The Quest for Foreign Skills
- International Recruitment Strategies in the Asia-Pacific Region

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Introduction

Many countries depend on immigrant labor forces to offset the impact of population aging, obtain new knowledge and foreign talent, to promote entrepreneurship and to expand into foreign markets. For some governments the search for foreign talent has become a top priority as they recognize that relatively small differences in talent can lead to large differences in economic outcomes. Developed countries facing demands for talent that exceed what they produce rely increasingly on foreign-born and foreign-educated workers to fill the gaps. Populous emerging market economies like India and China have increased their talent pools; as their own demands grow the global competition for talent will intensify. How are governments responding to mounting competition for highly skilled workers? What are the determinants and consequences of these recruitment programs – both for receiving and sending countries?

This chapter focuses on the immigration and recruitment strategies of Australia, Canada, Hong Kong SAR, Japan, Singapore and the United States. In the next section we establish the historical context and our analytical framework. In the third section we analyze four factors driving the global competition for talent and in the fourth section discuss the strategic responses in the selected economies. In the fifth section we analyze the consequences of these strategies in terms of the effects on receiving and sending countries. The final section concludes.

Background

In the late nineteenth and early twentieth century prior to World War I, millions of people left their homes to cross the Atlantic, Pacific and Indian Oceans or moved within continents in search of better economic opportunities. A second wave occurred after 1945 as post-war economic growth drove many receiving countries to relax immigration policies and as efforts were made to reunify families torn apart by war. Since the 1990s forces of globalization (declining barriers to trade and investment, the impact of information and communications technologies on cross-border transactions) have had major impacts on labor markets. Advanced countries eased immigration restrictions in response to rising demands for highly educated and skilled workers. Since the 2008 financial crisis, however, slow recovery in receiving countries like the United States is likely to cause further policy changes as policy makers reconsider their recruitment strategies.

Significantly, the absence of international agreements to govern migration has created a vacuum that has been filled by ad hoc bilateral agreements. The General Agreement on Trade in Services (GATS) attempted to ease the way for temporary service workers but national policies are the main determinants of talent recruitment strategies. Four approaches can be distinguished: a supply-demand approach, the use of permanent and temporary policies, relying on international students as potential sources of human capital and leveraging diasporas.

- Supply-demand approaches: supply-driven approaches rely on human capital models and usually incorporate points awarded for desirable attributes and qualifications of immigrants. Demand-driven approaches reflect employers' demands while governments perform a regulatory role.

- National migration systems are also characterized as temporary or permanent streams. Governments experiment with ways to give temporary migrants permanent status. The purpose is to address problems of temporary unemployment and deskilling among new migrants and to provide stability and options for temporary skilled workers.

- Recruiting foreign students: Despite their qualifications, immigrants may face information and other barriers such as credential recognition. International students, especially in science and technology, provide an alternative source of highly skilled workers with acceptable credentials. This strategy has long been used in the United States and more recently in other economies.

[Insert Figure 1 here]

- Leveraging Diasporas: Diaspora populations traditionally have been seen as sources of remittances. More recently their role has expanded to include foreign direct investment, technology transfers and philanthropy and as sources of human capital. Taiwan was one of the first economies actively to court its diaspora located in Silicon Valley. China has invested heavily in research institutions as 'incubators' to attract skilled overseas Chinese. Canada, Australia and New Zealand are developing strategies to harness the skills and connections of their diasporas.

Thus, both sending and receiving countries are using a variety of regimes to regulate – and harness the benefits of – international migration. This introductory summary shows a trend toward hybrid regimes that combine both supply and demand factors, that experiment with two-step migration to ease the transition of temporary migrants to permanent status, competition for international students and rising recognition of the economic value to be extracted from their diasporas. This typology provides a useful context for our analysis of recruitment strategies in the fourth section. First, however, we examine the state of global competition for these skills.

The Global Competition for Skills

What are the reasons for the variety of recruitment strategies? Competition for skills is arguably the main reason. As other papers in this volume illustrate, diffusing technologies and knowledge

as well as labor mobility can contribute to economic development. The search for talent has become a major concern for Asian business leaders. In 2011, it ranked among the top 10 challenges for CEOs in Asia (Conference Board of Canada, 2011) reflecting the changing business landscape and fluctuations in supply of talent, both within regions and globally.

Many governments have woken up to the fact that immigration policies affect future economic prosperity. Four factors shape this competition: changes in demographic structures with population aging, so-called "brain circulation", the knowledge-intensive economy, and growing demand for talent in emerging markets.

Demographic Change

As fertility declines, life expectancies rise and populations age, an increasing number of countries face declining work forces and potential labor shortages at the same time as the number of dependents (people over age 65 and under age 14) is rising (Figure 2). As other papers in this volume show the demographic transition has economic and fiscal implications for emerging economies. Governments are aware of these challenges and are boosting efforts to attract scientists, engineers, other high-level management, and technical workers. Countries like Japan and South Korea which traditionally have not been open to foreign immigration, face particular challenges.

[Insert Figure 2 here]

Brain Circulation

Outward movements of the highly skilled used to be described as the "brain drain." More recently this term has been replaced by the term "brain circulation". Migration is no longer a simple one-off event. Labor circulates globally. People no longer permanently leave their home country to take up residence in another; they study abroad, work in a different country, and often return to their home countries. Many also reside in two or more countries. Policy objectives are also changing "from preventing the brain drain to making the most of the brain circulation" (Clemens and McKenzie, 2009; Guest, 2011; The Royal Society, 2011). Not only do receiving countries benefit from specialized expatriate workers, but emigrants' skills, networks and knowledge generate important pay offs in their home countries.

Countries also benefit from the movement of personnel and skilled workers returning to their home counties with skills and experience acquired overseas. Even if reverse flows seem to be smaller than initial outward flows, countries can benefit from returning workers. For example, the Chinese government now has schemes to encourage the return of the million or so who have studied abroad between 1978 and 2006; the number of returnees has increased sharply (Zheng, 2006). A recent survey reported that 23% of Chinese returnees decided to return to China due to various government incentives (Wadhwa et al, 2011; Zheng, 2006). Fast growth, movement up the value chain and improved working conditions are part of the attraction to recent graduates and experienced professionals.

The Knowledge-intensive Economy

Most advanced economies now rely heavily on knowledge-intensive innovation as a source of growth which in turn drives both the supply of and demand for highly skilled workers who are able to "access, understand and use knowledge for technological and economic development" (OECD, 2009). Many countries have shifted their emphasis from recruiting migrants to fill low-skilled jobs or to recruit them on the basis of their family ties to attracting highly skilled workers independently of their race and country of origin (Chiswick, 2011). In addition, research has shown that FDI, investment in R&D, and skilled professionals are highly connected, where an increase or a change of direction in the flow of one necessarily impacts the other (Head and Ries, 2004). The growth and spread of multinational companies has also encouraged global labor mobility.

Demand from Emerging Markets

Highly-skilled labor such as STEM (Science, Technology, Engineer, and Mathematics) workers are now the "wheel" of the global economy and critical to emerging countries' economic growth. China and India are now seeking more skilled workers and intensifying global competitive pressures. It has been argued the reverse brain drain of talented workers returning to their home countries has not been sufficient to offset the rising need for skilled workers in these economies implying growing shortages of highly-skilled labor (Craig et al, 2011; Khallash, 2012; Mercer, 2011).

Strategic Responses to the Competition

The strategic responses to this intensifying competition can be seen at national levels and in terms of corporate strategies. In this section we analyze the recruitment strategies employed by governments in Canada, the U. S., Australia, Japan, Singapore and Hong Kong. Though policies and programs vary we include combined supply and demand immigration systems, experiments with two-step immigration, increasing competition for international students, and Diaspora strategies.

Canada

Canada is an immigrant country. The 2006 Census identified 20 percent of the Canadian population as born abroad. Net immigration to Canada contributes over 50 percent of annual population growth (Chui, Maheux and Tran, 2008). The introduction of a system of points awarded for specific attribute in 1967 marked a critical moment in Canada's immigration history, when a policy that previously favored the recruitment of largely non-skilled labor shifted to one that emphasized skilled labor, and one that formerly used race as a principal criterion changed to one that relied on education, language and long-term adaptability for the basis of permanent residency status.

The point system has shifted to reflect the way immigration has been used to fill labor market gaps. Between 1976 and 1988, the policy was one of tap-on tap-off to tie that largely tied the inflows to the business cycle (DeVoretz, 2006). In the mid-1990s, the weight accorded occupational needs was reduced and replaced by a human capital model in which greater emphasis was placed on a visa applicant's long-term adaptability.

Shift to a Demand-Driven Approach

The point system based on supply-driven approach has remained the core evaluation method used to assess independent/economic class migrants. But since 2008, the Government of Canada has made changes to the Immigration and Refugee Protection Act to meet the country's changing labor market needs reflecting employer demands. In 2008, the Ministry of Citizenship Immigration Canada (CIC) announced an Action Plan for Faster Immigration to cut the backlog of applications and prioritize applications under the Federal Skilled Worker Program (Justus, 2011).

Easing the Transition from Temporary immigrant to Permanent Resident

The Canadian Experience Class (CEC) program facilitates applications for permanent resident status by temporary foreign workers and foreign students graduating from Canadian universities. Commensurate with efforts to better utilize the skills of foreign workers, the CEC category takes advantage of individuals who had lived, worked and studied in Canada.

Competing for International Students

In recent years, Canada, like other OECD countries, has drawn on its pool of international students as a source of highly skilled workers. Between 2001 and 2010, the number of international students in Canada at all levels increased by 60% from 136,495 to 218,161, of which 45% are from China, South Korea and India (CIC, 2011). Having been trained at a Canadian institution, having acquired a strong foundation in one of Canada's two official languages, and having had some Canadian work experience, international students were more likely than newer immigrants to integrate successfully into the labor market. They supply human capital by becoming permanent residents or by taking advantage of policies permitting them to work while students.

A Diaspora Strategy

The discussion of Canada's expatriate population has historically focused on the movement of skilled workers within North America under NAFTA's TN visa status. After Hong Kong's repatriation to China in 1997, Canada experienced a large outflow of Chinese immigrants with as many as 300 thousand Canadian citizens now resident in Hong Kong (Zhang and DeGolyer, 2011).

The Asia Pacific Foundation of Canada's (APFC) Canadians Abroad project was a path breaking study which painted the outlines of Canada's Diaspora. Canada's expatriate population is nearly three million, 9% of the country's total population, and its demography and skill composition are

particularly notable (APFC, 2011). Naturalized Canadian citizens and those between the ages of 21 and 30 have much higher exit rates than those of Canadian-born citizens and other age groups. Since these are economically-active and highly educated the report recommended diaspora strategy. Today the Global Citizens Initiative seeks to improve coordination within the government to better align policies relevant to Canadians living abroad (DFAIT, 2010). Provincial strategies are also being adopted.

United States

Immigration is a highly contentious issue in U.S. politics. As a result there have been relatively few changes to U.S. policy for attracting highly skilled workers. Authorities have generally had to tweak existing policies rather than introduce new ones.

The U.S. predominantly opts to grant Lawful Permanent Resident Status (LPR) or what is commonly referred to as a green card for family reunification purposes. Employment-based admissions, including family members of primary applicants, account for only one seventh] of the roughly one million LPRs issued each year. While many economists and politicians favor the granting of more LPRs to individuals for employment purposes (Peri, 2009), the emphasis on family reunification has remained a constant since the 1960s.

Demand-Driven Approach

In recent years, over 90% of individuals granted LPR for employment reasons were already living in the country which suggests a reliance on non-immigrant visa categories for admitting skilled immigrants. Some of these visa categories include L-1 visas for inter-company transfers of managers or specialists and O-1 visas, which are granted to a select group of exceptional workers.

More visas are issued annually than any other class of nonimmigrant work visa. While visas are capped at 65,000 each year, approximately 130,000 H1B visas were issued annually between 2001 and 2010.[1]

Transition from Temporary to Permanent Resident

The H1B visa, like the L and O visas, is dual intent which means that the worker does not have to prove an intention to leave the U.S. when the visa expires. The foreign worker can remain in the U.S. to work for the employer for up to three years, and has the opportunity to extend it to six years. An employer can then sponsor the worker as a LPR.

The U.S. government has focused on amending quotas for H1B visas as the primary mechanism for increasing the number of temporary, highly-skilled immigrants. A number of these amendments have focused on increasing the number of foreign students that can remain in the U.S. after graduation. In 2004, the U.S. Congress passed a bill allowing an additional 20,000 visas to be issued to graduates with M.A. and PhD degrees from U.S. institutions.

Competing for International Students

F-1 visas are issued to individuals pursuing academic programs or language training in the U.S. They are not work visas but are relevant to this discussion of obtaining global talent.

Between 2001 and 2010, 283,000 F-1 visas on average were issued each year.[2] Student visas are not dual intent. Students who are admitted to a U.S. institution must prove that they have sufficient funds to complete their studies and that they intend to return to their country of origin after graduation. Nevertheless, students on F-1 visas can transfer directly to an H1B visa if they are sponsored by an employer.

There are no caps on the number of student visas issued each year. The overall number of foreign students studying in the U.S. has increased annually for the last five years, according to the Institute of International Education's Open Doors report (2011). In 2010/11, there were 723,277 foreign students studying in the U.S., 32 percent more than were studying in the U.S. a decade earlier. The impact of 9/11 on the number of students studying in the U.S. has been much debated. The number of F-1 visa applications decreased after 2001 before rising again in 2005. Visa rejection rates also increased after 2001, but declined again in 2003 (Lowell et al, 2007).

Diaspora Strategy

More than five million American citizens live abroad. The main relevant policy is tax policy in that those living abroad must file annual tax returns on their global income (unless subject to negotiated reductions and exemptions).

Australia

Australia sees immigration as contributing to nation-building. Like other settler states, its early immigration policy selectively recruited immigrants from the United Kingdom. In the post-war period the government abandoned its race-based immigration policy and opened its doors to non-English speaking countries. Australia's policies have since evolved as a selective strategy to strengthen its knowledge economy and to enable the country to compete globally. While Australia must deal with population aging it also experiences high rates of out-migration, mainly of young, highly-educated and skilled workers, whose number increased by 1.2% between 2010 and 2011 along (ADIC, 2012). Recruitment of highly skilled workers from abroad, therefore, is a key component of the country's immigration policy.

Hybrid Economic Migration System

Since the mid 1980s, the government has relied on a hybrid system of permanent and temporary migration schemes (Cully, 2011). Its skilled stream of visa applicants is based on a point system, in which applicants can apply independently through the General Skilled Migration Program. Since 1996 the immigration system has shifted toward a demand-driven model, in which points are weighted in favor of applicants with pre-arranged employment and in high-demand occupations. The Skilled Occupation List is updated twice a year to reflect labor market conditions. The points system was reviewed in 2009 due to concerns that the occupations list did not address labor demand. Five occupations accounted for half of the visas granted, causing labor

market imbalances and difficulties with integration (Hawthorne, 2010). These problems led to the elimination of the List and replaced by a temporary immigration scheme and employer nomination stream.

Transition from Temporary to Permanent Resident

A two-step process was incorporated into the points test as a way to reduce the backlog of applications. Rather than granting a permanent visa based on a pass mark, applicants were invited to apply for a skilled immigration visa. The intent was to balance the volume of skilled applicants with the allotment of visas.

The Business Long Stay visa is the principal mechanism for employers to sponsor foreign skilled workers and is valid for four years. The number granted between 2010 and 2011 increased by 32.5 percent (ADIC, 2012) and is a common pathway for skilled immigrants to make the transition from temporary to permanent resident status. An important draw for international students has been the flexible policies that facilitate the transition from temporary to permanent status. In light of their ages and education they are more likely to secure a sufficient number of points to qualify.

Competing for International Students

Australia is a leading destination for international students. Strategically located in the Asia Pacific region, the government has positioned Australian higher education institutions as the primary destination of choice among Asian students. The two largest source countries are China and India. There have also been significant pay-offs. Education exports have become Australia's third-largest source of export income (Douglass and Edlestein, 2009) and foreign students in 2002 accounted for over half of Australia's skilled immigrant applications (Hawthorne, 2008).

Diaspora Strategy

Australia struggles with high rates of emigration. 2010 marked the sixteenth year that the number of Australians leaving the country permanently had increased. By 2001 the country's diaspora population was estimated at one million, expatriates that are young, well-educated, highly skilled and active in the labor force. Nearly 90 per cent of those surveyed worked in professions and a high percentage had postgraduate degrees (Hugo et al., 2003). Capitalizing on the diaspora's connections, skills and capital has been primarily led by civil society groups made up of overseas professionals such as Advance Australia and the Southern Cross Group. These groups have facilitated networking between Australian professionals and businesses and expatriates abroad as well as providing information and tools for those wishing to return to Australia.

Japan

Historically, Japan has been a relatively closed and homogenous society, consistently ranking near the bottom of the list on percentage of population born in foreign countries (Harden, 2009). The 1952 Immigration Control and Refugee Recognition Act is the foundation for immigration policy in post-war Japan. Although modeled on the American system, the Act was not designed

to promote the permanent settlement of foreigners nor did it facilitate the acquisition by foreigners of Japanese nationality. Despite this, the number of foreign nationals entering Japan has increased dramatically, rising from 18,000 in 1950 to about 9.44 million in 2010. Most are from Asia (Immigration Bureau of Japan, 2011).

The Immigration Control Act was amended in 1989 to control the growing number of illegal immigrants since only foreign workers with recognized skills or training are permitted to work in Japan. But since many entered in response to labor market demand the number of job categories eligible for foreign workers has expanded (but the ban remains on hiring unskilled foreign workers). Exceptions are allowed for trainees and migrants of Japanese descent (*Nikkeijin*)[3].

Points-based System

Japan's New Growth Strategy adopted in 2010 aims to revitalize the Japanese economy. Part of the strategy is to allow a points-based preferential system for highly skilled foreign professionals with the goal of attracting highly skilled and qualified foreign professionals who could contribute to Japan's economic growth. Their activities are classified into three categories: (1) academic research; (2) advanced specialized/technical; and (3) business management.

Easy Restrictions of Temporary Visa

With a rapidly-aging population there are now concerns about accepting foreign medical and nursing practitioners. Foreign medical services practitioners, despite holding government-issued licenses, are restricted to work for 4-6 year periods depending on the occupation. These restrictions were eliminated in November 2010 for dentists, nurses and assistant nurses. Foreign entrepreneurs and business people wishing to open job-creating businesses were also to be granted visas.

Competing for International Students

Japan is also tapping foreign students by admitting individuals with Japanese education who are interested in working after graduation. In March 2010, the adoption of the fourth Basic Plan for Immigration Control will increase the number of foreign students allowed entry to Japan to a target of 300 thousand. Foreign students with special expertise may also apply for work visas.

Diaspora Strategy

The 1990 revision of Japan's laws also introduced the *Nikkeijin* visa, allowing those of Japanese descent to stay and apply for unlimited work permits, there by accessing an attractive new source of workers. The largest group is the 300 thousand Brazilian *Nikkeijin* who work for the large Japanese automakers and industrial groups. These workers have taken over Japan's "3K" jobs ones that are kiken (dangerous), kitsui (tough) or kitanai (dirty). *Nikkeijin* are the only foreign workers legally allowed to do so.

Hong Kong SAR

Hong Kong's governmental-led immigration policies largely revolve around attracting highly skilled workers and retaining foreign students. New measures implemented since 2003 have replaced previous immigration schemes and mainly offer two unique immigration schemes designed to facilitate the entry of highly skilled workers.

Demand-Driven Approach

One scheme is the Admission of Mainland Talents Professionals which attracts qualified professionals from mainland China to meet Hong Kong's manpower needs and enhance competitiveness. The program was designed to attract mainland Chinese exclusively to fill jobs that required skilled labor that was not available in Hong Kong. Visa applicants must have a confirmed offer of employment with a remuneration package in line with prevailing market rates in Hong Kong; and entry visas will be granted to the employer of the successful applicant. Successful applicants may also apply to bring their spouse and unmarried dependent children under the age of 18 as dependents. A 12-month visa is usually awarded but extensions can be granted if the candidate continues to meet the eligibility criteria. As of March 31, 2010, 34, 967 individuals were admitted under the scheme. In 2009-2010, 6,718 visas were granted, marking a 61% increase since 2005-2006 (HKID, 2008a).

Another is the 2006 Quality Migrant Admission Scheme (QMAS) which attracts a thousand highly skilled professionals a year and admits them as residents without the prior offer of local employment (a key feature of the program). The visa is valid for an initial twelve month period and can be renewed if the applicant can prove he or she has secured a job. Selection is by points. In 2008, an age ceiling restriction was increased and the general points test relaxed. In 2009-2010 514 visas were granted, marking a 245% increase from 2006-2007 (HKID, 2008b).

Competing for International Students

Since 2004 Hong Kong has pursued a strategy to become a regional education hub. Educational services were selected in 2009 as one of the six prioritized industries identified as crucial to the economy. The program began in 2004 with an internship program in innovation and technology aimed at science and engineering graduates to staff funded research and development projects. By 2012, 761 internships had been approved.

Other programs such as the Non-local Graduates scheme aim to retain undergraduate and graduate international students. Students must submit their application within six months of graduation to be eligible. As of March 31, 2010, 6,522 non-local graduates were approved to work in Hong Kong under this arrangement. See data.

In order to attract the most brilliant students from around the world to pursue doctoral degrees in Hong Kong, the Hong Kong PhD Fellowship Scheme (HKPFS) was launched in 2009 and in 2012/2013, 200 PhD fellowships have been awarded (Hong Kong University Grant Committee, 2012).

Singapore

Singapore is very dependent on foreign workers which have accounted for a third of the work force in 2011. Since the late 1990s Singapore has aimed to attract foreign manpower to overcome the limits of the island state's limited local resources.

Demand-Driven Approach

Over the years the Singapore government has developed differentiated policies to regulate the flow of skilled and unskilled foreign workers.

The foreign work force is categorized into foreign workers and foreign talent. Foreign workers are the unskilled labor force who must have work permits, are expected to return home and are prohibited from bringing dependents. Employers face hiring restrictions and industry quotas are established. Foreign talent consists of skilled employees with professional or university degrees. Restrictions are far fewer, permanent residence is encouraged and citizenship allowed after two years of residence.

Singapore's Employment Act provides for a strictly managed work permit system for skilled and unskilled workers. It specifies clear responsibilities of employers. But it is also structured to attract and retain foreign talent. Foreigners receive Employment Passes subject to professional qualifications and salary range and may qualify for Personalized Passes which allow latitude when they are unemployed or between jobs. Skilled foreigners are also eligible for Permanent Residency.

Singapore has also implemented schemes which provide tax reductions and concessions to foreign talent. And it works with industry groups to develop a Strategic Skills List of occupations in most demand which is frequently updated.

Competing for International Students

Targeting students is an integral part of Singapore's recruitment strategy. The postgraduate education and research system has been expanded and recruitment offices set up abroad. Since 2002 international student enrollment has risen from less than 50 thousand to more than 80 thousand. Singapore's target for 2015 is 150 thousand (Becker and Kolster, 2012). In the effort to become an international education hub the Global School house initiative was also launched in 2002 with aim of developing "a vibrant community of tertiary, pre-tertiary and corporate training institutions to make the city-state a global talent hub" (Singapore Economic Development Board, 2011). Singapore has also articulated the goal of become the "Boston of the East" and to transform Singapore into a global innovation hub with ten world-class universities. Sixteen foreign universities have locations in Singapore. The research hub objective has also been furthered by investments in Biopolis, the life-sciences hub known as Technopole, and Fusionopolis, a physical sciences and engineering hub.

Diaspora Strategy

Contact Singapore is an initiative to attract global talent and make it relatively easy to look for work, do business and invest in Singapore. With offices in the Asia Pacific, Europe and North America, Contact Singapore links Singapore-based companies with foreign talent and provides updates on career opportunities and industry developments in Singapore. The Prime Minister's Overseas Singaporean Unit (OSU) was launched in 2006 to reach out to the diaspora and facilitate their return.

A summary of international comparison of the recruitment strategies for temporary and permanent talent in the countries discussed above is provided in Table 1.

[Insert Table 1 here]

Firm Strategies

Corporations, which increasingly operate on a global scale, also play significant roles in recruiting foreign skilled workers to meet their own requirements. Four recruitment strategies are commonly found:

1. Local hires: Businesses can recruit both native and foreign-born workers (such as international students or new immigrants looking to change employers) in local labour markets by using standard recruitment techniques.
2. Foreign hires: Intra-company transfers bring talent through temporary, provisional or permanent immigration permits. Two-step immigration processes are also commonly used by in-country affiliates.
3. Locating abroad: By locating affiliates within industrial clusters, firms access talented individuals.
4. Accessing global talent directly in developed-country operations: Corporations can bypass government immigration systems altogether and tap talent by outsourcing and off-shoring a wide range of tasks to workers abroad, particularly if this leads to cutting costs without loss in either quality or productivity. (Papademetriou, Somerville and Tanaka, 2008)

To see how such strategies work, a short case study of measures employed by Canadian employees provides an illustration:

- Use of contests: To attract clean-technology innovators to the province of Nova Scotia, Innovacorp, a venture capital state-owned corporation ran a competition with a grand prize of $100,000. Although a local company won the contest, the competition created links with global innovators, including a Dutch company now negotiating a move to the province.
- Job fairs: The government of Saskatchewan province sponsored a contingent of immigration specialists and employers to visit Ireland to help recruit highly skilled workers. The team

attended job fairs in Dublin and Cork and at last count, employers had extended offers for 282 positions.

- Overseas recruitment: In 2011, Winkler, a city in the province of Manitoba, set up an office in Berlin to interview potential immigrants interested in setting up small businesses, but who had no personal contacts in the province and were not able to make exploratory visits. They interviewed applicants from more than ten countries from as far away as Latvia and Kazakhstan. The city of 11,000 is expecting the first wave from that recruitment drive to arrive in the summer of 2012.
- Supportive networking: The Professional Immigrant Networks (PINs) website[4] is designed to create connections between immigrants, employers and community agencies, such as the Chinese Professionals Association of Canada or the Latin American MBA Alumni Network. The website launched on Feb. 9, 2012 in association with the Toronto Region Immigrant Employment Council.
- Promoting Canada's potential: C100[5] brings successful Canadian expatriates together with IT and start-up professionals. This non-profit, member-driven organization puts Canadian ingenuity on display at conferences and events, exposing tech entrepreneurs to the burgeoning talent and business potential in Canada (The Globe and Mail, May 4, 2012).

The Consequences of Competition

These national and firm responses to the competition for global talent suggest a number of global and national implications, both for sending and receiving countries.

The global implications include:

- The growing scale of international migration: By 2010, the estimated number of international migrants worldwide reached close to 215 million, a 20% increase over the past 10 years or 37% over twenty years. Today more than 3% of the world's population lives outside the country of birth (Table 2).

[Insert Table 2 here]

- Mobility of Human Capital: A significant number of global migrants are in the highly-skilled occupations listed earlier. A more complete picture of the global movements of these people is still lacking but recent efforts by scholars and international organizations provide evidence that today's migration patterns are about the mobility of the highly-skilled. The less-skilled are less likely to move across national borders (see Figure 3). Similarly, the highly skilled constitute growing shares of the international migration stocks and flows (see Table 3).

[Insert Figure 3 here]

[Insert Table 3 here]

- The shift towards temporary migration: Admissions to receiving countries of the highly-skilled is either on a permanent basis (as immigrants) or on a temporary one (as foreign workers or students). Traditional receiving countries (Australia, Canada, and New Zealand) tend to allow permanent entry while skill shortages seem to be the reason for temporary entries because they are more flexible in the face of labour market needs.

- The changing direction of mobility: The largest flows of highly-skilled labor occur between and among developed countries but the largest migratory flows are sent from developing to high-income countries (Table 4). With the shift in economic activity to Asian and other emerging economies there are two implications for the mobility of skilled workers. Shifting demand patterns away from manufacturing and towards technology-driven sectors has led to increasing demand for scientific, technical, engineering & high-level management workers in all countries and increased their mobility. But the advanced country share of these workers is declining as emerging economies also become magnets (Skeldon, 2011).

[Insert Table 4 here]

Beyond these global implications there are further implications for receiving and sending countries which include both benefits and costs.

- Benefits to receiving countries:

Receiving countries are better off if skilled workers not only enter, but stay, in the country. The rationale is that the marginal immigrant raises the after-tax wage of local workers, in other words, if there are externalities generated by immigration. Local populations may simply derive more utility from living next to, working beside, or sharing their child's classroom with the children of skilled immigrants. Skilled immigrants also generate fiscal externalities. An additional highly-skilled worker who earns more than an average local can contribute more than proportionally to finance public expenditures via a progressive income tax. In addition skilled immigrants are less likely to receive income support from the government; they were typically educated at another country's expense; and they tend to be relatively young (which tends to subsidize the public pension system). Finally, an additional highly skilled worker creates production externalities due to agglomeration effects where an additional productive worker more-than-proportionally contributes to increasing average productivity of the whole industry (HRSDC – IC – SSHRC Partnership, 2008).

- Costs to receiving countries.

One cost is the complex problem of foreign credential recognition. In supply-driven selection regimes, qualified individuals are allowed permanent residence who may lack the promise of a job, but who possess the qualifications to integrate into the labour market. In contrast, the demand-driven regime responds to requests from employers and guarantees the flow of high skilled workers. Research on the labour-market outcomes for highly skilled immigrants chosen through points - systems and/or entering through the family and refugee/asylum immigration streams indicates that they tend to have higher unemployment rates and lower earnings compared

to similarly qualified natives. Failure to recognize credentials has substantial economic costs – for example, Canadian estimates suggest that failure to recognize foreign credentials of skilled immigrants costs the economy C$3 billion annually (Reitz, 2011).

A second issue is the lack of "retention" due to the uncertainty of transition from temporary to permanent status. For example, the United States predominantly uses non-immigrant visas to bring highly skilled talent into the country. In general, it is while holding certain classes of these non-immigrant visas that highly skilled individuals are ultimately sponsored by an employer to become LPR. Many argue that this transition from temporary to permanent status is too uncertain, resulting in a loss of talented individuals who could fill long-term labour shortages and generate economic growth. Others argue that tying temporary visa holders to an employer increases opportunities for exploiting foreign workers. Employer-based temporary visas may depress wages for all workers in industries with large numbers of foreign workers, who are not permitted to seek higher-paying job offers. Some proposed solutions to the problem include increasing the number of economic-based LPRs granted annually or creating a "provisional visa" that would allow holders to seek new employment after one year (Papademetriou et al, 2009).

- Sending Country costs and benefits

The impacts of emigration on sending countries are a matter of some controversy. The traditional view is that emigration of skilled workers is harmful to sending countries. In 2005, for example, as many as 22.5% of Filipinos working abroad were skilled, i.e. professional, technical and related workers, compared to only 6.9% in the same category in the domestic labour force (Orbeta and Abrigo, 2009). In effect, such emigration from developing to developed countries can be seen as a perverse subsidy flowing from poor to rich. Li (2011) examines the supply of human capital from China to Canada since the 1990s and discovers that Canada saved about $2.2 billion in education-related expenses by accepting immigrations from China with university degrees between 1991 and 2000. For this reason Jagdish Bhagwati (1979) proposed that sending countries should tax the incomes of skilled emigrants.

More recent studies argue, however, that the perverse subsidy argument is incomplete since countries compete for aspiring migrants, not for a set pool of talents (Bertoli et al, 2012). Having the choice to migrate may induce additional human capital investment because of the high prospective returns from moving. Skill-selective immigration policies in receiving countries will have a similar effect. Thus where such migration has traditionally been viewed as zero-sum (sending countries lose what receiving countries gain) the choice to move can set up competition among receiving countries but also expand the pool of potential talented migrants from sending countries (Bertoli et al., 2012). Brain "circulation" theories also suggest other benefits for original sending countries as argued earlier.

The other important impact of emigration on sending countries that has received insufficient attention is the economic significance of diasporas and their contribution to the sending country's economic growth. While diaspora networks are well-known as sources of remittance income, declining costs and rising ease of modern travel have enlarged their impacts at home by

making it easier to do business across borders. Networks of kinship and language foster trust and help speed the two-way flows of information, products and money. Thus both sending and receiving countries benefit from these network effects.

Conclusions

This chapter shows close relationships among economic change, recruitment strategies and immigration policies. Global demand for highly skilled workers driven by population aging, the rising demand for talent in emerging economies and increasing cross-border employment opportunities are all intensifying the competition for talent. In the absence of an international consensus on global policy frameworks, national governments and corporations have responded with the variety of policies and practices reflecting their own goals and values as discussed in this chapter.

The trend in national recruitment strategies is clearly in the direction of hybrid arrangements in which supply and demand factors converge in the selection of foreign skills. The supply-driven points system values migrants' long-term contributions to the receiving country. At the other end of the spectrum, demand-driven systems emphasize the ability of migrants to fill labor shortages. The hybrid recruitment regimes are obviously more capable addressing the long-term human resources contribution and the short-term labor market needs. Canada's and Australia's supply-driven skill selection systems are shifting to incorporate more consideration of demand-driven approaches.

The hybrid regimes offer greater flexibility in foreign workers' duration of stay by foreign workers. While duration is usually contingent on their work permits countries like Canada and Australia allow transition from temporary to permanent status. In contrast, the U.S. and Singapore face the challenge of retaining skilled foreign workers due to uncertainty of the transition from temporary to permanent stays.

The hybrid regimes also provide more room for employers and businesses to play crucial roles in selecting and accessing foreign skills. With many firms now operating on a global scale they demand skilled workers from around the world and the hybrid regime enhances their ability to identify and access such workers. These corporate strategies and efforts reinforce the government policies, and vice versa, in recruiting foreign skills as well as protecting foreign workers.

Competition for international students, particularly those studying science and technology in post-secondary and tertiary institutions is another dimension of recruitment. The recognition that International students in the United States have contributed significantly to scientific research and development has encouraged other economies to follow suit.

Finally, diasporas of sending countries are increasingly seen as unique sources of human capital that benefit home and host countries. Both developing and developed countries need a better

understanding of their own diasporas and the policy tools to facilitate better uses of their transnational skills and experiences.
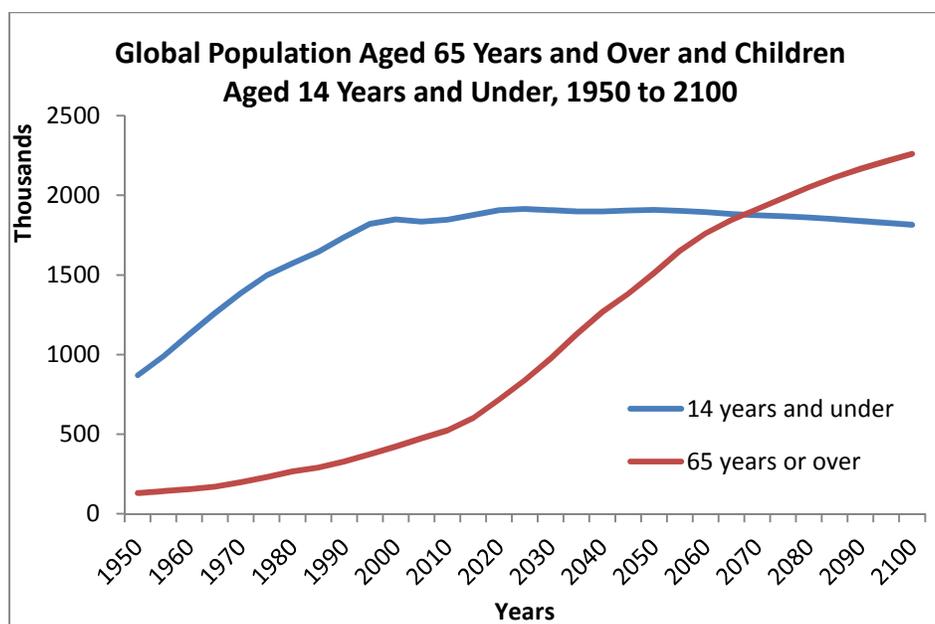
Looking to the future, the variety of cross-border recruitment and labor mobility strategies described suggests a number of policy areas needing attention, such as better management of immigration policies to recruit foreign talent. Like-minded countries should be more actively engaged in developing bilateral and multilateral agreements to facilitate the mobility of skilled workers and to better utilize these skills by cross-border agreements to facilitate credentials recognition. Mutual recognition agreements would improve cross-border skill transferability and productivities. Cross-border agreements to facilitate the portability of social security benefits are also needed in recognition of the growing brain circulation by skilled workers.

Tables and Charts

Figure 1.

One in four international student stays on
International students changing status, 2008-09, %

Source: OECD (2011), *International Migration Outlook*

Figure 2.

Global Population Aged 65 Years and Over and Children Aged 14 Years and Under, 1950 to 2100
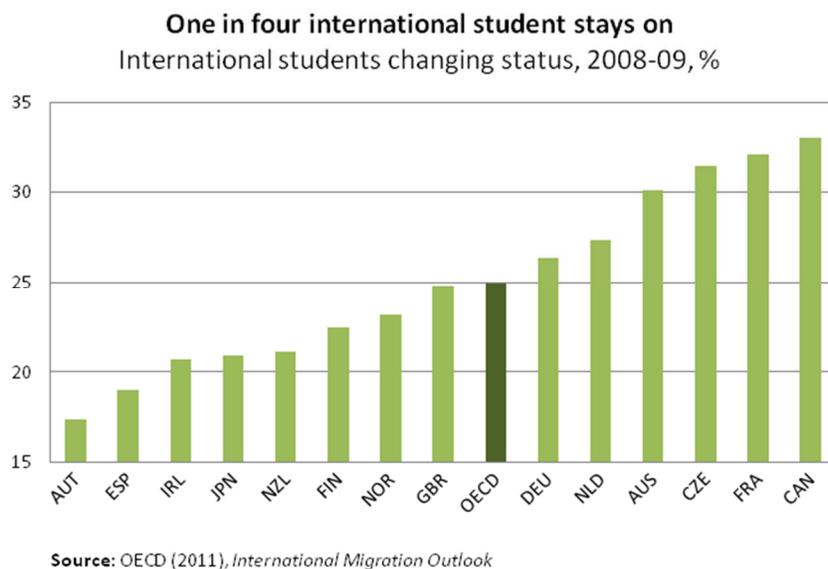
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2010 Revision. Retrieved March 29, 2012 from http://esa.un.org/unpd/wpp/index.htm

Figure 3.
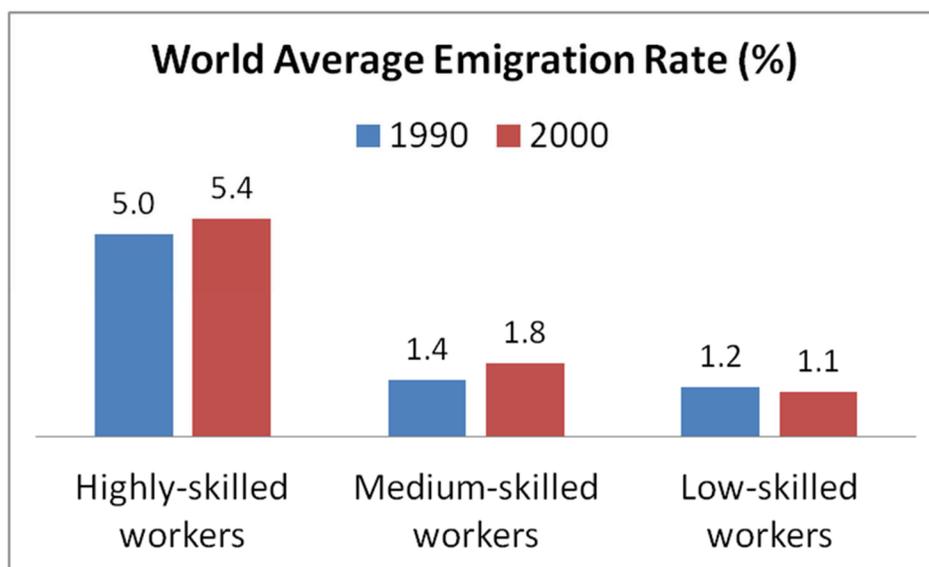
Source: Docquier and Rapoport, 2005; Docquier, et al, 2010

Table 1

Comparison of Permanent and Temporary Programs

	Canada	U. S.	Australia	Hong Kong SAR	Japan	Singapore
Permanent Categories	• Point system for immigration • Federal Skilled Worker Program (outside of Quebec) • Quebec-selected skilled workers • Canadian Experience Class • Business Immigration Program • Provincial Nominee Program • Family Class • 280,691 permanent residents (2010)	• Point system for immigration • Employer Sponsored • Immediate Relative and Family Sponsored • Special Immigrants • Diversity Visa Program • 1,062,040 Legal Permanent Residents (2011)	• Point system for immigration • Employer sponsored • Skilled independent • State/Territory sponsored • Skilled Australian sponsored • Distinguished talent • Business skills • Family Stream • Special Eligibility Stream • 168,685 permanent migrants (2010-2011)	Under paragraph 2(d) of Schedule 1 to the Immigration Ordinance, Cap 115, a person not of Chinese nationality who has entered HKSAR with a valid travel document, has ordinarily resided in HKSAR for a continuous period of not less than 7 years and has taken HKSAR as his or her place of permanent residence is a permanent resident of the HKSAR. • 384,699 Permanent Identity Card Issued (2009-10)	Under paragraph 1(3a) of the Guidelines for Permission for Permanent Residence, in principle, a person who has stayed in Japan for more than 10 years consecutively may be granted permanent residency. Among other conditions that has to be satisfied, it is also required that during his/her stay in Japan the person has had work permit or the status of residence for more than 5 years consecutively. • 47,898 foreign nationals granted permanent residence (2010)	• Professionals/Technical Personnel and Skilled Worker scheme • Investor/Entrepreneur Scheme • Spouse and unmarried children of a Singapore Citizen/Singapore Permanent Resident • Aged Parents of a Singapore Citizen • 532,000 permanent residents (2011 estimate)

Temporary Categories	Temporary Foreign Worker Program	Temporary workers and families	Temporary Residents Program (2010-11)	Employment visas	Employment in specific and technical fields	Work Passes/Visas

	Temporary Foreign Worker Program
	• International arrangements
	• Canadian interests
	• Labour Market Opinion
	• 182,276 total entries (2010)
	• 432,682 foreign workers (2010)
	Foreign Student Program
	• 96,157 total entries (2010)
	• 278,146 foreign students (2010)
		Temporary workers and families
		• Temporary workers and trainees
		• Intracompany transferees
		• Treaty traders and investors and spouses and children
		• Representatives of foreign media and their spouses and children
		• 3,385,775 admissions (2011)
		Foreign students
		• 1,788,962 admissions (2011)
			Temporary Residents Program (2010-11)
			• Working Holiday Makers (192,922 visas issued)
			• Skilled temporary residents (90,567 visas issued)
			• Skilled Graduate visas (21,587 visas issued)
			Overseas Students
			• 250,438 visas issued (2010-11)
				Employment visas
				• Employment Visas for foreigners
				• Admission Scheme for Mainland Talents and Professionals
				• Capital Investment Entrant Scheme
				• Quality Migrant Admission Scheme
				• Immigration Arrangements for Non-local Graduates
				• Supplementary Labour Scheme
				• Employment Visas for foreign domestic helpers
				• Working Holiday Scheme
				• 126,026 visas issued (2009-10)
				Student Visas
				• 14,460 visas issued (2009-10)
					Employment in specific and technical fields
					• "Engineer", Specialist in Humanities/International Services", "Intra-company Transferee"
					• "Skilled Labor"
					• "Entertainer"
					• 52,503 entries (2010)
					College Student and Pre-College Student
					• 48,706 entries (2010)
					Trainee and Technical Intern Trainee
					• 51,725 entries (2010)
						Work Passes/Visas
						• For professionals
						  ○ Employment Pass
						  ○ Personalized Employment Pass
						  ○ EntrePass
						• S Pass (mid-level skilled workers)
						• Work Permit (foreign unskilled workers)
						• For foreign students and foreigners undergoing training
						  ○ Working Holiday Programme
						  ○ Training Employment Pass
						  ○ Training Work Permit
						• Around 1.19 million foreign workforce (as at December 2011)
						Student's Pass
						• 91,500 foreign students (2010 estimate)

Source: CIC, 2011; BCA, online; DHS, 2012; ADIC, 2012a; 2012b;; HKLII, online; IDHKSAR, online; IBJ, 2011; GuideMeSingapore.com, online; DSS, 2011; SMOM, online; Clark, 2011.

Table 2

International Migrants: 1990 to 2010

	1990			2000			2010		
Region	Migrant stock (1,000)	Share in local populati on (%)	Net migrati on* (1,000)	Migrant stock (1,000)	Share in local populati on (%)	Net migrati on (1,000)	Migrant stock (1,000)	Share in local populati on (%)	Net migrati on (1,000)
East Asia & Pacific	11,901	0.7	536	15,560	0.8	-950	19,203	0.9	-2,833
Europe & Central Asia	58,582	7.0	978	65,302	7.6	1,062	77,100	8.7	7,862
Latin America & Caribbean	6,917	1.6	-3,344	6,193	1.2	-3,928	7,127	1.2	-5,246
Middle East & North Africa	19,378	7.7	513	22,016	7.0	-1,513	30,040	7.8	4,518
North America	27,764	10.0	4,676	40,387	12.9	9,254	50,036	14.6	6,053
South Asia	15,904	1.4	-1,931	12,866	0.9	-2,532	12,175	0.8	-8,622
Sub-Saharan Africa	14,786	2.9	-1,263	15,775	2.4	-1,238	17,717	2.1	-1,986
World	155,233	3.0	0	178,098	2.9	0	213,397	3.1	0

Note: * positive of net migration indicates inflow into the region and a negative shows outflow from the region.
Source: The World Bank, online data.

Table 3

Migration Stocks (25 years and above*), 1990 and 2000 (in millions)

	1990			2000		
	Total	High-skilled	Low-skilled	Total	High-skilled	Low-skilled
OECD	40.8	12.3	28.5	57.4	20.3	37.0
	100%	30%	70%	100%	35%	65%
Non-OECD	14.0	1.6	12.4	20.2	3.1	17.2
	100%	11%	89%	100%	15%	85%
Country Unknown	25.4	2.5	22.9	22.9	2.8	20.1
	100%	10%	90%	100%	12%	88%
Total	80.2	16.4	63.9	100.5	26.2	74.3
	100%	20%	80%	100%	26%	74%

Source: Docquier, et al, 2010

- Proportions of high- and low-skilled aged 25 and above in total population

Table 4

Migration between North and South countries in 2000

		High-income (destination)	Developing (destination)
High-income (origin)	Stock (in millions)	22.5	3.3
	High-skill (%)	38.2	21.5
	Growth (1990-2000 %)	8.6	12.5
Developing (origin)	Stock (in millions)	45.4	29.4
	High-skill (%)	30.5	10.4
	Growth (1990-2000 %)	55.6	7.0

Source: Docquier, et al, 2010

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Endnotes:

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[1] Calculation from data from the Bureau of Consular Affairs, U.S. Department of State. http://travel.state.gov/visa/statistics/nivstats/nivstats_4582.html

[2] Calculation from data from the Bureau of Consular Affairs, U.S. Department of State. http://travel.state.gov/visa/statistics/nivstats/nivstats_4582.html

[3] In Japan, *Nikkeijin* literally means a person with ties to Japan; the term is used to describe persons of Japanese descent.

[4] The website is at http://www.networksforimmigrants.ca/

[5] The C100 is a non-profit, member-driven organization that supports Canadian technology entrepreneurship through mentorship, partnership and investment (http://www.thec100.org/).