of Mobile Talent”, at the Annual Meeting 2010. He referred to movement of ideas as critical for both good writing and teaching. He mentioned, however, that one word seemed to be missing in the dialogue. “Talent Mobility has to take into account ethics and not only economics,” he said. Talent mobility cannot be fostered for profit-related reasons but for the benefits of people and societies.



3. Landscape of the Skills Gaps

Approach

“Companies say they don’t have the right people with the right skills at the right place at the right time.”

David Arkless, President, Corporate and Government Affairs, Manpower, United Kingdom

Companies are facing an increasing challenge when looking for the right skills. Businesses agree that it will become even more challenging in the coming years, as highlighted in a survey of more than 4,700 executives of large companies from over 80 countries and more than 15 industries published by The Boston Consulting Group in Creating People Advantage: How to Address HR Challenges Worldwide through 2015 together with the World Federation of Personnel Management Associations in 2008 (see Exhibit 4). A long-term increase in the demand for skills and continued competition for talent are foreseen.

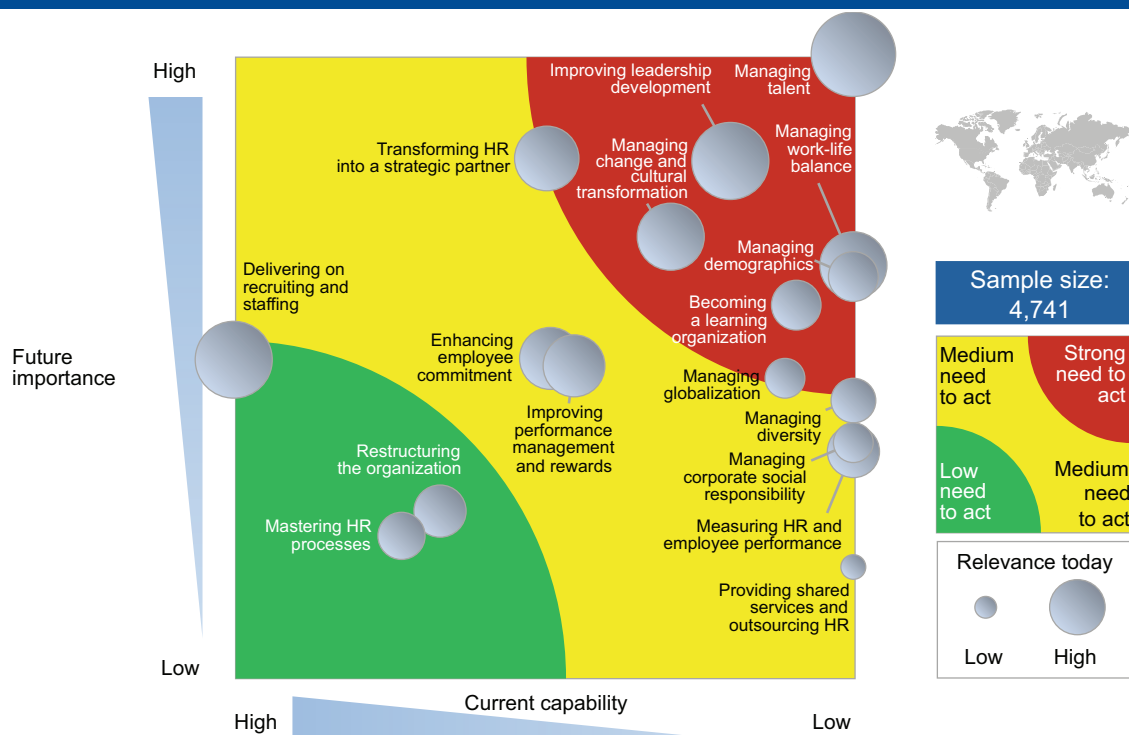
As one of the first steps in the project research, talent shortages at the country and industry level were reviewed,

both within their country’s environment and in the global context. The following evaluation is based on a cross-reference of demographics and macroeconomic modelling together with qualitative assessments of employability and migration focused on high skills. The study covers 22 countries from all geographies and levels of economic development and explores 12 different industry sector clusters (see list in the appendix).

The selection of countries ensures a balanced geographical representation and an appropriate representation of developed, newly industrialized and developing economies. The focus countries were also selected based on data availability. Industries analysed in the report cover all secondary and tertiary sectors listed by the International Standard Industrial Classification of All Economic Activities in the United Nations system for classifying economic data (see detailed definition of industries in the appendix).

For the purpose of the study, “high skills” are mostly defined as tertiary educational attainment, including both general and vocational higher education. Investigation of migration flows and employability factors, and pairing quantitative analysis with qualitative assessments, further increased the comprehensiveness of the global talent market outlook.

Exhibit 4: Globally, Managing Talent Is Rated Top Priority for Businesses



Source: Global BCG/WFPMA report 2008 "Creating People Advantage: How to Address HR Challenges Worldwide through 2015": Proprietary Web survey with responses from 83 countries and markets; The Boston Consulting Group /WFPMA analysis.

The study focuses on the labour force and the impact of migration on the talent landscape. It reflects expected capital and productivity gains, but does not explore in depth other economic side effects or dynamics of talent scarcity, such as additional factor-price shifts (wage increase) boosting productivity or hampering economic growth potential. The objective is to illustrate the scale and the landscape of talent shortages; however, it does not rank the severity of problems, and shows trends without exploring the entire related environment.

Challenges of Matching Supply and Demand

The study aims to identify countries and industries that will face high-skills shortages within the next two decades. Comparing growth of labour supply and demand highlights areas of increasing talent shortages. Focusing on high skills enables identification of the most critical skills gaps.

Developed countries will experience very limited growth or even a decrease in their working age population, even if they fully use their talent pools. Germany, Japan and Italy will be the most affected countries with -0.7% to even -1.3% compound annual growth rate of the economically active population between 2020 and 2030. Developing countries, except the People's Republic of China, will still experience significant growth in their working-age population. Egypt and India will experience around +1.3% of annual growth between 2020 and 2030 (see exhibit 5).

The depth of the current economic crisis and uncertainty about how fast and on what trajectory the economy will recover make growth predictions challenging. Although the study explores long-term trends, it does not neglect the impact of the crisis. Instead, it develops two alternative scenarios of labour market development by 2020, depending on a smaller or bigger impact of the crisis. Looking at the overall labour market development, the demographic tide in developed countries leads to talent shortages by 2020 (see Exhibit 6).

Next, it explores a path of economic recovery and the potential outlook for 2030. The question remains whether the demand for highly skilled people is likely to drop in line with the overall labour demand, as times of crisis may require talented people to innovate and to steer companies and employees even more wisely through markets uncertainty and volatility.

“The current crisis is the last flare-up of invested capital. In 10 years, the scarcest resource for a company will be people. Companies with the ability to foresee and sustainably manage their workforce needs – especially for high skills – will gain the decisive competitive advantage.”

Rainer Strack, Senior Partner and Managing Director, The Boston Consulting Group, Germany

Exhibit 5: Especially developed countries will experience demographic decline

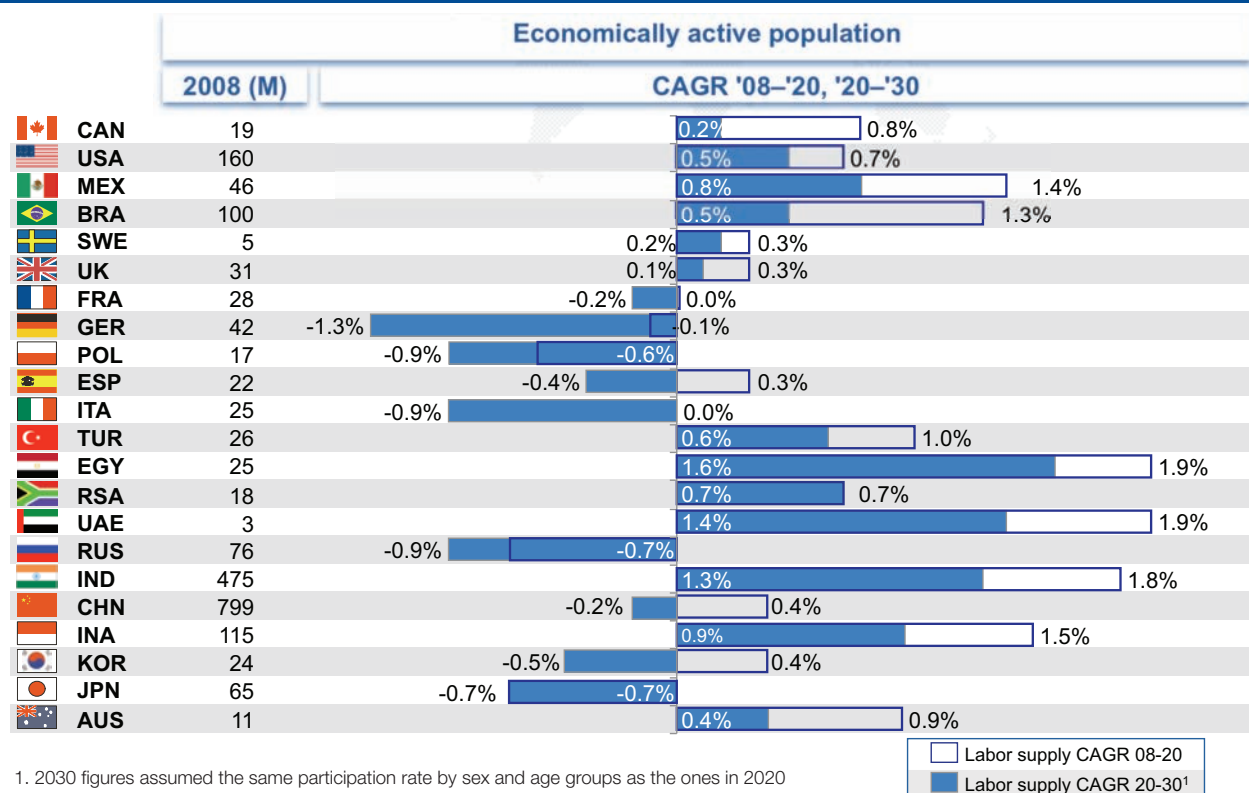
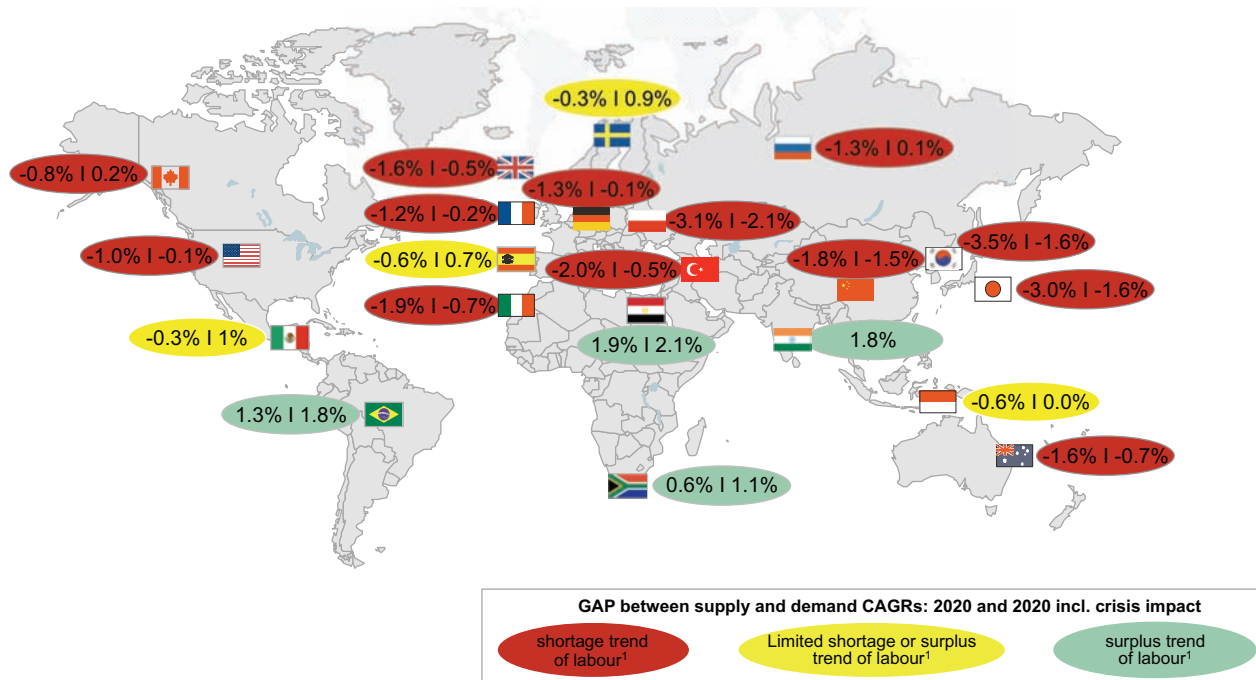


Exhibit 6: In 2020, Gaps between Supply and Demand Increase in Many Countries



1. GAP = Supply CAGR – Demand CAGR

Note: The presented view is a solely quantitative view and does not reflect any qualitative issues (e.g. job mismatch, employability).

Source: The Boston Consulting Group analysis

Over the next years, the most pressing, quantitative high-skills gaps are predominantly expected in developed countries as working-age populations will be shrinking. Labour supply will be relatively stagnant in many other developed countries, leading to a situation in which upgrading the workforce through increased university graduation rates will not be sufficient to fill growing demand for highly skilled labour.

Increased labour mobility is one solution – but not the only one – which together with education and training, technology progress, outsourcing and greater mobilization of the domestic workforce can allow markets to better match unfilled jobs with required skills. Analysis of migration flows emphasizes that countries do not have the same opportunities to fill the forecasted gaps with foreign talent.

Whereas the United Kingdom, United States, Canada and Australia are the global champions in attracting talent from all over the world – as both economic development and English language attract talent – other countries affected by talent shortages may have more difficulties in filling their skills gaps with foreign skills. Germany and France, for example, often attract people from a close geographical area and neighbouring regions of cultural affinity. Japan, seen as very restrictive on migration, will be challenged by outside perceptions, and cultural and language barriers. Mexico, China and India are forecasted to remain sending countries rather than hosting ones.

The current economic crisis requires adjusting projections of labour demand. Countries faced with persistently severe skills gap challenges are Japan and Russia, while many others, like

the United States, Canada, the United Kingdom, Germany and South Korea experience limited gaps first, but then demographics clearly override this mid-term release effect.

Extending the scope one decade further, increasingly challenging supply side dynamics occur with more countries suffering from the demographic shift and the retirement of large cohorts of baby boomers. Poland, Russia and the most developed countries are strongly affected by a shrinking working-age population (especially Japan, Germany and Italy but also South Korea). Beyond 2020, Canada, the United States, Germany, the United Kingdom, Mexico, Turkey, Poland, Russia, South Korea and Japan are projected to suffer from large high-skill gaps.



Angel Gurría, Secretary-General, Organisation for Economic Co-operation and Development (OECD), Paris

Exhibit 7: Skills Gaps – Real Talent Shortages or Employers’ Unrealistic Expectations?

The Forum’s Cross-Industry Summit on Talent Mobility on 1 October 2009 in New York was an occasion to challenge assumptions about the existence of talent shortages.

Questions about whether talent shortages exist or are merely a function of wages and perceptions were raised. “Is there a shortage of diamonds?” asked Peter Cappelli, George W. Taylor Professor of Management, Wharton School, University of Pennsylvania, USA. “No, the market price is simply expensive.” The labour market behaves similarly. As long as wages do not increase to attract “missing” talent, the market suggests that there is no real shortage and implies that employers’ expectations may be too high compared to the price a business is willing to pay for demanded skills.

Employers, particularly in tight labour markets, can adjust to the supply of workers by modifying employment requirements through, for example, lowering expectations

and/or relaxing regulations (e.g. eyesight rules for airline pilots during a pilot shortage). Both responses attract domestic and foreign labour.

However, from the business view, skills gaps continue to exist despite the crisis and high unemployment. In preparation for the Cross-Industry Summit, participants completed a survey on talent mobility. The results indicated that 73% of surveyed companies are affected by a talent shortage and, for 55% of respondents, talent mobility is critical to address these shortages. Addressing talent shortages through talent mobility should always consider the consequences for the sending country, receiving country, migrant workers and a highly mobile labour market as a whole.

Source: Discussions at the Cross-Industry Summit in New York, 1 October 2009, World Economic Forum

A few focus countries, namely China, India, Brazil, are projected to produce large amounts of highly skilled labour. These countries will increase their high-skill population, benefiting both from demographic growth and higher tertiary graduation rates. Issues of employability, however, remain prevalent in these countries as formal qualifications are often not a sufficient proof of skills.

The most important challenge will be for these countries to upgrade and focus their tertiary education systems to improve the employability of graduates.

“Once the crisis is over, the world will be on a different growth path that will require the use of different skills. In order to reduce unemployment, it will be necessary for people to reallocate their skills across different sectors and different professions.”

Dennis J. Snower, President, Kiel Institute for the World Economy, Germany, regarding an important aspect of talent mobility across industries and jobs

Skills requirements are expected to generally increase for most industries. Developing countries have automation reserves and productivity increase potential and will require more sophisticated skills. The sector shift from an agrarian to an industrial or services society requires appropriate adjustments in education to increase the qualifications of the labour force. Services industries are most likely to suffer from high-skill gaps. Healthcare, education, real estate, IT and business, and other services are expected to show the strongest growth dynamics and are thus most likely to experience high-skill gaps. Looking at the secondary sector, the picture differs by country and industry.



Participants in the Cross-Industry Summit on Talent Mobility Discuss Recommendations during Breakout Sessions

The High-Skills Gaps Overview across Countries and Industries

Overall, bringing the quantitative and qualitative examinations together, forecasts show that talent shortages and skills gaps are expected to exist and grow in the next decade, and a more severe situation is likely to appear in the longer run.

For the first time, the talent shortages forecasted to affect countries have been paired with the projected skills gaps in industries. The matrix (see Exhibit 8) assesses high-skill challenges in 2020 for focus countries and industries. It summarizes the projected evolution by 2020 and 2030 (yellow, orange and red dots signal the extent of potential gap developments).

The matrix also illustrates the employability and immigration capabilities of each country (the blue colour code highlights how prepared countries are to face shortages challenges, with darker blue signalling countries that are better prepared), which reflects its ability to bridge the skills gap.

Looking at the IT and business services industries, North America will more likely experience high-skills gaps in the coming years, whereas China and India will probably suffer more from low employability than from overall supply of high skills.

As another example, although Italy's challenging demographics, it seems a bit less affected by highly skilled shortages than other developed countries given the recent increase in percentage of young people completing a tertiary education. But Italy is one of the less-prepared countries within Western Europe to face the future high skills challenges as attracting the highly skilled has not been a priority and the country is also facing an employability issue.

The matrix highlights the scale of challenges and points out the areas where the labour market dynamics are mostly triggered. It helps set a stimulus and focus to generate systems and policies that are responsive to future challenges.

To allow such recurrent updates of the matrix, improving the access to information on labour demand and labour supply at a global level should be pursued. UNESCO is already providing an equivalence of diploma across countries, which makes it easier to compare the pool of skills available across countries. However, data on occupational level of workers are limited, especially for developing countries.

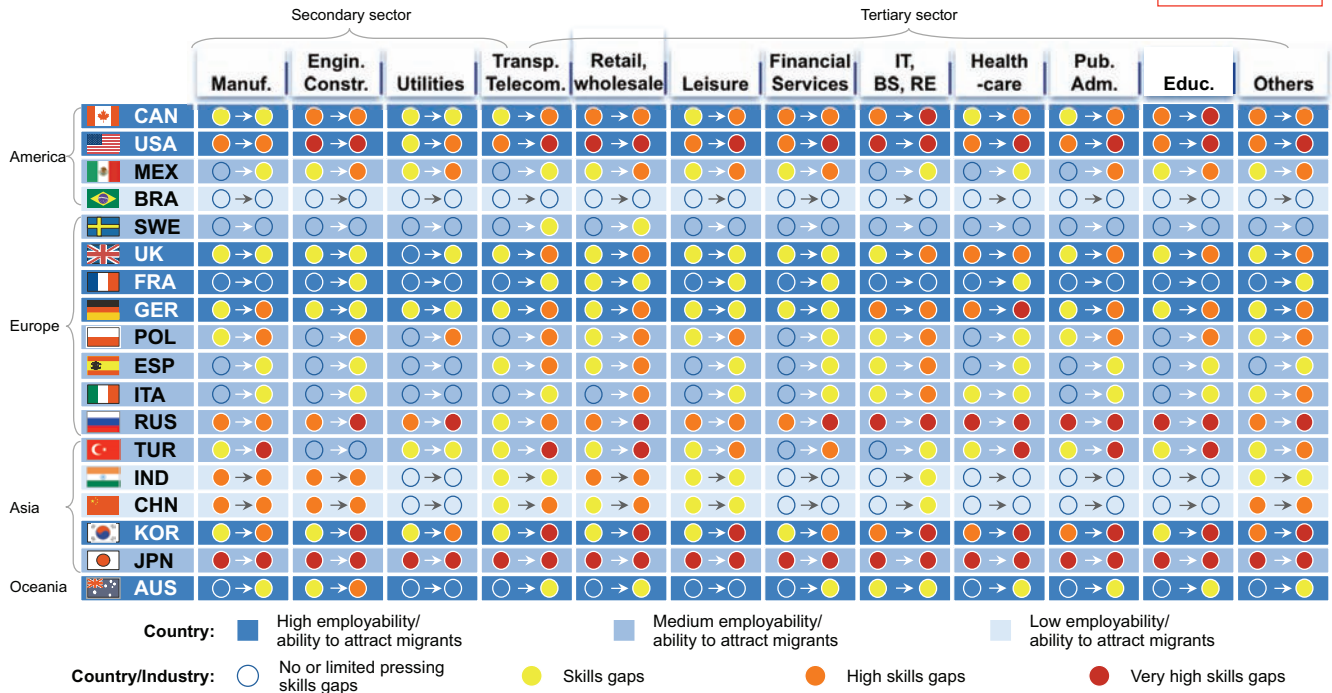
As for the labour demand, the data are very limited, as they are dependent on businesses. Countries should improve dialogue with sector associations and large corporations to better understand their needs and to be able to adapt their policies.

Talent shortages are a result of demographic changes and a mismatch between the skills available in the market and skills needed by businesses. To solve the skills gap problem, countries have to invest in the education of their workforce to increase its employability, but also need to attract highly skilled migrants. Multinational companies also have a role to play in building global workforce. Recommendations on how countries and companies can achieve this are developed in the following chapters.

Global competition for labour is intensifying, notably for top talent and highly qualified individuals. By 2020, for every five retiring workers, only four young people will enter the labour force in most OECD countries. However, several countries are considering tightening immigration laws, as a result of the crisis. "Migration is not a tap that can be turned on and off at will," said Angel Gurría, Secretary-General, Organisation for Economic Co-operation and Development (OECD), at the WorkSpace session "Entering the Era of Mobile Talent" at the Annual Meeting 2010. "We need responsive, fair and effective migration and integration policies – policies that work and adjust to both good economic times and bad ones. We also need to ensure that the benefits of migration are shared between sending and receiving countries. This requires responsible recruitment policies to avoid the risk of brain drain," Gurría added.

Exhibit 8: Country-Industry Talent Matrix
Future Challenges of the High-Skills Labour Market

Projections
2020 → 2030



Note: Country assessment scoring derived from combination of employability score and ease of immigration score; country/industry assessment scoring based on size of current employment situation, CAGR difference between supply by country and demand by industry, and CAGR difference between labor supply and demand on country level
 Source: The Boston Consulting Group analysis

4. How to Improve Employability? Education and Skills Recognition Systems

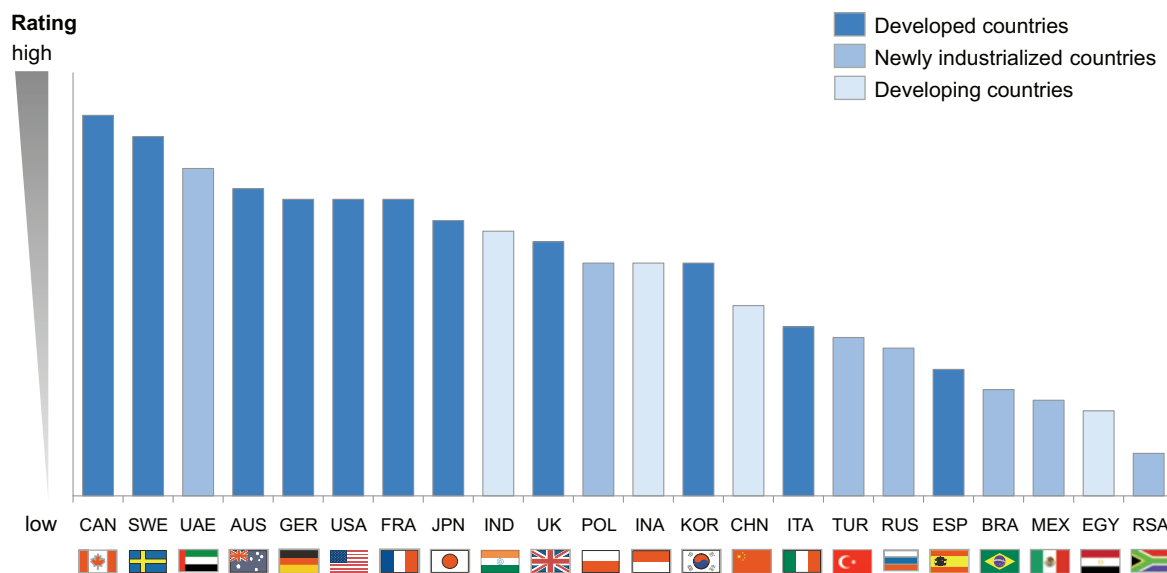
Summary of recommendations

- Assess current and anticipate future skills shortages through strategic skills planning
- Develop skills recognition mechanism for both native born and migrant workers
- Provide tax incentives for businesses to train employees
- Develop public-private partnerships (PPP) for promoting education and training
- Promote student mobility

“As much as for a mining company the key asset would be, of course, an access to gold, for businesses like banking, insurance, etc., the limiting factor for prosperity, growth and outperforming competitors is having better people.”

Peter Goerke, Member of the Group Management Board, Zurich Financial Services, Switzerland

Exhibit 9: Educational Systems Do Not Always Meet Business Needs



Note: Rating derived from the World Economic Forum Executive Opinion Survey answers to the question "how well does the educational system in your country meet the needs of a competitive economy?"
Source: World Economic Forum The Global Competitiveness Report 2009-2010, The Boston Consulting Group analysis

The Employability Challenge

Understanding employability is key for bridging the skills gaps in general and facilitating migration of the highly skilled in particular, as employers are suspicious of the qualifications of immigrants.

Employability refers to the set of skills required to gain employment and effectively work in a company. It combines generic skills such as adaptability and more technical skills specific to each industry. In developing countries, relatively few graduates and engineers are directly employable, which further accentuates the skills gaps. In India, the overall high-skills labour supply marginally exceeds demand but there is a shortfall of sufficiently qualified (or employable) high skills.

There are three main reasons to explain the relatively low employability of many graduates, including engineers. First, the quality of educational systems in developing countries is highly heterogeneous, due to significant disparities across universities in infrastructure, facilities and capabilities.

Second, the educational systems of all countries do not often meet the needs of economies and do not prepare the highly skilled for positions with global companies. They do not focus sufficiently on the development of skills required by employers, such as communication and other soft skills (see Exhibit 9). Although the education system eventually adjusts to market needs, the skills development cycle is not aligned with the fast-changing market conditions.

China faces challenges in the human capital market. There is a shortage of qualified workers as well as experienced managers speaking fluent English, while there is an oversupply of Masters and PhD degree holders. In 2009, 6.4 million students graduated and, currently, there are still 2 million on the waiting list for a job. In addition, students who studied abroad are returning home because of the effect of the financial crisis on the job markets. "China has to develop its

human resources market and address the mismatch between supply and demand for skills. In particular, vocational education needs to be intensified," said Cheng Siwei, Chairman, International Finance Forum (IFF), People's Republic of China, at the WorkSpace session "Entering the Era of Mobile Talent", at the Annual Meeting 2010.

Finally, organizations are not always prepared to take advantage of cultural differences and do not always know how to effectively manage diverse talent.

As a result, in developing countries, global companies have difficulties in finding graduates students that are directly employable. The Chinese Academy of Social Sciences reports that 20% of Chinese university graduates could not find work because they did not have the skills required by employers. The situation is similar in India, where, out of 1,200 graduate schools, only a limited number comply with international standards.

Developed countries are also facing employability issues. For example, employability was one of the motivations for European countries to develop the Bologna Reforms. High drop-out rates and the high unemployment rates of individuals with higher education led European governments to set the increase of employability as one of the core objectives of the Bologna Process.

Talent mobility is an important way to increase the employability of the workforce through improving access to better educational systems or training providers.

Current Situation and Best Practices

Systems of skills and qualifications recognition and certification are mechanisms that allow acknowledgment of a level of skills and knowledge of individuals, obtained through training, general and vocational studies, adult education, and paid and volunteer work experience. These systems can facilitate the identification of the right talent for vacant jobs and, if relevant, justify the demand for increased talent mobility.



Participants in the Cross-Industry Meeting on Talent Mobility at the India Economic Summit Discuss Specific Recommendations for India Regarding Talent Mobility

Exhibit 10: India, the Future Global Talent Hub?

India has big dreams of becoming a world-class talent hub,

a favourite destination for multinationals. By 2020, 100 million economically active individuals will enter the Indian labour force – the equivalent of the combined labour force of the United Kingdom, France, Italy and Spain – which creates a significant opportunity, but also a daunting challenge. Talent availability is the biggest attraction for multinationals deciding in which country to invest. India needs to leverage, create and retain its talent to stay competitive.

Talent shortages in India at a time of high unemployment rates can be summarized in a short phrase: “too few of some, too many of others.” The current surplus of unskilled people and a deficit of skilled people need to be balanced out.

Increasing the quality of the Indian labour force is a challenge. India has a huge population waiting to be trained and developed. The prime minister’s goal to train 500 million people over the next decade is an enormous task.

“Brahmin” views on education as well as a “herd mentality” have led to extremely polarized perceptions of professions. Some professions are highly respected; others are not. These perceptions are deeply entrenched in the Indian psyche regardless of people’s economic status. Everyone wants their children to become managers, bureaucrats, scientists, doctors or engineers. Vocations such as electrician, plumber, mason or even nurse can be viewed as degrading.

For many years, the country’s education policy has been skewed towards the top end – with emphasis placed on tertiary education, management and science rather than universal literacy and minimum standards, which would increase the employability of large parts of the population.

Increasing the level of employability and more equal participation in the workforce and wealth is not just about stimulating economic growth. It is also an indispensable way of preventing social unrest, which is a real risk unless a solution is found.

Selected proposals on education and employment discussed at the Summit include:

- Create skills for new professions emerging in India, such as insurance, broking and healthcare
- Ensure the basic rights of employees are respected country-wide; about 10% of India’s workforce is employed by Fortune 2000 companies and another 10% is employed by the government; however, 65% of the country’s labour force is employed by small businesses, where the labour rights are implemented to a limited extent
- Tackle the fundamental cultural and deeply entrenched job perceptions and bring everyone up to a level where they can participate; upgrade and rebrand vocational institutions and make the jobs attractive and respectable

Source: highlights from the Cross-Industry Meeting on Talent Mobility in New Delhi, India, on 7 November 2009

As the workforce globalizes, it becomes more important – as part of comprehensive skill management – to coordinate systems allowing effective – and credible – skills recognition, comparison and application across geographical and industrial borders, going far beyond a simple translation of qualifications. It requires a clear framework to design efficient mechanisms of skills recognition and certification (see Exhibit 11).

- **Strategic skills planning:** An assessment of a country’s current and future skills and qualification demands needs to be developed in close cooperation with state authorities and industry. As of today, only few countries, such as Australia, have established formal cooperation mechanisms between state and industry where the government closely collaborates with industry-specific associations to plan qualifications of high-skill foreigners.
- **Talent Attraction:** Countries have to communicate what skills are most in demand. This communication has to target universities, training providers and migration agencies so they can provide the right skills.
- **Skills Assessment:** Education and qualification assessment is crucial for a successful match of foreign talent with organizations in need of skills. Certain countries (e.g. Singapore, Australia) use comprehensive qualification frameworks such as databases that list countries’ skills needs and assess equivalence recommendations of native and foreign qualifications. Furthermore, Australia and Singapore combine the assessment of skills with immigration regulations – foreigners with the skills in highest demand have the least obstacles for immigration.
- **Placement:** After the assessment of their skills, individuals should be able to find jobs appropriate for their skill set, which is not always an easy thing to do. Some countries, such as Australia, provide migrants with access to an employment database. This facilitates the integration of migrants in the country and ensures they can be properly employed.

- **Auditing:** Governments have to make sure their skills planning and assessment are efficient. Australia, for example, regularly updates statistics on migrant employment by occupation or diploma level in order to audit its assessment of migrants' skills.

Some countries have already developed farsighted skills recognition schemes. Australia combines its migration policy with the assessment of immigrants' skills and qualifications by specialized authorities like industry sector associations.

The Bologna Process framework, which encompasses 46 countries such as Germany, Turkey and Denmark, provides comprehensive initiatives and tools for comparing various skills and qualifications. Further projects are already being initiated.

The Irish government has established a successful skills recognition procedure through the National Qualifications Authority of Ireland. This programme has developed a standardized framework of qualifications necessary to work in Ireland and recognizes foreign qualifications within this framework. It also features a qualification database that includes detailed information about foreign qualifications.

The United States has a decentralized system with no official federal governmental authority assessing qualifications. Either the US employer (in unregulated occupations) or the state or territorial licensing authority (in regulated professions, e.g. law, medicine) assess qualifications. Often, these authorities refer the assessment to costly credential evaluation services that are not regulated by the federal or state governments.

Certain bilateral (e.g. India and the UK) and regional (e.g. European Union, NAFTA) agreements provide legal frameworks for the mutual recognition of skills and qualifications. In the European Union, the Bologna Process ensures the equivalence of degrees in higher education and, hence, facilitates the transfer of high skills.

Proposals for Action

Assess current and anticipate future skills shortages through strategic skills planning. Talent shortages can have a significant impact on the economic development of countries. Countries need to anticipate those talent shortages as much as possible to be able to take corrective actions. As much as the long-term forecasting of skills demand is often challenging, there are positive examples of a successful shorter term assessments.

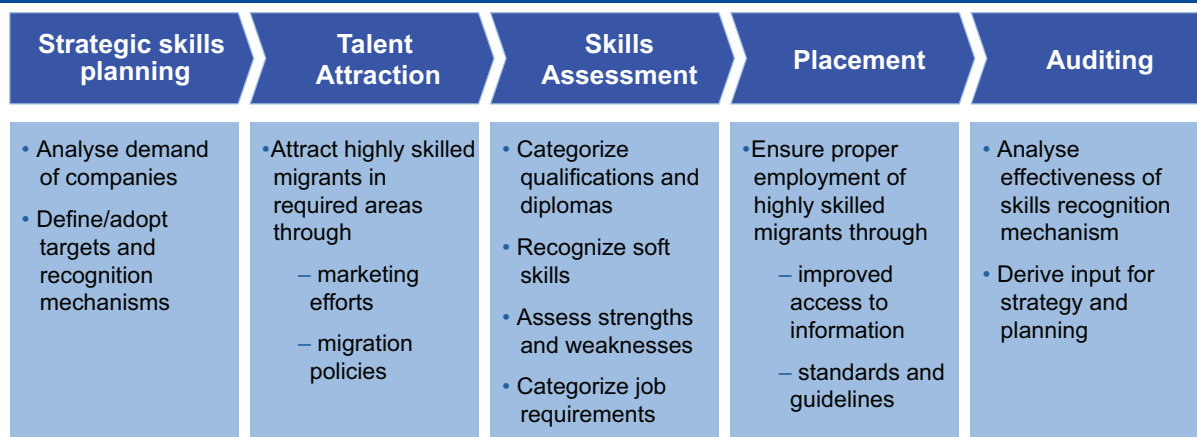
Countries should develop strategic skills planning. These planning models need to be pragmatic, organized at the job-family level and flexible for practical reasons and to avoid huge and complex modelling. Moreover, the planning models need to be reviewed and updated regularly to ensure they reflect the evolution of the countries' highly skilled supply and demand.

Countries have to identify skills they particularly need and link business development priorities with this vision. They should capitalize on existing resources, policies and methods, but make them flexible and adaptable to changing business needs. Cities with over 1 million inhabitants need strategic skills planning similar to that of countries.

Some major cities are implementing their own local skills planning, such as Shanghai's "High Talent Initiative" to attract new talent and upgrade the skills of the local workers. The initiative provides advice to local policy-makers seeking the best means to design a local skills strategy appropriate to their own local situation. Skills planning should be the starting point to derive high-skilled labour migration policies and lifelong education and training policies.

Develop a skills recognition mechanism for both native born and migrant workers. Countries and the private sector should collaborate to define present and future skills needs that are critical for economic development. This should be linked to skills recognition and certification schemes for both

Exhibit 11: Comprehensive Framework to Design Skills Recognition Mechanisms



Source: The Boston Consulting Group

native born and migrant workers, as well as to skills development, particularly critically needed skills.

For example, the United Kingdom has set up some 25 licensed Sector Skills Councils (for retail, IT and telecom, construction, etc.) that aim to reduce skills shortages and raise the skills level of the existing workforce. The councils perform skills forecasting and develop occupational standards (national vocational qualifications); the awarding bodies design assessment systems with the support of the sector councils, and assure the quality of the assessment. Finally, the Qualification and Curriculum Agency monitors the overall system. This framework provides a coherent approach across sectors, connects skills needs with training and education, and has proven successful as defined by cooperation with employers.

Multilateral agreements should be developed to allow an easy recognition of skills across countries despite differences in education systems and professional experiences. The more degrees and credentials that can move across nations, the easier it is to identify and nurture suitable skills and talent, avoid biases and build inclusive workforce cultures and environments.

To do so, a database of qualifications (academic and job) should be available with a translation of countries' qualifications into the equivalent in other countries. Optimally, it could be done through industry associations with governmental supervision, which could facilitate the issuance of certificates that acknowledge a migrant's translated qualification (easily accessible, fast and cost-efficient for government and immigrants; probably involving the Internet).

Countries should also issue work permits automatically if qualifications match current demands, which need to be assessed and constantly updated, as in Australia. They could then develop and maintain a database of immigrants with needed qualifications for industry use.



Members of the Global Agenda Council on the Skills Gap Discuss Key Deficiencies in International Cooperation Related to the Skills Gap

Finally, countries should design mechanisms to ensure fast-tracking to full employability for highly skilled immigrants. Skills recognition systems are critical and countries should closely cooperate with businesses to ensure skills recognition is efficient and supports both workers and companies.

Provide tax incentives for businesses to train employees.

The education system cannot teach all sets of skills and adapt as rapidly as needed to the evolving demand for skills from the workplace. Continuous learning and training should be pursued and companies should regularly train their workforce to ensure lifelong skills development. Governments should stimulate investments from individuals and enterprises in lifelong education and training through financial instruments such as student loans, training funds and tax incentives with, for example, corporate incentive tax (CIT).

Businesses are particularly interested in tax incentives that are not bureaucratic and reduce the cost of training. Some countries offer tax incentives to the corporate sector to develop training but, generally, the systems are very different across countries.

Countries should develop tax incentives to promote training in vocational skills and skills that could be helpful for new career paths. Companies should offer training not only to new hires but to all employees. Germany, the Netherlands and Austria, for example, have developed special tax incentives not only for training tied to current jobs but also for future jobs, in recognition of the long-term employability perspective. Training programmes should be part of skill recognition schemes (see previous recommendation) and should be certified by independent agencies to ensure the usefulness of training outside of the trainees' companies.

Governments could also implement regulations, such as requiring employers to provide training for their employees every three years. In France, for example, initial and continuing vocational training is compulsory. Firms with at least 20 employees must dedicate 1.6% of the gross wages paid to vocational training. If the companies do not spend the money on training, it is collected as taxes. All enterprises with at least one employee must pay a 0.5% apprenticeship tax on gross wages.

Talent development becomes increasingly important for companies in today's business context and companies can derive strong competitive advantages from the skills development process, especially if well linked to corporate strategy. Companies should develop ongoing training and development opportunities for their employees through comprehensive processes. They should also develop mechanisms to track and control employability of their employees to adapt training or coaching to employees needs.

Given the rapid pace of innovation that makes current skill sets obsolete, it is critical that countries and businesses promote lifelong education and training and cooperate to optimize the benefits for both.

Develop public-private partnerships (PPP) for promoting education and training. Public-private partnerships between academic institutions, businesses and governments are particularly effective in increasing labour quality by aligning key stakeholders on the knowledge and skills required by the market. Governments should work together with academic institutions and businesses to reduce the gap between what students learn and what they need to know to become productive employees.

First, businesses can help develop adapted curricula and set up educational standards. This can be done by engaging several companies or even an entire sector to have more impact. It necessitates consensus on what skills are to be developed and how to develop them. The collaboration between IBM and Google in the United States is a good example of a sector cooperating with academia. The initiative, tested at leading American universities, aims to provide computer science students with open source-based development tools so they can gain the advanced

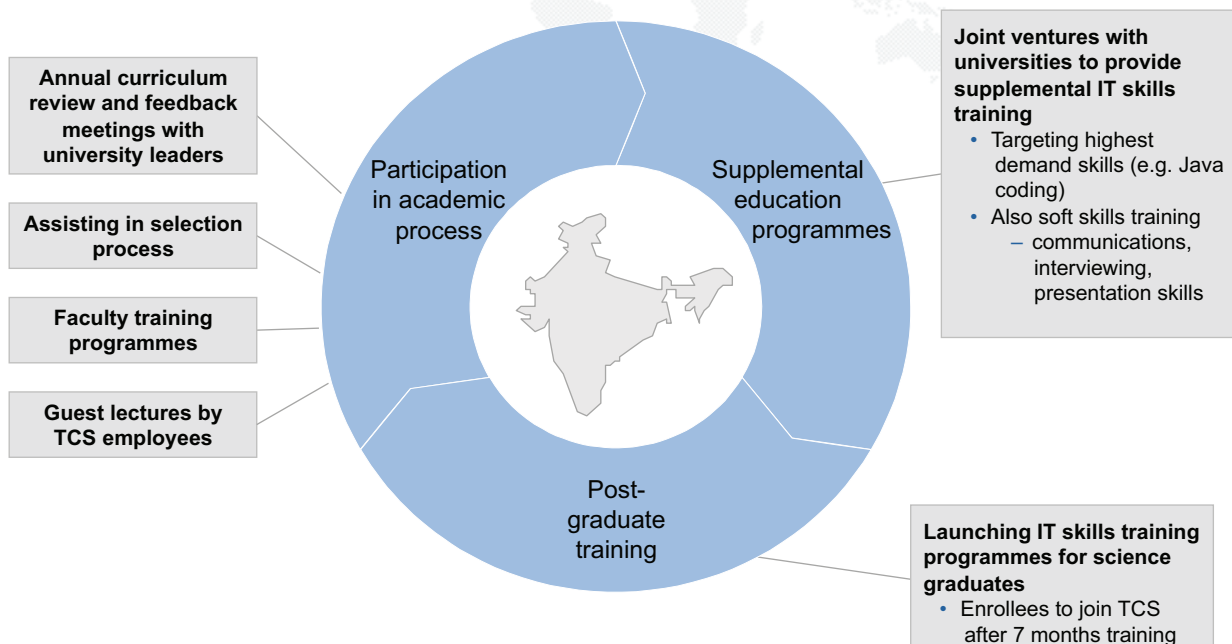
“We need to understand what skills are required in countries and industries, and we need to make sure there are sufficient investments made in education and training. Education systems evolve slowly; as we need short-term solutions, it is the business that has to provide these short-term solutions.”

Kris Gopalakrishnan, Chief Executive Officer and Managing Director, Infosys Technologies, India

programming skills necessary to innovate and address the challenges of cloud computing.

Businesses can also help to develop curricula where systematized student internship programmes are integrated. Companies should help students to find long-term internships that will help them develop the skills required by the industry in which they are interested.

Exhibit 12: Partnerships with Indian Schools Help Address Talent Shortages Case Study on Tata Consultancy Services



Source: The Boston Consulting Group, Company website, literature review

PPPs are also a good way to increase the quality of education provided to students through the development of teachers. For example, the Indo-US collaboration for engineering education builds on the “Train the Trainer” model to improve the quality of faculty members. Through this initiative – which was launched with the cooperation of the American Society for Engineering Education (ASEE), the Indian Society for Technology Education (ISTE) and several corporations, including Infosys Technologies and Microsoft – more than 1,000 senior faculty members across India have already been trained.

Tata Consultancy Services, the IT services company, is building strong connections with first-, second- and third-tier universities (see Exhibit 12). Tata gives feedback on curricula at those schools, helps train faculty and provides guest lecturers. The firm has also created partnerships with universities to provide special IT skills in java programming to students.

Tata is not the only company tightening its link with education. Such corporate initiatives should be encouraged by governments as they are beneficial for both countries and companies.

Promote student mobility. Students’ mobility should be encouraged as a first step in talent mobility. Recognition of cultural diversity, greater international exposure and increased adaptability are some of the many important benefits students gain when receiving education in more than one country.

International student migration can be a win-win situation for both hosting and sending countries. The hosting country can benefit from foreign, highly skilled students by retaining some of them to work after the completion of their degree. Migrant students represent an advantage for hosting countries as they combine domestic tertiary diplomas with a better knowledge of the language and culture – which is what highly skilled migrants entering the country for work often do not have.

The impact on the sending country can be positive for several reasons. First, the cost of training is shared between the two countries. Overall stay rates for international students after graduation are between 15% and 35%, so the sending countries can benefit from skills developed abroad by many students. Some of those who stay after graduation return to their home country after gaining work experience, which can be even more beneficial for the country of origin. Finally, the person recruited by the hosting country is typically young and does not occupy a senior position, as is often the case when recruiting highly skilled workers.

In addition, student mobility introduces healthy competition among academic institutions, which contributes to improved levels of education.

“Given today's speed of change in technologies and business in general, no education system can provide the appropriate talents in the long run; this implies that corporations should invest furthermore in training and education, including through delivering diplomas in order to increase talents employability, which obviously calls for partnerships with universities.”

Jean-Michel Caye, Partner and Managing Director, The Boston Consulting Group, France

Governments and academic institutions should increase access to tertiary education for migrant students who require financial support through, for example, portability of grants and loans. Language support should also be provided. Multilateral programmes, such as Erasmus in Europe – integrating a clear framework for student mobility with the necessary support – should be encouraged. Increased cooperation among academic institutions is an important factor facilitating these types of programmes.

Student mobility significantly enhances cultural diversity and facilitates intercultural understanding. It allows the younger generation to learn, in practice, values such as tolerance. Even very short-term mobility for primary and secondary students such as exchange programmes between schools should be encouraged to multiply contacts by children with diverse environments.

5. How to Attract Highly Skilled Migrants? Migrations Policies and Related Environment

Summary of recommendations

- **Design migration policies in collaboration with employment and social agencies**
- **Create a new category of short-term work visa targeting the highly skilled**
- **Create inclusive societies and working environments**
- **Promote appropriate representation of foreign workers in both political and corporate decision-making bodies**
- **Integrate migration into development strategies of sending countries**

Migration policy refers to activities performed by governments to stimulate or mitigate the inflow and outflow of the workforce from and to foreign countries. It is not limited just to law and regulation, but also covers mechanisms to actively manage immigration to fill skill gaps in the labour market, match companies' demand for skills with supply of immigrant workforce, facilitate the on-boarding process, and ensure development and retention of highly skilled migrants.

The study focuses on building an overview of high-skills migration policies along four dimensions:

- **Migration regulations** govern if and how foreign individuals, especially of working age, are admitted to a country's labour market, what legal status they receive and what rules and restrictions they must follow.
- **Labour market governance** refers to a government's activities to steer and regulate labour market dynamics. This includes the attraction and targeting mechanisms for foreign talent, as well as coordination with companies to identify and close existing skills gaps.
- **Companies** play a crucial role in the development and retention of foreign talent; and best practices on development and retention should be assessed. It is critical that the private sector and governments work together in the coordination of training and development of foreign talent.

- **Country's cultural and economic environments** are important drivers for migration. Various factors such as language, standard of living, political stability and social cohesion, among others, play a role here.

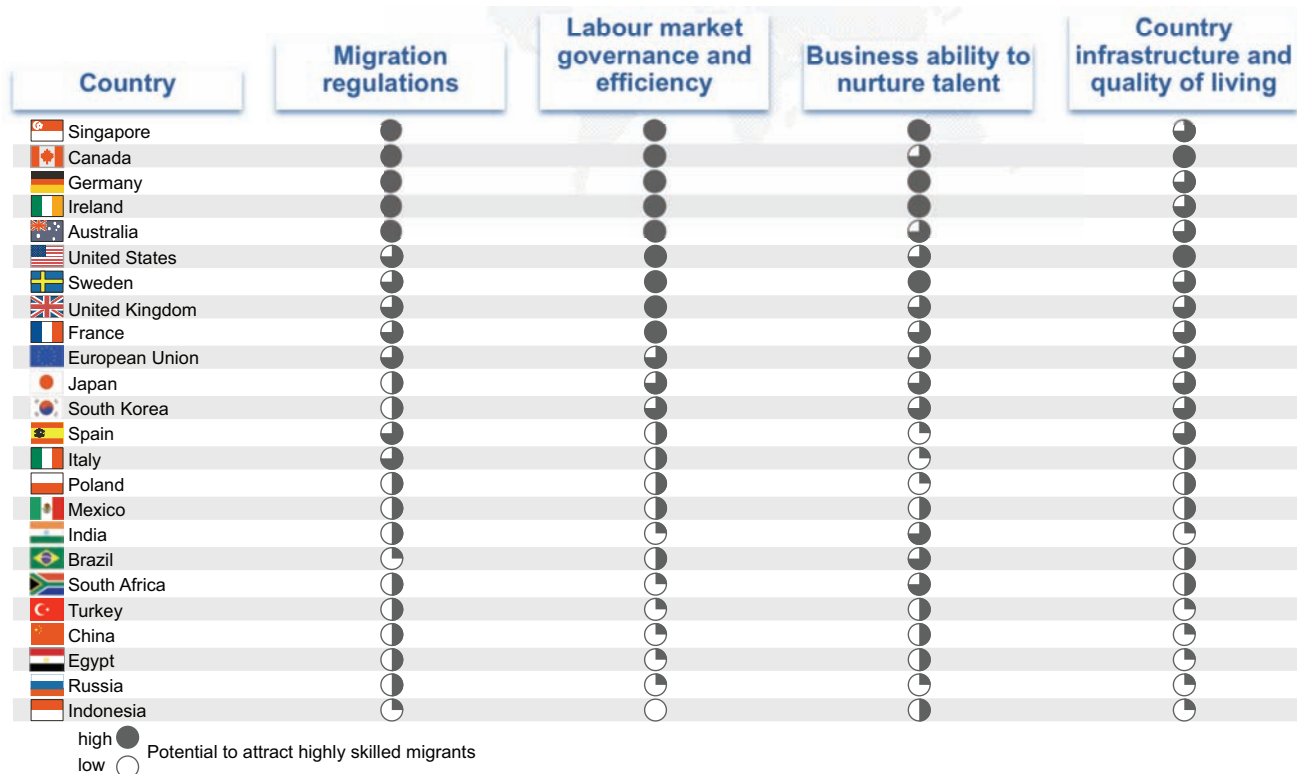
Current Situation and Best Practices

The expected shortage of skilled labour in many ageing societies is putting pressure on governments to take action to increase the supply of scarce skills. The development of intelligent high-skill migration policies and skill management strategies should be a priority for countries.

As the global economy recovers from recession, the demand for talent will rise rapidly, fuelled by the need for innovation and strong managers. Therefore, governments need to recognize the short- and long-term needs for skilled migration and should avoid short-term protectionist policies.

Attracting highly skilled migrants has been a priority for several countries, but some of them have achieved only relatively low success (see Exhibit 13). The majority of countries want to raise or maintain the ratio of highly skilled migrants but not increase overall immigration. Among other reasons, highly skilled migration is believed to improve the level of skills of the workforce in hosting countries. In the United Kingdom, for instance, more than one-third of migrants are highly skilled, which increases the national highly skilled average. This assumes that highly skilled migrants are properly employed, when, in fact, some migrants are working in positions below their skills level and ability.

Exhibit 13: Countries' Potential for Attracting Highly Skilled Immigrants



Note: Main drivers based on assessment of 19 sub-drivers
Source: EIU; Heidrick & Struggles; IMD; UN; The Boston Consulting Group analysis

Few countries leverage their full potential to attract highly skilled immigrants by applying comprehensive migration policies that target foreign talent throughout their careers, from student until retirement, and that address the development and retention processes. The following examples illustrate how countries have diverse approaches to migration policies for the highly skilled:

- **Attract:** Some countries have targeted high-skill policies aimed at limiting immigration mostly to highly skilled individuals (e.g. Singapore, United States) while others do not have specific high-skill migration policies in place (e.g. United Arab Emirates).
- **On-board:** some countries let highly skilled migrants in (after skills certification) to look for a job themselves (Australia, United Kingdom, Singapore) while others (United States, Germany) require employer sponsorship (i.e. proof of employment needed to obtain work and residence permits).

Some also provide grace periods to look for a new job or tie the work permit to the person (employer portability) – a change of jobs does not require a change in visa (e.g. Australia highly skilled migration programme, US green card). But, in other countries, the work permit is strictly tied to the employer and a job loss requires leaving the country immediately (United Arab Emirates, United States temporary visas).

- **Develop:** ongoing training and skills development of migrants, after their on-boarding in the hosting country, is critical to ensure their employability and to upgrade the skills level of the workforce. However, only a few countries act on this need by implementing foreign workforce development policies. Singapore's government provides incentives for companies to develop and train employees, and runs the Workforce Development Agency, which offers programmes to increase employability.

Singapore can serve as an example of best practices. The government is attracting students and upgrading the educational system through a comprehensive highly skilled attraction policy with simple processes to obtain highly skilled visas and coordinate skills management. The private sector is involved through tax or other incentives to develop and retain highly skilled foreigners. Low tax rates, a safe environment, and a good education and health system are further attraction points for Singapore. Hence, along all dimensions, Singapore effectively attracts, develops and retains highly skilled migrants.

Some regional agreements, such as respective European Union policies, have liberalized labour markets and facilitated talent mobility across the member states. While such agreements have greatly enhanced the labour rotation within the EU, attracting and integrating foreign talent from outside the European Union has not been coordinated to a similar extent. At the moment, European Union countries have mostly country-specific regulations in place on the treatment of non-EU foreigners. Approaches vary from points-based systems (e.g. United Kingdom) to employer sponsorship requirements (e.g. Germany). The EU blue card, adopted mid-2009 and under implementation now, is a coordinated multilateral approach to facilitate entry for high-skill, non-EU nationals that will have come into force already in 2011.

Quebec is an example of best practice in terms of skilled migration, and has recently signed a bilateral understanding with France on mutual recognition of professional qualifications to facilitate the access to regulated trades and professions from one region to another (see Exhibit 14).

Jean Charest, Premier of Québec, Canada, admitted that, in recent years, talent mobility has become key for many regions. To stay competitive, the government of Québec looked 30 years ahead and concluded that it needs to attract the best talent. The understanding between Québec and France on the mutual recognition of professional qualifications was signed on 17 October 2008. Since then, representatives of 22 trades and professions in Québec have signed mutual recognition arrangements (MRAs) with their French counterparts, and the negotiations between competent authorities continue. The result will be total labour mobility by the end of 2010. In order to retain the best talent in Quebec, facilitating measures towards obtaining Canadian permanent residency are now available to foreign students who graduate in Québec and to qualified workers employed temporarily in Québec. "We look forward to competing for the brightest talent – and we plan to win," said Jean Charest, Premier of Québec, Canada.



Jean Charest, Premier of Quebec, Canada, at the "Talent Mobility" session in Davos

Exhibit 14: Quebec Invests to Attract Highly Skilled Migrants

Quebec's bilateral agreements with the Government of Canada allow Quebec to establish and oversee the selection parameters for economic migration. Thus, Quebec has developed an ambitious "immigration programme for skilled workers" to align its labour needs and selection of skilled workers.

The governmental employment agency and the department of immigration of Quebec are regularly performing quantitative analyses of Quebec's immigration needs. Quebec is preparing itself for the demographic shifts that will lead to a decrease of the working-age population after 2030 if migration is not leveraged. According to the employment agency of Quebec, 700,000 jobs have to be filled by 2012, although the current unemployment rate is reaching 8.0%.

As the department of immigration states: "Population growth in Quebec is slowing and the population is ageing markedly and rapidly. The foreseeable impact of these trends is striking, i.e. a slowdown in economic growth, increased pressure on public finances and a decline in Quebec's relative weight in Canada. While immigration is not a panacea, it can, combined with other initiatives, help to mitigate such an impact, especially by delaying the onset of population decline and slowing the reduction in the working-age labour force."

The skilled immigration programme is a point-based system that takes into account the level and area of education, work experience, age, knowledge of French and English, and the applicants' connection with Quebec. Quebec is also publishing a "list of preferred areas of training", which allows relevant applicants to be eligible on a priority process. A job offer is not necessary to be eligible for this priority process. This list of preferred areas of training ensures an optimal contribution of the migrant to the Quebec economy and a facilitated integration of the migrant through an easier process to find an appropriate job.

To attract highly skilled migrants, Quebec strongly communicates its quality of life; it has also set up financial incentives: foreign researchers in IT, health science, engineering, etc., can benefit from a five-year tax holiday on Quebec's income tax, applicable to 75% of their personal income when they settle in Quebec to participate in research and development activities (R&D) in a corporation. Quebec also facilitates the integration of foreign students into the labour market. Students who spend two years at a Quebec university benefit from a three-year work permit.

Quebec's migration success is also based on its significant effort to best integrate migrants. The department of immigration encourages migrants to have their diploma recognized and a "Comparative Evaluation for Studies Done outside Quebec" facilitates their proper employment. Quebec is also implementing projects to facilitate access to regulated trades and professions. Programmes to help migrants integrate Quebec society are financially supported by the Quebec government, such as the "Regional Program for Integration", and "Action for Diversity". A strong effort is made to help migrants learn French as the government funds many programmes of "francization".

Finally, Quebec has signed an understanding with France in 2008 on the mutual recognition of professional qualifications. Since the understanding was signed, representatives of 22 trades and professions in Québec have signed mutual recognition arrangements with their French counterparts. The negotiations between competent authorities continue and, by the end of 2010, near 100 regulated trades and professions will have implemented a common procedure by doing an overall examination of qualifications to determine if the recognition of professional qualifications is possible.

Quebec has access to the employment agency in France to recruit French workers looking for international jobs.

Source: Consultation document respecting planning for 2008-2010 Quebec Immigration Level, Department of Immigration and Cultural Communities

Two proposals for directives were adopted by the Commission in 2007 and 2009 – one creating a single procedure for a single permit and providing a secure legal status for third-country workers and the other one regulating the admission of highly qualified workers (the so-called “EU Blue Card”). The European Union is considering immigration as one solution to compensate for the loss of workers due to retirement, which will play a crucial role in helping to address future labour and skill shortages. However, the European Union emphasizes that immigration is not the only solution, and is attempting to retrain its existing human resources and re-integrate unemployed people into the labour market.

Similar multilateral agreements can create momentum for a more coordinated skill management that goes beyond national borders.

Proposals for Action

Design migration policies in collaboration with employment and social agencies. The capacity of countries to attract highly skilled migrants depends on more than migration policies. The overall economic and cultural environment in the hosting country is important, too. Countries should develop a holistic approach to highly skilled migration, from attraction to integration of migrants, with the support of not only migration-related government institutions but also key economic agencies such as employment and education authorities.

In Singapore, for example, there is a strong focus on high-skilled workers in the communications field. The policies are transparent and visa procedures are rapid. A strategic skills list is assembled in collaboration with companies and recruiters. Companies are encouraged by tax benefits to send foreign talent (as well as local talent) to top universities abroad so long as they return to work with the company for several years. They can also use several government programmes and tax benefits to offer in-house training or send their staff to external courses.

Providing language support is also critical to facilitate the integration of migrants in the hosting country, but the funding

of language training varies significantly across countries, from up to 2,000 hours in Denmark and 1,300 hours in Australia, to only 200 hours in Belgium. Countries should provide sufficient funding support for language training to all migrants to facilitate their integration.

Most migrants face strong obstacles related to the portability of social security and pension benefits, which is the ability to preserve, maintain and transfer vested social security rights, independent of nationality and country of residence. It is critical to improve the portability of social security contributions, as it constitutes one of the greatest incentives or disincentives for migration return and circular migration.

Current systems for protection of migrants vary by country. Most receiving countries have some bilateral agreements with a limited number of sending countries to regulate the portability of pension rights in order to avoid double coverage and, more importantly, to determine the number of periods of contribution included in the pension system. Unfortunately, these agreements involve only a limited number of sending countries.

Consequently, for most migrants, the system is not working well. Exportability is sometimes limited from the hosting country to the sending country, especially when there is no bilateral agreement. For example, Germany applies certain rules to reduce pensions that are paid in countries with which Germany has not concluded a bilateral social security agreement.

Recognition of all periods of contribution to the pension system of the hosting countries is not systematic, especially for countries with no agreement, and pension contributions may in some cases be lost. Given that the system is governed by bilateral agreements rather than a more comprehensive approach, pension portability is very complex. Two potential solutions countries should pursue are the harmonization of agreements and greater use of multilateral agreements. They should also make sure that portability of health benefits is guaranteed when the migrant decides to return to his or her home country.

Exhibit 15: Non-business Perspective on Integration of Migrant Workers

Migrant workers are often discriminated against in the labour markets of industrialized countries. The proliferation of temporary migration schemes should not lead to the curtailment of the rights of migrant workers.

Major recommendations:

- Acknowledge that labour migration is a process to be managed, not a problem to be solved
- Recognize the trade-offs between migrant numbers and migrant rights
- Evaluate the longer-term effects of policies and regulation on both migrants and employers

Sources: *Towards Effective Temporary Worker Programmes: Issues and Challenges in Industrial Countries*, International Migration Paper 89, International Labour Organization (2007); *Protecting Temporary Workers: Migrant Welfare Funds from Developing Countries*, World Bank (2008)

“We need an incentive system to create a win-win situation for both receiving and sending countries and employees.”

J. Frank Brown, Dean, INSEAD, France

Countries should also improve communication, marketing and offerings of jobs. They should advertise according to location, environment, security, education system, career and access to healthcare. For example, Singapore, on its immigration website, highlights its educational system, high security levels, low crime and corruption rates, and high political stability.

Countries should communicate with one another and build on best practices, such as the points system in Canada.

Create a new category of short-term work visas targeting the highly skilled. A focus on short-term mobility would promote brain circulation and free flow of ideas, experiences and insights. Short-term visas can enable this environment, provided that migrants and labour rights are duly respected. For the system to work, every stakeholder must understand it. Bureaucracy and red tape should be limited; some countries have unclear regulations concerning work permits, which can be issued at the discretion of agents who make selection criteria arcane and waiting times long and unclear, among other things.


A clear database of regulations across countries could facilitate understanding and transparency, and would provide migrants with security about their status. The cost of work permits, which varies significantly by country, could also be harmonized into a global comprehensive system. Indeed, costs range from a few euros in Germany to around 1,500 euros in France and US\$ 2,300 in the United States for some H-1B visas. In a few countries, including Belgium and Switzerland, fees are fixed by local or regional authorities. Recommendations for long-term mobility policies should be revisited to encourage sustainable solutions for both hosting and sending countries.

Each country is facing its own migration challenges and has specific policies, inherited from history. Therefore, improved migration policies for countries should be tailor-made for each country (see Exhibit 16).

“In all the new development areas we haven’t touched yet, we have to be able to send the people we have to build up within our organization to develop our business.”

Hans-Peter Frick, Senior Vice-President and Group General Counsel, Nestlé, Switzerland


Exhibit 16: Examples of country-specific recommendations

 The US is very successful at attracting highly skilled migrants. However, the US has complex immigration procedures, with more than 70 different types of visas, and little support for integration after on-boarding of highly skilled migrants. The government has limited involvement in migration regulations, and companies are the main actors in the process. There is no coordinated governmental skills recognition scheme, the assessment of skill level is performed at company level on an individual case basis with no consistency of evaluation criteria across companies.


Creating a cost efficient and fast high skill visa application process using online platforms together with reduced high visa application fees (up to US\$ 1,000) and waiting times (several months for a H1B; 6-7 years for a green card) could be one of the next steps.

The US could also benefit from the definition of a country-wide governance for highly skilled migration, with a more detailed definition of highly skilled and adapted visas' quotas for these. Reducing the influence of lobbying should be pursued, as small and medium businesses are disadvantaged compared to large corporations when sponsoring a highly skilled applicant. This country-wide governance should include a skill recognition framework by establishing official assessment authority.


Finally, an H1B visa could allow for job change under the same visa and incorporate a longer and easier way to receive a grace period in case of unemployment.

 The mobility of talent within the European Union already exists, and the European Union already has a well-developed skill recognition system but targeting mainly EU/EEA nationals. EURES, the European Job Mobility Portal, provides information on job vacancies reported by employers, and facilitates the job seeking process for EU/EEA nationals.

However EU countries could leverage these best practices to adapt policies for non EU/EEA nationals. Then, each country within the EU has its own specific migration policies in place and could adapt its migration policies on specific areas.

 Germany, as an example of an EU country, has proven relatively successful as a regional player for attracting migrants. Germany has a specific highly skilled migration programme, with a simplified immigration process for highly skilled migrants.

However, Germany could potentially perform skills workforce planning in partnership with industry associations to better understand the skills needs of industries. It could also work more closely with industries to create an integrated skills recognition scheme. Currently, the skill recognition schemes focused more on skills obtained in Europe and are not centralized except for regulated professions. It could be extended to non EU/EEA nationals and should be centralized for all professions and skills.

 For the last decades, India has experienced more outflows rather than inflows of highly skilled migrants. Therefore, migration policies are still less sophisticated than in some developed countries. Becoming increasingly attractive for highly skilled migrants, India can start to adapt its migration policies to attract highly skilled migrants.

India could benefit from increasing the transparency of its migration policies and developing better access to information by applicants and companies. The creation of a specific programme for highly skilled migrants would also facilitate the attraction of these applicants.

The governmental agencies have limited dialogue with industry associations and companies, and therefore the understanding of skills needs are not deep enough. The government could foster the dialogue with employers to have a better visibility of the needs. It would have to be done in parallel with the set-up of a skill recognition programme for both native and foreign workers as there is no uniform recognition of international qualifications and no standardized system to attract skilled/qualified employees. There are still problems of recognition of qualifications gained within India; hence, India could focus first on recognition schemes within the country.

Source: Department of Immigration of the United States, Germany and India; European Commission, The Boston Consulting Group analysis

“Few organizations truly understand how to effectively manage a diverse workforce to ensure the realization of the benefits of having diverse perspectives. Any attempt to address workforce diversity must be done in the context of talent management, acquisition, development, promotion and deployment.”

David A. Thomas, H. Naylor Fitzhugh Professor of Business Administration; Unit Head, Organizational Behavior, Harvard Business School, USA

Create inclusive societies and working environments.

Both countries and corporations should reinforce their efforts to build inclusive communities and work environments in order to improve integration of diverse migrants. Diverse organizations are better positioned to find the right skills by tapping into a broader talent pool, and to manage their multicultural workforce more effectively.

Since organizations usually tap into the same pool of talent repeatedly, reaching out to underrepresented groups – such as women and minorities – can be a solution to talent shortages. Moreover, companies should provide support for employees’ families to facilitate both the move and integration into the hosting country and community.

The role of the cities is increasingly important; many cities in Europe are working on urban development for better integration of newly arrived migrants. For example, Rotterdam has developed a “Meetings between Old and New Residents” initiative. The city encourages meetings between migrants and “old” residents. They meet up to three times over three months to get to know each other and the city. It is important that countries demonstrate the long-term opportunities that are possible for migrants.

Integrate migration into development strategies of sending countries. Hosting countries, companies and migrant workers should actively contribute to the development strategies of the poorest sending countries. Migrant workers are already significantly contributing through remittances they send to their families in their home countries. Both sending and hosting countries should work closely to provide a framework for the best use of remittances, recognizing that, ultimately, these are private funds. They could also work together to reduce the cost of remittance transfers through formal channels.

Hosting countries and highly skilled migrants can also contribute to the development of the sending countries through programmes to increase the level of skills and technology of the hosting country. Several programmes already exist and should be harmonized and expanded to increase their benefit to developing countries. They mostly build on mobilizing highly skilled migrants in hosting countries to invest in knowledge sharing and training in sectors crucial for development.

Diasporas can also be encouraged to build their own networks. Hosting countries can help diaspora networks to organize themselves by identifying and locating the migrants within a country, sustaining development programmes, providing support to these networks, and securing the visa status of highly skilled migrants so they are able to circulate easily between their home and hosting countries. Sending countries can take advantage of diasporas by creating special bodies to organize the gathering of these groups and helping to sponsor events that involve highly skilled migrants in the development of their home country. For example, the Foreign Affairs Bureau of the Ministry of Education of China encourages people who remain overseas to return to China for short visits and “serve the country” from abroad.

“National economies can most efficiently develop and use their human resources if they take diversity into account [...] It is important to invest broadly in the formation of skills for all populations, to identify and attract potential talent wherever it exists, and to find cost-effective ways to realize that potential.”

Harry Holzer, Professor of Public Policy, Georgetown University, USA

Exhibit 17: International Organization Recommendations for Migration Policies

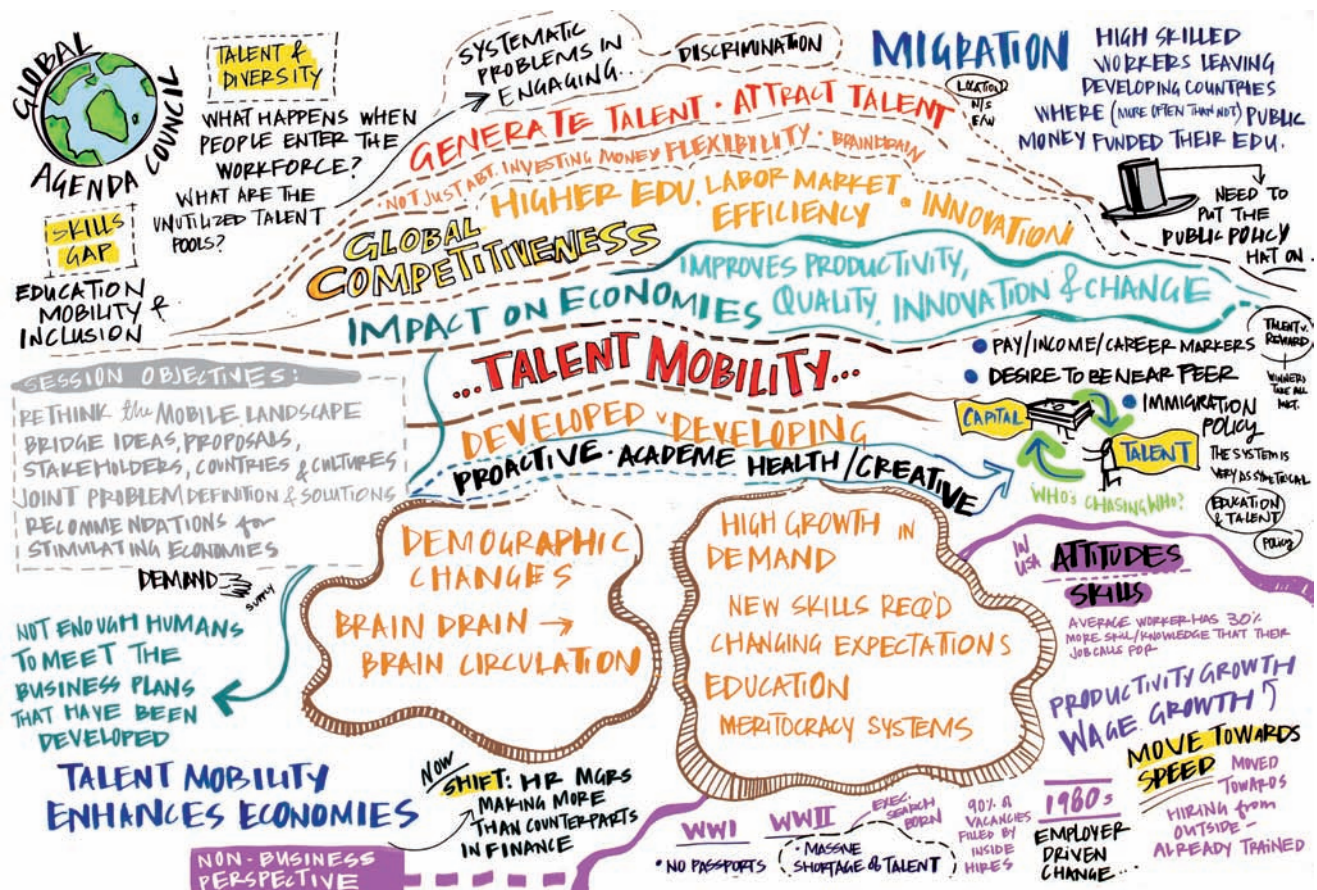
The International Labour Organization specifies that policies regulating highly skilled migration should focus on the “Six Rs”:

- Return of migrants to their source country
- Restriction of international mobility controls
- Recruitment of international migrants
- Reparation for loss of human capital compensation policies, brain drain tax
- Resourcing expatriates (diaspora options)
- Retention

The OECD recommends that:

- Removal of barriers to short-term and circular mobility of human resources in science and technology (HRST) should be promoted
- Migration of HRST cannot reduce investment in education of domestic labour
- Coherence of talent mobility, innovation, development and aid policies is important; simply increasing the number of immigrants will not boost innovation without a system that enables them to use, create and disseminate knowledge
- Countries need to better understand patterns and changes in stocks and flows of scientists, engineers, researchers and the broader category of the highly skilled
- Better data collection is required so a thorough exploration of mobility across sectors and within the private sector is possible
- The global competition for talent is growing, but countries cannot rely too heavily on importing qualified science and technology personnel; demand and supply may change

Sources: Synthesis Study on Skilled Migration, Lowell & Findlay, International Labour Organization (2002), The Global Competition for Talent: Mobility of the Highly Skilled, OECD (2008)



Talent Mobility Is a Complex Problem: Illustration of Thoughts from Cross-Industry Summit on Talent Mobility in New York

6. How Can Businesses Create a Global Talent Strategy? Examples from the IT Industry

Summary of recommendations

- **Develop global talent management processes: set talent planning and management as a priority for the CEO and invest in global leadership development and management**
- **Assess current and anticipate future skills shortages through strategic skills planning**
- **Design and promote talent mobility programmes inside the company**
- **Expand talent pool for recruitment and make talent grow internally**



Participants in the Cross-Industry Summit on Talent Mobility in New York

Current Situation and Best Practices

Some best practices are emerging to address the skills gap issues and employability problems through partnerships between main stakeholders – companies, countries, education institutions and IT associations. In future, initiatives coordinating the input of various stakeholders will have an even bigger impact on improving the situation.

In the past, many certification initiatives were set up at company level only, which did not prove to be successful. On the contrary, it affected the credibility of certification systems. In 2007, leading industry companies in the United States set up an IT certification committee “to ensure that a qualified, certified workforce is in place to support the technology needs of businesses and organizations worldwide.” This initiative aimed to strengthen the credibility of certification and increase the employability of the workforce.

In India, the Train the Trainer programme of Infosys “empowers college faculty with experiential knowledge ... so they can, in turn, enrich their course curricula and transfer the benefits to students.” It is a good example of cooperation between academia and companies to ensure a smoother transition between study and work for high-skill students. The programme facilitates the recognition of Indian IT skills across the world through the increased credibility of their IT universities degrees.

Australia facilitates migration of highly skilled IT experts through several initiatives. The country communicates its needs for skilled workers and has set up a list of occupations needed in which IT managers are clearly identified. Moreover, migration services cooperate with the Australian Computer Society to facilitate the migrants’ skills assessment and certification and their integration into the Australian labour market.

Cooperation between countries and companies can result in initiatives improving the educational systems and better preparing the workforce for industry requirements. For example, Sun Microsystems and the State Administration of Foreign Experts of China (SAFEA) have committed to long-term cooperation to empower university administrators, teachers and IT talents with Sun’s IT innovations and industry-recognized open source technologies. This initiative improves students’ knowledge of specific technologies that are currently not well taught in all universities, such as cloud computing.

Companies also facilitate talent mobility programmes within their own network of offices around the world. Moreover, the IT industry experiences an emerging trend of creating jobs where the highly skilled are actually located as sometimes this may be easier than moving talent given the existing barriers. Integration of worldwide offices services can enhance economies of all participating countries, and give companies 24-hour programming capabilities.

Proposals for Action

Given the current competition for talent and future skills shortages, attracting, developing and retaining the best talent will be key for future growth. To do so, companies should develop global talent management practices, look for diverse perspectives and backgrounds across the globe and promote a global mindset.

Develop global talent management processes: set talent planning and management as a priority of the CEO and invest in global leadership development and management. Companies must set talent management as a priority and develop rigorous and global processes. First, global talent planning should be one of the priorities of the CEO’s agenda. The chief executive and top executives should work in concert with the human resources department and address talent issues on a regular basis. Business and talent strategy can, for example, be aligned through annual planning processes.

In the same line, they should invest in global leadership development that allows local talent from rapidly developing economies to occupy meaningful positions and be offered promotions. To achieve this, a strong commitment by top management to the new global mindset is required.

Assess current and anticipate future skills shortages through strategic skills planning. Companies should build a long-term vision of their personnel needs, integrating internal

and external constraints. Workforce planning can help companies understand where they will likely face shortages and help them undertake corrective actions. In Chapter 4, we underscored the need for countries to perform strategic skills planning – companies should be doing the same thing. They should analyse their workforce by creating job categories based on similar skills requirements, analyse the exchangeability between job categories and assign employees to these job families (see Exhibit 18).

Exhibit 18: Controlling the Risks arising from Demographic Shifts

There is neither an “ideal” distribution of the age structure, nor can the status quo be used as a standard. On one hand, companies are losing qualified, experienced staff in large waves; on the other, they are faced with the task of productively managing an ageing workforce. Tackling these challenges in a timely manner will become the fundamental prerequisite for remaining productive and competitive. An example of this is RWE Power, subsidiary of RWE Group (Germany-based), which, in collaboration with The Boston Consulting Group (BCG), introduced a strategic demographic risk management approach.

Unbalanced Situation

By analysing the staff requirements and portfolio over a long-term period, the developments the company would soon be facing became apparent: the share of employees over 50 years old would increase from about 20% in 2006 to over 50% within five years; the company also has employees over the age of 60. In a few years, a large share of these employees will have retired. Companies conducting long-term strategic planning must counteract these risks early on with focused age management and anticipatory capacity management. Both require a detailed supply and demand simulation to perform a risk analysis as a first step.

Rigorous Understanding of the Risk

Although all areas of a company are affected by demographic shifts, the effects can differ strongly depending on segment and qualification group. To perform a differentiated risks assessment, a pragmatic approach is applied as a first step to divide the employees into job clusters.

The second step is to determine the medium-term effects of ageing and fluctuation (e.g. retirements, unforced attrition) for each job cluster through workforce-level simulation. This produces a scenario under the assumption that no measures (e.g. hiring or firing) are taken and already reveals areas in which unbalanced age structures may lead to a shortage of qualified staff. Whether such a decline in capacity becomes a risk or not depends mainly on the development of demand during that time.

The demand is determined for each cluster through the use of driver models that show long-term business and productivity developments, as well as sensitivities and

scenarios. This requires precise knowledge of influencing factors and strategies, necessitating intensive dialogue between HR and the business departments, strategists and financial departments. A few meaningful scenarios often suffice to reveal future staff shortages that will inevitably become a problem.

Portfolio and demand simulations lead to a gap analysis, which reveals the difference between the existing and the required workforce for each job cluster over the period under observation, and highlights the surplus or shortage of talent. The gap analysis supplies a highly informative, quantitative basis for deriving targeted HR measures.

Strategic Management of Ageing and Capacity Loss

In addition to external procurement of personnel, internal optimization options should also be reviewed in the context of capacity management. The most important levers in this respect are staff transfers between sites and advanced training. Only the remaining gap needs to be closed through new hires. Although the voluntary fluctuation rates are currently very low in many companies – as at RWE Power – the staff retention issue will in future play an increasingly important role for scarce and sought-after resources.

On the issue of ageing, the risks must be examined separately for each job cluster. A significantly older personnel structure has a different effect on physically active employees than on executives. For the former, increasing age results in disproportionately high absences; the risk of unsuitability for shift work also increases. The personnel processes, e.g. staffing, compensation and development, must be oriented specifically to these risks. In addition, new training offers can be developed that impart new knowledge to older employees and are tailored to the different needs of younger and older employees.

A Paradigm Shift Is Required: Set Talent as a Priority of the CEO

In many companies, a gradual exit between the ages of 51 and 58 became the rule. A certain period of acclimatization can therefore be expected if companies now introduce targeted measures to retain older employees. This paradigm shift will undoubtedly be one of the greatest challenges for HR management.

Exhibit 19: Companies Can Identify Capacity Risks through Strategic Workforce Planning

Job categories	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Power electronics electrician	-4%	-2%	0%	4%	9%	15%	13%	-1%	-3%	8%	20%	17%	18%
System controller	-5%	-8%	-12%	-18%	-22%	-30%	-35%	-45%	-45%	-47%	-51%	-58%	-62%
Electrical planner	-6%	-13%	-14%	-25%	-23%	-20%	-19%	-18%	-20%	-22%	-25%	-28%	-32%
High-voltage electrician	-1%	-10%	14%	13%	-7%	-29%	-29%	-43%	-45%	-75%	-81%	-85%	-92%
Low-voltage electrician	-1%	-3%	1%	2%	-1%	9%	21%	24%	27%	29%	32%	358%	38%

Demand vs. supply

Surplus ■ ■ ■ Shortfall

Source: "Managing Demographic Risk", Rainer Strack, Jens Baier, Anders Fahlander, Harvard Business Review, 2008
Based on a project experience from The Boston Consulting Group

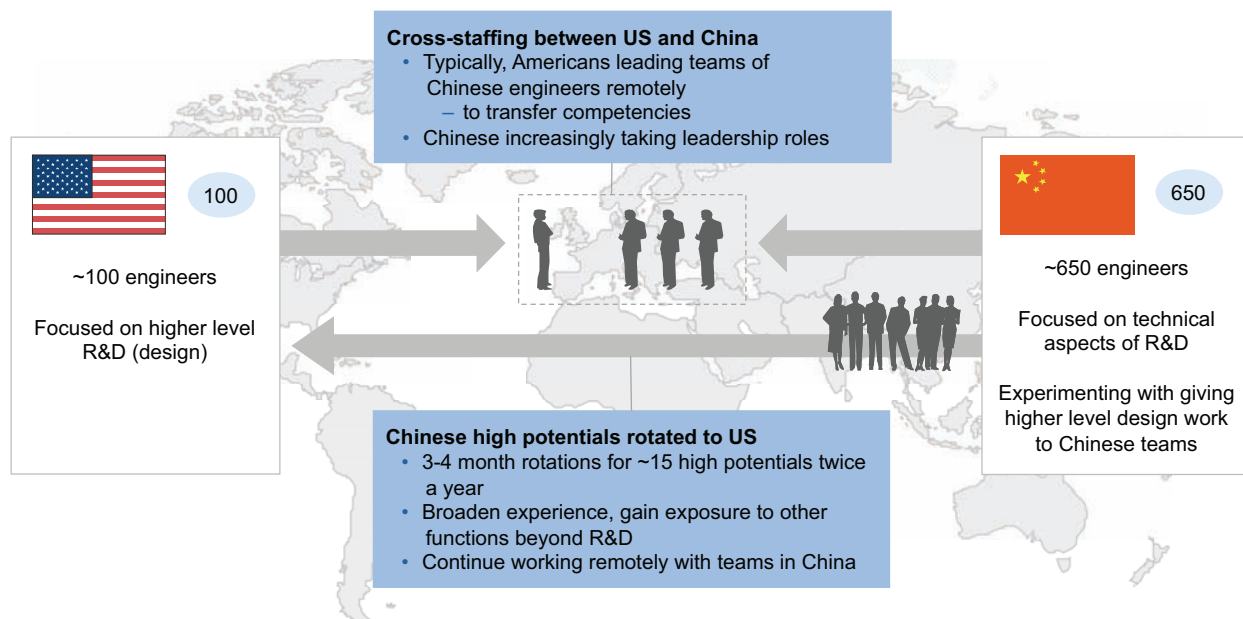
Simulation and definition of scenarios can help assess demographic risks and anticipate skills gaps. This exercise will also increase the transparency of talent management and make all human resources actions much more coordinated.

Design and promote talent mobility programmes inside the company. Companies should develop mobility programmes for their employees and encourage them to embrace a global mindset. These programmes will also ensure cross-fertilization and give companies a chance to build a global workforce across their network of offices and facilities. Mobility programmes can include several formats such as cross-office staffing, temporary secondment, temporary

transfer to other offices and rotational programmes. International assignments are essential for the skills development of high-potential employees.

For example, WebEx has built a distributed US-China R&D organization that effectively leverages talent, thanks to a rotational programme between its R&D offices in the United States and China. Chinese high-potential employees are rotated to United States for three to four months to broaden their experience and gain exposure to other functions beyond R&D while they continue working remotely with teams in China (see Exhibit 20).

Exhibit 20: Leverage of Talent through Distributed R&D Organization Case Study on WebEx



Source: The Boston Consulting Group, Company interviews

To create a successful international programme, it is critical to have a globally consistent performance management, assessment and evaluation process. When defining international programmes, specific performance objectives to be accomplished on assignment should be specified. Assessment of the individual performance against these objectives should be performed and length of the assignment should be managed actively.

For example, Schindler, the global mobility provider, has defined a three-year limited programme for expatriates in Asia with targeted objectives. Three clear objectives are set for their stay in Asia: they have to set up their organizations, train and develop a local workforce and find successors for themselves. Expatriates' success is reflected through a performance evaluation and financial incentive system; if they cannot find and train a successor during their three-year stay in Asia, the last year of bonus is forfeited.

Expand the talent pool for recruitment and grow talent internally. As it is more and more difficult to find the right talent, companies should consider untapped talent pools. They should recruit not only from first-tier universities but also from the second and third tiers, and seek a more diverse set of candidates. For example, Wipro is multiplying sources of talent and targets second-, third- and fourth-tier cities and universities in India to increase the candidate pool. To ensure quality of talent, the company invests heavily in training and personnel development. Training costs are mitigated by the compensation offered (see Exhibit 21).

Exhibit 21: Managing a Diverse Workforce through Lifelong Training Case Study on Wipro

Innovative recruiting from multiple talent sources



Large-scale hiring in India

Multiple sources of talent to increase candidate pool

- Combination of university and lateral hiring (~50% each)
- Target second-, third-, fourth-tier cities and universities in India

Increasingly hiring non-engineering graduates

Heavy focus on training to address different skills gaps



In-house “university” with 135 faculty

Multiple training tracks depending on type of recruit

- 10-12 weeks for engineering grads
- 6 months for non-engineering majors

Training focuses on key skills gaps for Indian talent

- Large focus on soft skills
- Additional IT engineering skills training for non-engineers

Placement tied to training track, with open career paths



Compensation and placement balanced with training cost

- Reduced comp and lower-level positions for recruits requiring more training

Ongoing open career opportunities

- Internal job market open to all employees
- Competencies for each position mapped out, aligned with performance reviews for self-assessment

Source: The Boston Consulting Group, Company interviews, literature review

Finally, businesses should try to address the most critical talent issues at the sector level rather than at the company level. Development of critical skills and the emergence of occupational standards require a joint effort by major companies.

“As we emerge from the economic crisis, the right talent will become more difficult to find. Global companies will have to look beyond the talent pools they currently know – multinational and diverse talent will be key to filling the gaps.”

Kevin Kelly, Chief Executive Officer, Heidrick & Struggles, USA

7. Conclusion and Recommendations

Human capital is an indispensable driver of economies and a foundation of innovations critical for post-crisis recovery and sustainable growth. International migration can positively stimulate both developed and developing economies. We are at the dawn of unparalleled skills crisis, and are witnessing a significant transformation of the workforce, which is more mobile and more diverse than ever before. Therefore, leaders need to drive their organizations to prepare for these changes.

The Annual Meeting 2010 gathered high-level contributors to the talent mobility project who reviewed current outcomes, brainstormed the final recommendations for stimulating economies through talent mobility (summarized under a working title "Declaration on Talent Mobility") and shared their thoughts on the implementation strategy (see the drawings). Key messages from the Meeting include:

- Retraining is an imperative for creating new jobs on a scale the economy needs.
- It is critical to change the perception of vocational education and career paths so they become more attractive.
- Prospective employees need more skills – less general education.
- There is a need to create awareness of the talent crisis and rebrand the issue of talent mobility.

The mandate to continue the work in the field of talent mobility has been further strengthened. In 2010, the Forum, its Global Agenda Councils and Partners will continue to build the talent mobility dialogue. Proposals for addressing inefficiencies in the global governance and collaboration systems in this field will be discussed with the policy-makers during the meetings in Brussels on 10-11 May, Doha on 30-31 May and in China on 13-15 September. Moreover, the dialogue will also continue online, at the Forum's interactive online platform for leaders (www.welcom.org).

It is the responsibility of today's leaders to ensure that increasing migration and diversity of talent are advantageous to all participating countries, people, businesses and the global, interconnected economy. Leaders of companies and governments must work together to ensure inclusion of all society's members in the creation of and benefiting from prosperity and wealth.

Summary of Recommendations Presented in the Report

Summary of Recommendations for Countries

- Assess current and anticipate future skills shortages through strategic skills planning
- Develop skills recognition mechanisms for both native born and migrant workers
- Provide tax incentives for businesses to train employees
- Develop public-private partnerships (PPP) for promoting education and training
- Promote student mobility
- Design migration policies in collaboration with employment and social agencies
- Create a new category of short-term visa targeting the highly skilled
- Create inclusive societies and working environments
- Promote appropriate representation of foreign workers in both political and corporate decision-making bodies
- Integrate migration into development strategies of sending countries

Summary of Recommendations for Companies

- Develop global talent management processes: set talent planning and management as a priority of the CEO and invest in global leadership development and management
- Assess current and anticipate future skills shortages through strategic skills planning
- Design and promote talent mobility programmes inside the company
- Expand the talent pool for recruitment and grow talent internally

Summary of Recommendations for all Stakeholders

- Increase mutual understanding and develop effective coordination and dialogue mechanisms

Exhibit 22: Outcomes of Discussions at the Workspace Session “Entering the Era of Mobile Talent”

DAVOS Declaration of Talent Mobility 2010

INCREASE PEOPLE'S EMPLOYABILITY

- STOP TRADING PEOPLE LIKE COMMODITIES
- RE-BRAND VOCATIONAL EDUCATION & JOBS 'COOL'
- INCENTIVIZE YOUNG PEOPLE TO DEVELOP RIGHT SKILLS
- PROMOTE LIFE-LONG EDUCATION
- ANALYSE COUNTRY / INDUSTRY COMPETENCIES REQUIREMENTS

RE-DESIGN MIGRATION POLICIES

- ELIMINATE TALENT WASTE THROUGH PUBLIC PRIVATE CERTIFICATION
- ADDRESS 'BRAIN DRAIN' - INCREASE POOL OF MOST WANTED WORKERS
- IMPROVE ACCESS TO INFORMATION
- PRE-CLEAR CORPORATIONS THROUGH CODE OF CONDUCT ON TALENT MOBILITY
- INTRODUCE 'TEMPORARY TO PERMANENT VISAS'

CREATE GLOBAL WORKFORCE

- RECRUIT ATTITUDE + ADAPTABILITY + INT'L EXPOSURE - NOT ONLY SKILLS
- INVEST IN SKILLS DEVELOPMENT
- CHANGE COMPENSATION SYSTEMS - STIMULATE INNOVATION!
- DEVELOP SET OF COMMON VALUES
- SUPPORT INTEGRATION OF FAMILY MEMBERS
- LOBBY GOVERNMENTS TO ADDRESS VISAS & TAX BARRIERS

BUILD & EFFECTIVELY MANAGE DIVERSITY

- INCLUDE DIVERSE PERSPECTIVES IN DECISION MAKING
- INTEGRATE DIVERSE PEOPLE IN ORGANIZATIONS WELL
- RE-DEFINE KPIs TO TRACK PROGRESS IN DIVERSITY
- INTEGRATE DIVERSITY OBJECTIVES INTO STRATEGIC WORKFORCE PLANNING

USE TALENT FOR INNOVATION

- BUSINESS FRIENDLY REGULATIONS + RESPECT FOR HUMAN RIGHTS
- ALLOW PORTABILITY OF HEALTHCARE & OTHER BENEFITS
- BUILD INNOVATION HUBS - INCLUDING CLOUD HUBS!
- USE TECHNOLOGY TO MOVE TALENT WITHOUT MOVING PEOPLE

IMPLEMENTATION Strategy HOW CAN WE MAKE IT HAPPEN? 2010-20

To Do's For GOVERNMENTS

- ESTABLISH PROCESS TO IDENTIFY MIGRATION NEEDS
- EDUCATE PUBLIC OPINION ABOUT TALENT MOBILITY
- COORDINATE TALENT MOBILITY RELATED POLICIES < INSIDE COUNTRIES BETWEEN COUNTRIES
- INCREASE ATTRACTIVENESS OF A HOME COUNTRY
- INVEST IN INFRASTRUCTURE & EDUCATION
- SUPPORT INTEGRATION OF MIGRANT WORKERS' FAMILIES
- ENTER BILATERAL & MULTILATERAL TALENT MOBILITY AGREEMENTS

To Do's For BUSINESS

- DEVELOP TALENT MOBILITY CHARTER FOR BUSINESS COMMUNITY
- BUILD DIVERSE LEADERSHIP TEAMS
- INVEST IN EDUCATION THROUGH PPPs & INTERNAL TRAINING PROGRAM
- MONITOR & MANAGE TALENT LIKE OTHER FORMS OF CAPITAL
- INVOLVE IN DISCUSSIONS ABOUT CRITICAL MIGRATION ISSUES
- INVOLVE IN SKILLS CERTIFICATION @ INDUSTRY LEVEL
- INTRODUCE INTERNAL TALENT MOBILITY PROGRAMS
- ADAPT PROMOTION & REWARDS PROCESSES TO ENCOURAGE TALENT MOBILITY
- SHARE SUCCESS STORIES!

To Do's For Academia

- BRING ACADEMIA CLOSER TO REAL WORLD
- PULL VOCATIONS INTO ACADEMIC WORLD
- INTEGRATE CULTURAL AWARENESS INTO CURRICULA
- HARMONIZE QUALIFICATION STANDARDS
- SHARE BEST PRACTICES OF 'FOR-PROFIT' SCHOOLS WITH 'NON-PROFIT' ACADEMIA



Elie Wiesel, Andrew W Mellon Professor in the Humanities, Boston University, USA, at the “Talent Mobility” session in Davos



Participants at the “Talent Mobility” session in Davos during breakout groups

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9. Appendix

Brief Outline of International Migration History

The Long-term View

Despite the widespread perception that international migration is associated with the rise of globalization and trade in the late 20th century, large-scale, long-distance movements were prevalent in the past. At the peak of Iberian rule in the Americas, more than half a million Spaniards and Portuguese and about 700,000 British subjects went to the colonies in the Americas. Through the brutal use of force, 11-12 million Africans were sent as slaves across the Atlantic between the 15th and late 19th centuries. Between 1842 and 1900, some 2.3 million Chinese and 1.3 million Indians travelled as contract labourers to South-East Asia, Africa and North America. At the close of the 19th century, the fraction of foreign-born residents in many countries was higher than today.

Population movements have played a vital role in the structural transformation of economies throughout history, thereby contributing greatly to development. The British Industrial Revolution both generated and was fuelled by rapid urban growth, driven mainly by movement from the countryside

By 1900, more than a million people were moving out of Europe each year, spurred by the search for better conditions in the face of hunger and poverty at home. The size of these flows is staggering by contemporary standards. At its peak in the 19th century, total emigrants over a decade accounted for 14% of the Irish population, 1 in 10 Norwegians, and 7% of the populations of both Sweden and the United Kingdom. In contrast, the number of *lifetime* emigrants from developing countries today is less

than 3% of the total population of these countries. Workers moved from low-wage, labour-abundant regions to high-wage, labour-scarce regions. This contributed to a significant economic convergence: between the 1850s and World War I, real wages in Sweden rose from 24% to 58% of those of the United States, while, over the same period, Irish wages rose from 61% to 92% of those in the United Kingdom.

Remittances and return migration were also very important in the past. It is estimated that the average British remitter in the United States in 1910 sent up to one-fifth of his income home, and that about one-quarter of European migration to the United States around that time was financed through remittances from those already there. Return migration was often the norm, with estimated rates of return from the United States ranging as high as 69% for Bulgaria, Serbia and Montenegro and 58% for Italy. These population movements were enabled by a policy stance that was not only receptive to migration but in many cases actively encouraged it. One key distinction between the pre-World War I period and today lies in the attitudes of destination governments. While anti-immigrant sentiment could run high and often drove the erection of barriers to specific kinds of movement, the prevailing view among governments was that movement was to be expected and was ultimately beneficial to both origin and destination societies.

Source: UN, Human Development Report (2009), Overcoming Barriers: Human Mobility and Development

The Labour Migration Situation until the Mid-1990s

Perspective of OECD Countries

In speaking about international migration, it is customary to distinguish between the so-called “settlement countries” and the rest of the OECD countries. The settlement countries are Australia, Canada, New Zealand and the United States, namely the countries that were essentially established through migration from other continents, especially Europe, over the past few centuries.

Access to nationality or citizenship is relatively easy and generally obtainable after no more than five years of residence. The objective of immigration is considered to be permanent settlement and this is the view conveyed to persons applying for immigration. These countries also have temporary labour migration regimes to satisfy immediate and/or temporary labour needs, for which permanent residence permits are inappropriate or for which the longer processing times associated with them pose a problem.

In European countries, Japan and South Korea but also the United States, labour migrants traditionally have only been admitted if they have a prior job offer; they are almost always granted permits of limited duration, the exception being those admitted under the United States employment preferences.

The settlement countries, with the exception of the United States, have had and continue to have extensive proactive permanent labour migration programmes, whose levels are fixed by ministerial decree each year. The levels are not caps but target levels and the objective is to attain the targets, that is, to admit the number of immigrants announced as the target.

The settlement countries continued to admit labour migrants throughout the 1970s and 1980s, while decreasing the numbers during economic downturns, a policy abandoned by one of them, namely Canada in 1990. The inflows of permanent labour migrants in these countries have been steadily increasing since the early 1990s. At the same time, temporary labour migration has also been increasing, especially for certain special programmes, such as working holiday-makers, and for immediate high-skilled needs, which the permanent regime with its long delays is unable to address.

The United States also has an extensive temporary labour migration programme covering many categories, for which the visas are labelled “non-immigrant visas” and the most

prominent category of which is the H-1B highly-skilled visa, allowing for up to a six-year stay for visa-holders, which can be extended if the holder applies for permanent resident status.

The situation in Europe, Japan and South Korea is substantially different. Almost all European countries are relatively recent immigration countries (since the 1950s), the one exception being France, which has seen significant migration inflows since the 19th century. In the post-war era, many European countries, among them Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Sweden, Switzerland and the United Kingdom, had recourse to migration from countries in southern Europe, the Mediterranean rim or from former colonies to satisfy their labour needs, which were mostly for low-skilled labour, in the context of strong economic growth. Southern Europe and Ireland saw strong labour-related outflows to the countries of Western Europe, as well as to the English-speaking non-European OECD countries.

In the 1950s through the early 1970s, many workers were recruited to Europe from origin countries but some arrived themselves as tourists or visitors to find work and stay. There were considerable back-and-forth movements between the origin and destination countries at the time. This occurred without any particular policy in place to encourage returns. Following the first oil-shock in 1973, labour migration to the countries of Western Europe was essentially stopped. Many workers who were present decided to stay on and to bring in their families. Further worker entries were only allowed in special cases (high-level employees of multinationals) or in situations where there existed a clear labour market need which could be demonstrated.

Migration into European OECD countries was essentially limited to family and humanitarian movements until the latter half of the 1990s, with the exception of free movement within the European Union and of migration to Switzerland, whose labour market continued to admit workers from abroad. The mid-1990s saw labour migration, especially highly skilled, expand in the United Kingdom and Ireland, in response to strong growth. At the same time, labour migration to the countries of southern Europe developed strongly.

Source: OECD, International Migration Outlook SOPEMI 2009

Overview of Talent Mobility Framework: Key Terms and Actors

Talent Mobility is an important new aspect of talent management that has gained attention a result of demographic pressures, mostly in developed countries, increasing competition for talent in developing countries, and changing behaviour of employees towards mobility.

Talent encompasses all human capital, including individuals with low, medium and high skills. It refers to the economically active population of one country. Its meaning has evolved with the emergence of talent management as a concept in the 1990s. Starting by defining gifts possessed by few people among the elite such as Mozart's talent for music, it evolved to define workers that can be developed and trained to grow their skills.

Talent mobility refers to more than the migration of skilled people across countries. It includes mobility across non-geographical boundaries, such as across industries, workplaces, jobs and functions. Talent mobility in a broader sense may also refer to mobility between various forms of employment, such as working as an employee or as a freelancer. Talent mobility highlights an increasingly general characteristic of today's workforce: many people are more willing to change, travel, learn new skills, explore new opportunities, and adjust to changing expectations and volatile conditions in the human capital market.

For employers, there are two types of skills: generic **skills**, which can be used across large numbers of different occupations, and vocational skills, which are specific to an occupational group. The shift during the last decades from agricultural and industrial sectors to service sectors has increased employers' need for generic skills such as communication, adaptability and the ability to use computers and mainstream software.

The **highly skilled** include not only very highly educated people but also people that have specific qualifications and perform specialized occupations where particular expertise is crucial to value creation. It is important to focus on those parts of the workforce that are essential drivers of economic and social development. Therefore, it is not sufficient to understand highly skilled as a small population of top talent but also to include those who perform in a broader range to expertise and managerial positions.

A **skills gap** refers to a misalignment between an organization's needs for skills and the capabilities of its workforce. Such a gap can cause an organization to become uncompetitive. As a result of the skills gap, organizations are experiencing **talent shortages**.

Migration without Borders (MWB) refers to scenarios in which border controls are suppressed or relaxed and people are able to move freely among countries. Such scenarios usually take into account the ethical, economic and social consequences of free movement and are a challenge to conventional wisdom.

These and other related terms can be further explored in UNESCO's **People on the Move: Handbook of Selected Terms and Concepts**, (2008). Designed for the public and written in cooperation with international experts, the publication offers precise and accurate definitions relating to talent mobility.

Who Does What in Regulating Talent Mobility?

As much as talent mobility, migration policies and workforce regulations are largely covered by national law and regulation, international organizations play an important role in assessing challenges, monitoring best practices, recommending solutions and coordinating relevant policies.

The International Labour Organization (ILO)

The ILO focuses on labour migration, labour administration, labour law, industrial relations, employment policy and vocational training. The ILO produces comparative research, policy guidelines and technical assistance to help constituents:

- Integrate skills development into national and sector development strategies
- Expand access to employment-related training, in particular for underprivileged groups
- Improve the ability of public employment services to provide career guidance, especially after crises

International Organization for Migration (IOM)

Established in 1951, the IOM is the leading intergovernmental organization in the field of migration. It works closely with governmental, intergovernmental and non-governmental partners. The IOM focuses on migration and development as well as on facilitating migration and regulating migration and forced migration. It promotes international migration law, policy debate and guidance, protection of migrants' rights, migration health and the gender dimension of migration.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

UNESCO's programme on International Migration and Multicultural Policies promotes respect for the human rights of migrants, and contributes to peaceful integration of immigrants in society. This includes:

- Increasing the protection of human rights of immigrants
- Improving national policies to handle the impact of migration on society
- Promoting the value and respect of cultural diversity in multicultural societies
- Contributing to the Global Consultative Forum within the United Nations on international migration
- Contributing to the global fight against human trafficking
- Strengthening the capacity, sustainability and effectiveness of diaspora networks

Organisation for Economic Co-operation and Development (OECD)

The OECD analyses employment and unemployment trends and labour market policies linked to social policy and education. It is continually monitoring migration movements and policies in member countries and outside the OECD area. The agency also conducts in-depth analysis of migration's economic and social aspects. This includes the role of migration in alleviating labour shortages, links between migration, demography and economic growth, and the fiscal impact of migration.

European Union (EU)

The EU Pact on Immigration and Asylum is based on ten common principles articulated around prosperity, solidarity and security and covers the entire immigration environment. The 10 principles were endorsed by the EU in October 2008 and formed a framework for the Common European Policy on Immigration.

- Prosperity and Immigration: Clear rules and a level playing field; matching skills and needs; integration of immigrants through active involvement of host society and immigrants
- Solidarity and Immigration: Transparency, trust and cooperation among the member states; effective and coherent use of available means; partnership with third countries
- Security and Immigration: A visa policy that serves the interests of Europe by facilitating the entry of bona fide visitors while at the same time enhancing security; integrated border management to preserve the integrity of the Schengen area without internal border controls; zero tolerance for human trafficking; sustainable and effective return policies respecting fundamental rights

Highlights from Previous Discussions at the Forum

During the course of the last two years, the Forum arranged numerous discussions on talent shortages and talent diversity, responding to the bigger-than-ever interest in this topic.

In January 2008, **Professional Services Industry Governors** gathered in Davos to discuss the challenges of diversity and inclusion. Joined by leading faculty and Young Global Leaders, the Governors agreed that diversity should be understood broadly and not be limited mainly to gender and race. Lack of diversity among company leadership and retention of female talent were mentioned as two of the biggest challenges. Solutions for both include accountability for turnover levels and making leaders responsible for ensuring appropriate retention levels. The Governors acknowledged difficulties in moving talented personnel around the world and advised tackling the issue in 2009, after the arrival of the new US administration.

On 9 September 2008 in New York, at the dawn of the financial market crisis, chief diversity officers from various industry sectors, Young Global Leaders and faculty met to

initiate a collective action to address the challenges of diversity. The objective of this cross-industry meeting on **Bridging the Skills Gap through Diversity and Inclusion** was to identify action(s) that can make a positive impact, and to “determine if we have an appetite and vision for a collective action.”

At the **inaugural Summit on the Global Agenda** in Dubai on 7-9 November 2008, the Global Agenda Councils on the Skills Gap and on Talent and Diversity convened for the first time to set the dialogue directions, scope and objectives. Both Councils convened in Dubai again in 2009 to continue the debates on their respective issues.

At the World Economic Forum Annual Meeting 2009, a cross-industry community of various stakeholders gathered again to share positive experiences on leading organizations and developing people in times of crisis. While sharing their success stories, participants asked, **“Is crisis a threat or an opportunity for talent?”** Business, experts from academia and civil society, Young Global Leaders and policy-makers examined whether the current economic shake-up could be an opportunity to reform organizations' leadership cultures and inclusive workforce strategies.

During the Forum's Industry Partnership Strategy Meeting 2009 in New York, on 1 October 2009, participants gathered at a **Cross-Industry Summit on Talent Mobility**. The impact of talent mobility on economies and on the competitiveness of countries was explored. Participants discussed issues related to migration of highly skilled people in the context of the economic crisis and rising unemployment, also from the perspective of developing countries. Moreover, the agenda of this highly interactive workshop of peers included managing a multicultural workforce and creating organizational cultures nurturing diverse talent.

A cross-industry business community convened on the occasion of **the India Economic Summit** in New Delhi on 8-10 November 2009 to explore the talent mobility challenges in the context of the Indian economy.

Finally, the Global Agenda Councils reconvened at the **Summit on the Global Agenda 2009** in Dubai, 20-22 November to address the inefficiencies of the international cooperation systems and develop proposals for addressing the governance gaps. Three Councils addressing respectively Migration, the Skills Gaps and Talent and Diversity agreed on top priorities of fostered talent mobility for economies development.

Nearly 80 high-level personalities from business, academia, international organizations and NGOs have contributed to discussions to date and their input to the recommendations developed on the project is significant. Each of the project assumptions, findings and proposal have been often debated by prominent thought leaders and practitioners.

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Global Agenda Council on the Skills Gap: Issue Description and Members

Description of the Issue

Human capital is an indispensable driver of economies. Quality of human capital is as important as quantity of available labour. Despite increasing unemployment and the economic crisis, talent shortages widely affect organizations across most industry sectors and geographies. In the long term, satisfying demand for skills will be even more challenging, particularly in ageing economies.

Talent capable of ensuring the success of organizations in turbulent times, handling the political and social agenda and boosting science to fuel economies is a scarce resource. Moreover, it is not easily comparable across countries.

The crisis highlights imbalances on the human capital market and confronts key stakeholders with challenges that need to be overcome collectively. Availability of appropriately skilled labour will be key for a sustainable post-crisis recovery, productivity growth and competitiveness.

Dimensions

The Global Agenda Council on the Skills Gap has identified the following dimensions to address skills gaps:

Education and Training

- **Raising skills through effective education:** Education is a critical issue for every government. However the challenges are very different in developed and developing nations. How can educational systems better respond to business-driven demand for skills while contributing to countries development?

- **Improving employability:** Generic skills such as adaptability and job-specific qualifications make people suitable for employment and effective work in organizations. Large parts of the workforce are not directly employable and skills are not easily comparable across countries and industries. What systems of skills recognition and certification can increase employability of a diverse workforce?
- **Decreasing the disconnect between academia, business and government:** The mismatch between what people learn at school and what the market requires reflects a disconnect between educational institutions, governments and the business sector. How can public and private sectors be synchronized?
- **Improving access to information:** Where are the jobs? Where are the skills? Better access to this information is important for all stakeholders.
- **Migration of Workers and Movement of Jobs**
- **Talent Mobility:** An increasing demand for skills will require foreign hiring in many countries. Governments must develop an international framework for managing immigration in a manner that reflects the reality that most developed world economies will fail unless they attract talent and increase migration of skills in demand.
- **Brain Circulation:** While in some developing countries the “brain drain” is a valid concern, “brain circulation” through the return of educated and experienced talent to these countries is a positive trend. Inflow of capital from emigrants is also a source of significant economic support for developing countries.
- **Movement of Jobs:** Businesses need to consider moving jobs where talent is on a larger scale, while governments should create conditions enabling this movement. Second, talent must easily adapt across industries and professions and be prepared to lifelong learning.
- **Inclusion and Diversity:** Companies should do much more to share best practices in managing diversity and inclusiveness to allow broadening the talent pool and benefiting from the potential of diverse skills. Governments should promote inclusiveness in respective policies to mobilize and train an underprivileged workforce.

Members of the Council (As of December 2009)

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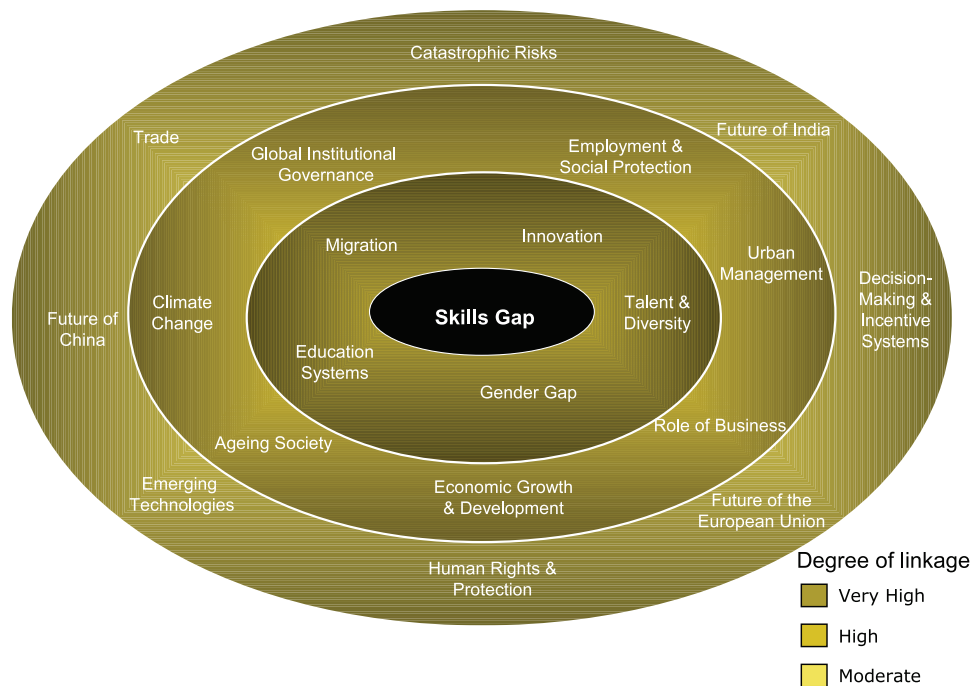
Rakesh Khurana, Professor, Harvard Business School, USA

Nguyen Thien Nhan, Deputy Prime Minister and Minister of Education and Training of Vietnam

Jim Quigley, Global Chief Executive Officer, Deloitte, USA
Paul C. Reilly, President, Raymond James Financial, USA
Jamal Rhmani, Minister of Employment and Vocational Training of Morocco
Sheryl Sandberg, Chief Operating Officer, Facebook, USA
Mahmood Sariolghalam, Professor of International Relations, National University of Iran, Islamic Republic of Iran

Dennis J. Snower, President, Kiel Institute for the World Economy, Germany
John Strackhouse, Senior Partner, Heidrick & Struggles, USA

Exhibit 23: Significance of Skills Gap to Other Issues and Topics



Source: World Economic Forum Global Agenda Council on Skills Gap

Global Agenda Council on Talent and Diversity: Issue Description and Members

Description of the Issue

In today's multicultural world, talent management goes hand-in-hand with diversity. The composition of talent must reflect the increased diversity of the marketplace. The understanding of diversity has broadened, going beyond gender and race to include profile and culture, age and disability. Moreover, there is increased awareness that diversity is perceived in various ways worldwide.

Diversity should be embedded in organizations' DNA to allow integration with stakeholders. Organizations that allow people to learn from each other and develop their full potential – from the factory floor to the boardroom – seem better equipped to face the challenges of globalization and recover faster post-crisis.

However, organizations face multiple challenges while designing modern, diverse talent strategies. And, although it could be an opportunity for long-term talent policies, the crisis may hinder the commitment to inclusion.

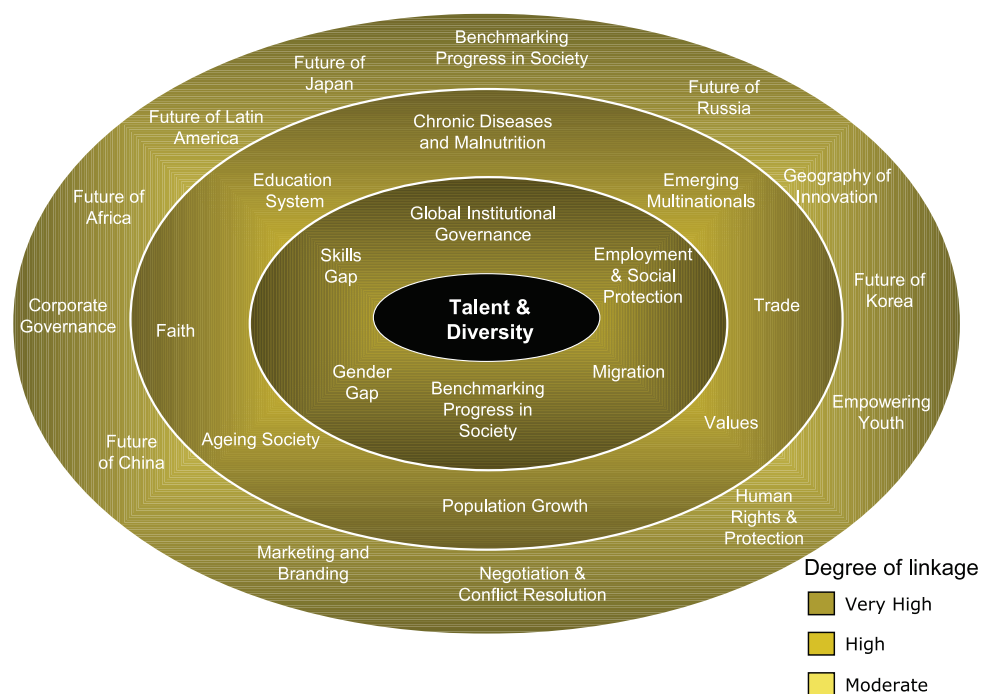
Dimensions

Diversity in business strategies: Demand for diversity and talent go hand-in-hand – from talent attraction, retention and management through corporate culture and leadership styles. How can organizations create an inclusive environment and corporate culture that allow every individual to develop his/her full potential for success?

Talent pool, talent pipelines: Focus on diversity enables tapping into the broad talent pool for the best and the brightest. Diversity efforts can only be credible if there are visible signs of success. Diversity efforts must be supported and exemplified by senior management. The leadership pipeline should include diverse people. Expectations should never be lowered in the name of diversity. How to maintain diversity from the talent pool through the talent pipelines to the top?

Crisis as an opportunity for talent: Because it has caused increased displacement and disproportions, the current economic crisis calls for rethinking of talent management. It has de-legitimized the structure of today's boards, which stand accused of group thinking. The crisis has also called into question the wisdom of individual talents as opposed to the wisdom of a diverse team. How can the crisis be used as an opportunity to invest in long-term, performance-based talent policies?

Exhibit 24: Significance of Talent and Diversity to Other Issues and Topics



Source: World Economic Forum Global Agenda Council on Talent and Diversity

Government policies: Educational and employment policies designed to ensure equal opportunity in societies and workplaces allow countries to best use their human resources and fairly distribute the benefits of a more productive economy. What is the optimal level of diversity regulations?

Non-Western understanding of diversity: Understanding of the diversity of human capital as well as perceptions of its importance for business and society varies around the globe. In Western Europe and North America, there is consensus that inclusion should be fostered. In BRIC countries, diversity is perceived differently and challenges can be different. What does diversity mean for organizations in developing countries? Does the diversity map reflect the geography of innovation?

Reinventing education for diversity: Today's multicultural world requires multicultural education and training. Schools need to teach these skills. Also, the education gap between more and less privileged groups begins early, so appropriate remedies should be promoted as well as tolerance and respect for differences. How should education systems, including business schools, evolve to prepare people for success in diverse organizations?

Members of the Council (As of December 2009)

Kurt April, Professor, University Senate Member, University of Cape Town, South Africa

Carlos Arruda, Professor of Innovation and Competitiveness and Director of International Relations, Fundação Dom Cabral, Brazil

Martha C. Artiles, Global Chief Diversity Officer, Manpower, USA

Subha Barry, Managing Director, Merrill Lynch, USA

Jaspal S. Bindra, Chief Executive Officer, Asia, Standard Chartered Bank, Hong Kong SAR

Ángel Cabrera, President, Thunderbird School of Global Management, USA

Caroline Casey, Founding Chief Executive Officer, Kanchi, Ireland

Katherine Garrett-Cox, Chief Executive Officer, Alliance Trust, United Kingdom

Peter Goerke, Member of the Group Management Board, Zurich Financial Services, Switzerland

Lord Hastings of Scarisbrick, Global Head of Citizenship and Diversity, KPMG International, United Kingdom

Harry Holzer, Professor of Public Policy, Georgetown University, USA

Tatsuya Sakamoto, Professor, Faculty of Economics, Keio University, Japan

Premkumar Seshadri, Senior Corporate Officer and President, HCL Technologies Limited, India

David A. Thomas, H. Naylor Fitzhugh Professor of Business Administration and Unit Head, Organizational Behaviour, Harvard Business School, USA

List and Definitions of Covered Industries

The list is based on the International Standard Industrial Classification of All Economic Activities, from the United Nation, Revision 3.1, (ISIC Rev. 3.1).

- Manufacturing
 - Manufacture of food products and beverages
 - Manufacture of tobacco products
 - Manufacture of textiles
 - Manufacture of wearing apparel; dressing and dyeing of fur
 - Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
 - Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
 - Manufacture of paper and paper products
 - Publishing, printing and reproduction of recorded media
 - Manufacture of coke, refined petroleum products and nuclear fuel
 - Manufacture of chemicals and chemical products
 - Manufacture of rubber and plastics products
 - Manufacture of other non-metallic mineral products
 - Manufacture of basic metals
 - Manufacture of fabricated metal products, except machinery and equipment
 - Manufacture of machinery and equipment n.e.c.
 - Manufacture of office, accounting and computing machinery
 - Manufacture of electrical machinery and apparatus n.e.c.
 - Manufacture of radio, television and communication equipment and apparatus
 - Manufacture of medical, precision and optical instruments, watches and clocks
 - Manufacture of motor vehicles, trailers and semi-trailers
 - Manufacture of other transport equipment
 - Manufacture of furniture; manufacturing n.e.c. Recycling
- Utilities (electricity, gas and water supply)
 - Electricity, gas, steam and hot water supply
 - Collection, purification and distribution of water
- Engineering and Construction
- Retail and Wholesale (wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods)
 - Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
 - Wholesale trade and commission trade, except of motor vehicles and motorcycles
 - Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods
- Leisure (hotels and restaurants)
- Transport and Telecommunication (transport, storage and communications)
 - Land transport; transport via pipelines
 - Water transport
 - Air transport
 - Supporting and auxiliary transport activities; activities of travel agencies
 - Post and telecommunications

- Financial Services
 - Financial intermediation, except insurance and pension funding
 - Insurance and pension funding, except compulsory social security
 - Activities auxiliary to financial intermediation
- IT, Business Services and Real Estate
 - Real estate activities
 - Renting of machinery and equipment without operator and of personal and household goods
 - Computer and related activities
 - Research and development
 - Other business activities
- Public administration (public administration and defence; compulsory social security)
- Education
- Healthcare (health and social work)
- Other

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