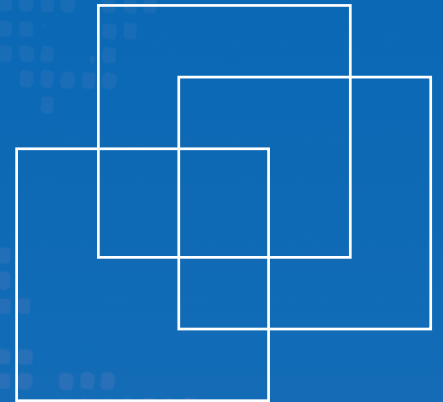




Attracting skilled international migrants to China: A review and comparison of policies and practices



Centre for China and Globalization (CCG)



International
Labour
Organization

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Foreword

China is actively pursuing a transformation from an export-oriented, low-skilled, and labour-intensive economy to a science, technology, and innovation-based economy. Such a transformation inevitably spurs rapid growth in the demand for highly skilled workers. Committed to globalization more than ever before, the Chinese Government is attaching more importance to attracting foreign talents who would not only bring valuable resources to help boost China's economic development but also contribute to building and strengthening the relationship between China and the rest of the world. Working towards this objective of competing for global talent, China has become ever more aware of the urgent need for the introduction of specific schemes and policies to attract skilled international migrants.

Early on in the new millennium, the Chinese Government started to introduce a series of policies to attract both Chinese professionals working overseas and foreign skilled talents. These policies included pilot schemes like the “Thousand Talent Programme” and a policy trial of the Green Card system in Beijing and Shanghai. However, these policies often set very high eligibility thresholds for foreign talents, and in general, international migrants faced challenges such as complicated and time-consuming immigration procedures, an arduous path to permanent residency, and administrative fragmentation in immigration management. The lack of mutual recognition of academic qualifications and research degrees also hindered the mobility of researchers and academic personnel. At the same time, Chinese employers experienced restrictions in offering short-term work and internships to foreign students and young professionals.

Access to specific services and support for explicit policies at each stage of the migration process is key for high-skilled migrants to enjoy an overall positive migration experience. Apart from sound policy and proper implementation, the overall living context – particularly environmental quality, housing, tax policies, health care, support to spouses and children, and cultural and social integration – are all important factors that will influence a country's competitiveness in attracting skilled foreign talent.

The research presented in this report was conducted under the “EU-China Dialogue on Migration and Mobility Support Project”, funded by the European Union and jointly implemented by the International Labour Organization (ILO) and the International Organization for Migration (IOM). The research reviews the existing policies and practices of China concerning the attraction of foreign professionals and other skilled

international migrants, and presents a comparative analysis of talent attraction policies and outcomes in Germany, Japan, and Singapore. Based on a comparative study, recommendations are put forward for China to improve its foreign talent attraction policies and practices in order to be more successful in the international competition for talent.

I hope this research will contribute to global reflection on the issues that will form the pillars of a new Global Compact on Safe, Orderly, and Regular Migration. Employment and decent work issues are likely to feature prominently in the related negotiations that are expected to culminate in an intergovernmental conference on migration in 2018: expansion of legal avenues for migrant workers to migrate safely and legally to other countries to work in difficult jobs; skills recognition and the need for accurate and reliable data on issues such as “brain drain” and “brain gain”; and the need to institute fair recruitment processes as a means to reduce the costs of labour migration for migrant workers and ensure improved protection for these workers. The 2030 Agenda for Sustainable Development recognizes the “positive contribution of migrants for inclusive growth and sustainable development”, but evidence-based governance of international migration that maximizes its benefits for societies and migrants alike remains subject to further improvement.

A handwritten signature in black ink, appearing to read 'Tim De Meyer', with a horizontal line underneath.

Tim De Meyer

Director

ILO Country Office for China and Mongolia

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Attracting skilled international migrants to China: A review and comparison of policies and practices is a major research study carried out under the EU–China Dialogue on Migration and Mobility Support Project, funded by the European Union (EU) and jointly implemented by the International Labour Organization (ILO) and the International Organization for Migration (IOM).

The research was conducted through collaboration between the ILO Country Office for China and Mongolia, the ILO Regional Office for Asia and the Pacific, and the Centre for China and Globalization (CCG), with support from the State Administration of Foreign Experts Affairs (SAFEA).

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Abbreviations and acronyms

A*STAR	Agency for Science, Technology and Research [Singapore]
CCG	Centre for China and Globalization
EC	European Community
EP	Employment Pass [Singapore]
EU	European Union
HSFP	High Skilled Foreign Professional [Japanese visa]
IOM	International Organization for Migration
IP	intellectual property
IT	information technology
MINT	mathematics, science, information technology, and technology [Germany]
MOM	Ministry of Manpower [Singapore]
OCI	Overseas Citizen of India
OECD	Organization for Economic Cooperation and Development
PEP	Personal Employment Pass [Singapore]
SAFEA	State Administration of Foreign Experts Affairs
STAR	Singapore Talent Recruitment
STEM	science, technology, engineering, and mathematics
WP	Work Permit [Singapore]

Executive Summary

Following more than a decade as the “Workshop of the World”, the Chinese economy is now under a process of further reform, and is moving from a labour-intensive model towards one based on service and technology. Recognizing the urgent need to attract skilled workers and professionals, and responding to the pressure of adverse demographic trends, the government of China over the last decade has made a series of policies aimed at attracting educated and skilled talent from around the world. During the short period of time in which these policies were implemented, large numbers of Chinese professionals overseas returned to the country, and increasing numbers of foreign talent were attracted to China. However, it should be recognized that there is still room for further development in these policies. This is particularly true for the “Green Card” system recently reformed in China.

This report seeks to provide useful, practical advice for how China can improve its policies aimed at attracting foreign professionals and other skilled personnel from overseas. This research analyses two types of data to investigate possible improvements in China’s policies: (1) an examination of policies with similar aims in three sample countries – Germany, Japan, and Singapore, and (2) surveys (which included a list of open-ended questions) with selected international professionals.

The report first presents a qualitative comparison between China and the sample countries with regard to policies, systems, and mechanisms for attracting highly skilled immigrants, including the rights and responsibilities attached. The report analyses relevant detailed policies and procedures, such as visa processing and other administrative procedures, as well as the obstacles and problems foreigners face in working in China and the sample countries. The report also reviews the available data on skilled foreign labour flows into Germany, Japan, and Singapore.

Based on this analysis, the report makes a comparison among these countries along a continuum ranging from “highly successful” to “somewhat successful” to “limited success”. Among these four countries it is found that Singapore stands out as being “highly successful” in attracting qualified foreign talent. In addition to doing well with respect to absolute numbers of skilled foreign personnel, Singapore has by far the highest ratio of such individuals to the overall population and, by extension, in the workforce. Meanwhile, Japan stands at the opposite side of the spectrum, due to the limited presence of foreign talent in the country, especially in relation to the overall population and workforce. It should be recognized that the Points-based Preferential Immigration Treatment for Highly Skilled Foreign Professionals policy newly implemented by the Japanese Government may improve the position of Japanese talent

acquisition policies among the four countries in this report. The effectiveness of this new policy should be studied as more data becomes available. Germany – specifically through its adoption of the European Union (EU) Blue Card Scheme – falls in between the two ends of the spectrum. These three cases studies provide a contrast with regard to the types of talent attraction policies being utilized and with respect to the outcomes of these policies. It should also be noted that Singapore’s open policies, while successful in attracting international talent, have drawn criticism from Singaporean nationals over concerns about congestion and competition for jobs. This points to the complexity and multifaceted nature of migration governance.

In addition to analysing talent attraction policies and outcomes in Germany, Japan, and Singapore, the report presents a similar evaluation of China. The report reviews earlier Chinese Government efforts in this area, including policies directed at both mainland Chinese returnees and foreign talent. This report presents data on the number of non-Chinese nationals holding foreign expert certificates, and those recruited to the country under the foreigner section of the “Thousand Talents Programme”. Findings indicated that policies aimed at settling international professionals in China, including the newly implemented Green Card system, lag well behind those in Germany and Singapore. Recent steps undertaken by local authorities in Shanghai and Beijing may be moves in the right direction, but the impact of these programmes is as of yet unclear. It is clear, however, that China needs further policy reform in order to catch up in the global competition for talent, particularly when it comes to policies aimed at settling non-Chinese passport holders in the country.

To further explore what China can learn from Germany, Japan, and Singapore to attract high-quality foreign human resources, small-scale surveys were conducted with qualified foreign personnel working in all four countries. These surveys asked respondents to rate the countries with respect to administrative procedures (such as the handling of visa claims, for example), living/working conditions, and various aspects of the post-arrival experience, such as taxes, health care, provision for spouses and children, and the degree of cultural/social inclusion. Survey respondents were also asked where their country of residence needed to improve the most with respect to their foreign talent attraction efforts. Subjects were also given the chance to write down open-ended responses on these matters. Researchers surveyed 39 individuals altogether – 11 working in Singapore, eight in Japan, and ten each from Germany and China.

China received low marks from the survey respondents in practically all of the close-ended questions, while also faring poorly with respect to the open-ended feedback offered by the survey participants. Interestingly, these negative responses did not vary significantly between the ethnic Chinese and non-Asian members of the China group. Germany also fared poorly,

particularly with respect to the degree of cultural/social inclusion and tax policy. However, these responses were likely skewed by the composition of the Germany survey group, which included a high number of Chinese nationals who are young singles or young couples without children. As Chinese nationals, these individuals can be expected to find adjustment to German culture difficult, given how far removed it is from the norms of Chinese society, and single people and couples without children face heavy tax burdens in Germany. In any case, this group served as a useful proxy for assessing the difficulties China might have in integrating Western professionals into its workforce. Like the Chinese living in Germany surveyed for this study, Western professionals will certainly experience culture shock in China. In line with the qualitative policy comparison, Singapore scored well in all areas.

As the on-going China–EU dialogue on the global mobility of researcher talent continues, this report also pays particular attention to the efforts these countries are making to attract scholars and examines how successful scholars have found their in-country experiences to be. While all four countries have created special work visa categories specifically targeting researchers and scholars, Singapore has arguably been the most proactive with respect to special outreach to this talent pool. In addition to our surveys, this study conducted an open research forum in Guangzhou held on 20 January 2016 in partnership with China’s State Administration of Foreign Experts Affairs (SAFEA). Responses from the forum point to problems for China in the administration of research grant money to foreign researchers doing projects in the country, and there are significant issues with regard to finding and retaining suitable research assistants.

The main lessons and recommendations for China that follow from this study are summarized as follows:

- Foreign professionals living in China commented that the Chinese administrative procedures are fragmented and lack clear explanation. Hence, implementing simple and easy application procedures for visas, work permits, and similar documentation might increase China’s overall attractiveness to foreign talents.
- Comparing to the three sample countries, China adopted a relatively high standard for evaluating foreign talents. This has prevented a large number of foreign professionals to work in China as they may not be among the extreme topflight of foreign talent.
- Chinese government requires applicants to provide lots of personal information and meet various qualifications. This has indirectly discouraged foreign professionals to settle down in China as long-term residents. Hence, if China can provide a less arduous path to permanent residency, it may be able to attain more foreign talents in the long run.
- Generous provisions for spouses and children are essential for attracting high-end foreign

talents. In order to improve China's competitiveness in the international talent market, the government should focus more attention on ensuring the quality of its accommodations for spouses and children, such as social welfare, child education, and the job allocation service for spouses.

- The government should avoid coupling visas and work permits too tightly to holding jobs with specific employers. By doing so, China will not only attract more foreign talent, but also increase foreigners' mobility in the domestic labour market.
- As the number of foreign students grew rapidly in the past decade, China should also enable a transition channel for foreign students to find jobs and obtain work visas in China.
- Chinese government launched generous attraction programmes on both national and provincial levels for attracting researchers. However, the administrative procedures of these attraction programmes sometimes can be very time-consuming and impractical. With further improvement on its procedures, the government may be able to deliver its programmes much more effectively.
- China has implemented liberal rules and generous provisions for foreign talents. However, its implementation process is still relatively slow-paced and might require further improvement in its administrative procedures.
- Most of the talent attraction programmes in China are being carried out by multiple ministries at the same time. This administrative fragmentation may be solved through establishing an integrated government platform for conducting such efforts.

As demonstrated by recent skilled immigration initiatives undertaken by local authorities in Shanghai and Beijing, governments in China are beginning to implement policies in line with previous recommendations made by the Centre for China and Globalization (CCG). The initiatives underway in Shanghai and Beijing include outreach to foreign students studying at Chinese universities, provision for the spouses and children of foreign talent, and streamlining visa application procedures. However, our findings suggest that compared to the schemes and mechanisms utilized by other countries to attract international talent, the steps taken in China so far can only be seen as preliminary. In order to succeed in the global competition for securing foreign talent – and to more effectively lure back Chinese professionals working overseas – further reforms in relevant policies, schemes, and mechanisms will be required.

1. Background and introduction

China now stands at a crucial juncture with respect to its economic development. For the past two decades, the country's rapid growth was driven by its rise as the largest export platform in the world for labour-intensive, low-skilled goods, such as clothing and apparel, shoes, toys, and furniture. In the middle of 1990s, a massive wave of internal migrant workers from the countryside moving to industrial urban centres successfully transformed China into "the world's factory". Approximately 300–400 million of these internal migrant workers (referred to as *nong min gong*) moved to cities over this period, representing the largest mass migration in human history (Chan, 2013). This huge new workforce enabled China to secure a comparative advantage in manufacturing by making intensive use of low-skilled labour.

As economic development in China continues to expand, the economic structure in China is transitioning from labour-intensive industries towards a knowledge and service-based economy. Growing numbers of Chinese businesses are investing in foreign markets and Chinese contractors are taking on large-scale development projects around the world, which showcases the degree to which Chinese enterprises are increasingly engaging with the process of globalization.

However, restructuring economic development requires the involvement of large numbers of educated and skilled talent, but this effort comes at a time when the size of China's domestic workforce is contracting. It was estimated that China's working age population (those from 15 to 59 years of age) declined for the first time in 2012, and numbers have continued to fall since (National Bureau of Statistics, 2015). In the coming decade, scholars predicted that the population of Chinese between the ages of 20 to 29 will drop by 25 per cent, from 200 million to 150 million. Moreover, the population of 30- to 34-year-olds is estimated to drop by nearly half, from 125 million to 68 million in the next ten years (F. Wang, 2010). Economists now predict that by 2020 or sooner, China will reach its "Lewis Turning Point" where the formerly abundant supply of cheap labour dries up (Das and N'Diaye, 2013).

As a country increasingly involved in the process of globalization, economies and governments in China have first-hand experiences of the importance of attracting educated and skilled talent for supporting social and economic development in the country. China has traditionally seen large numbers of workers and students head overseas; so it should be recognized that China has a large potential reserve of educated, skilled, and experienced talents spread around the world. This being the case, both national and regional governments in China have been keen to encourage overseas Chinese talents and professionals to return to the country.

In addition to encouraging the return of skilled professionals of the Chinese diaspora, China has started policy trials for attracting educated and skilled foreign talent to the country. Compared to most economically advanced countries around the world, for example the United States, China is a latecomer to the global search for talent. However, it should be recognized that Chinese policies have started attracting foreign talents, who are coming to the country for work, and even settlement. In 2010, the Chinese Government, for the first time, included data related to foreign residents in a national census. That said, according to the official report of the 2010 Sixth China Population Census, the number of long-term foreign residents living in China amounted to just under 600,000, which represents just 0.04 per cent of the country's total population (National Bureau of Statistics, 2011).

While increasing numbers of educated and skilled foreign talents have been attracted to China, criticisms regarding the current Chinese attraction policy have also increased. As a result, the Chinese Government is facing the need to reform its relevant policies to account for the criticisms raised. The objective of this report is to provide advice on ways to improve China's talent attraction policies.

Beyond looking at existing policies in China for attracting international talent, this report also investigates the corresponding policies in Germany, Japan, and Singapore to serve as a basis of comparison. The report details the best practices of these countries that China could adopt, as well as the potential problems it should avoid. The rationale for choosing Germany, Japan, and Singapore is as follows: 1) these three countries have achieved different degrees of success in attracting overseas skilled workers; and 2) they each have very different overall administrative systems and talent attraction policies. By taking a closer look at the German, Japanese, and Singaporean talent attraction outcomes, the report can provide a much more comprehensive overview of global trends in talent attraction, and therefore offer practical advice to the Chinese Government.

In addition to this qualitative desk research and analysis, this study also conducted small-scale surveys involving 39 high-end talented migrants living in China, Germany, Japan, and Singapore. The questions asked were designed with a primary focus on studying these individuals' personal immigration experiences as well as their overall working and living conditions.

In summary, the remainder of the report proceeds under the following sequence: in chapter 2, the report provides a brief overview of the incentives that drive both advanced and emerging economies to seek highly educated foreign talent. This chapter also analyses the different

fundamental schemes that have been used worldwide for fulfilling this purpose. Chapter 3 briefly summarises the demographic imperatives China faces right now, as well as the country's previous accomplishments in luring overseas Chinese professionals and foreign talent. Chapter 4 presents the three country case studies – Germany, Japan, and Singapore – with a detailed description of each country's political/social background and their talent attraction policies. Furthermore, chapter 4 also presents an analysis of the institutional mechanisms used by the case study countries for attracting high-skilled foreign professionals, and an overall assessment of their talent acquisition progress. Chapter 5 provides a comparative analysis of the different policies that Germany, Japan, and Singapore have used for acquiring foreign experts. Chapter 6 begins with a review of the rationale behind the process by which survey subjects were selected as well as the possible outcomes of the survey results. The chapter continues by presenting the quantitative findings of the surveys. Last but not least, the report concludes with a list of lessons that can be gleaned from this comparative study. In addition, it also provides a set of suggestions for China as it seeks to devise competitive policies for attracting highly qualified foreign personnel.

2. Theoretical perspective of skilled labour migration policies

2.1 Driving factors for attracting foreign talent and skilled workers

“[D]estination countries are now competing for highly-skilled workers”, as Baruah et al. (2006, p. 19) noted. As early as the Post-War period, countries such as Canada and the United States recognized the importance of skilled and employment-based immigration. In 1998, the well-known American global consultancy McKinsey issued a celebrated report proclaiming, “Better talent is worth fighting for” (Chambers et al., 1998). This report underpinned the growing, crucial importance of individuals who have keen analytic and writing skills and are technologically literate, globally astute, and operationally agile. Due to the crucial role high-end professionals are playing in boosting business expansion and national development, both businesses and governments are becoming acutely aware of this kind of human capital. Such talent has acquired a special significance in a globalized world economy in which the importance of knowledge-based activities is rapidly increasing.

While many countries, particularly emerging economies like Brazil, China, and India, have recently made heavy investments in education, their domestic schooling and training systems have failed, for a wide variety of reasons, to keep pace with the talent demands of employers. In a follow-up study done by McKinsey two years after the “better talent is worth fighting for” report, nine out of ten employers surveyed said they had problems finding and retaining highly qualified personnel (Axelrod et al., 2001). In addition to being scarce and in high demand, high-skilled talent is also highly mobile across international borders. Research study shows that these professionals have a higher tendency for migration (5.5 per cent) than their low- and medium-skilled counterparts (0.9 per cent and 1.6 per cent, respectively). In addition, they have also experienced the highest growth rate in population size among all kinds of labour forces (Beechler and Woodward, 2009).

These trends combined have forced countries to go beyond their own borders in searching for top-tier talent. Australia, Canada, and the United States have long been attracting overseas talent in order to bridge skill gaps in their economies – for example, immigrants from China and India accounted for one quarter of all the engineers in the United States’ Silicon Valley in 2001 (Wogart and Schüller, 2011). In the past decade, they have been joined by a group of newcomers among developed countries, such as Austria, Germany, Spain, and Sweden, in the global quest for high-skilled workers. Beyond Organisation for Economic Co-operation and Development (OECD) members, emerging economy countries such as Brazil, China, and India are becoming active players in the talent game (Papademetriou and Sumption, 2013). China and India, which have

long served as sources of talent for developed economies, are now energetically trying to attract nationals who have been educated and worked overseas back home.

In going about this task, each country has its particular goals and motives. But a number of common imperatives –demographic pressures; skill shortages; the desire for entrepreneurial activities and knowledge advancement; the demand for building a stronger researcher network; as well as global trends in reverse migration – have caused the current global search for high-end talent. These factors are briefly reviewed below.

2.1.1 Demographic imperatives

After rising rapidly during the post-World War II baby boom, fertility rates began falling steeply across all OECD countries in 1970s. By the end of that decade, the average OECD-wide fertility rate had dipped below the natural replacement rate of 2.1 and continued plunging through the middle of 1980s. Fertility rates did rebound somewhat in a few places, notably in the United States and, to some extent, Scandinavia, during the 1990s (Sleebo, 2003). But the overall fertility rate among OECD countries remains below the replacement rate needed to sustain populations. The average fertility rate among this group of States stood at 1.70 in 2011 (OECD, 2014a).

This demographic crunch extends beyond developed countries to middle-income emerging economies, particularly China, whose fertility rate has been falling for decades, putting it in the same league as low-birth OECD countries. One of the possible reasons behind low fertility rates might be the social/financial pressure that young couples receive as a result of rapid economic development. According to a news article published in *Nature*, constraints on housing and education, as well as a strong focus on career have all led to a low average fertility rate in China (Schiermeier, 2015). It is notable that relaxations of China's "One-Child" family planning regime – the Government enacted the Selective Two-Child Policy (单独二孩政策) in 2013, allowing families to have two children if one of the parents is an only child (National Health and Family Planning Commission, 2013) – have failed to raise birth rates (Guo et al., 2014).

Adverse demography will significantly lower the share of individuals of working age in the overall population. It is estimated that the total working age population among OECD countries will only grow by 4 per cent from 2000 to 2050, after a rapid increase of 76 per cent from 1950 to 2000 (Sleebo, 2003). As noted above, given China's low fertility rate, it is very possible that China will face a decrease in its working age population in the near future (F. Wang, 2010). In the absence of intensified efforts to boost domestic education levels, these trends will more

than likely exacerbate the overall shortage of high-quality talent. Such shortages in human capital will become especially acute if, as widely predicted, the importance of knowledge-based economic activities continues to rise. In any case, the slowdown in the numbers of working age adults is expected to influence economic growth rates among advanced economies. A 2001 study predicted that the European economic growth rate is expected to fall from the 2001 annual rate of 2.3 per cent to 0.5 per cent by 2050, while the American economy might decrease from a growth rate of 2.5 per cent in 2001 to 1.4 per cent by 2050. As the ratio of working age population to retirees falls, public pension schemes in these countries, which are in large part financed by the contributions of working adults, will face increasing pressure, and therefore, exacerbate governmental primary fiscal deficits (Dang, Antolin, and Oxley, 2001). Such influence might trigger a greater economic impact in China than in other countries, since China is still standing at the crossroads of economic restructuring. For instance, besides the universal demand for a stable social welfare system, the Chinese Government also tends to use its pension funds as a strategic tool for stimulating domestic consumption among the elderly and among working adults (A. Wang and Qing, 2012). In short, it is clear that with the emerging ageing issue, pension schemes in both developed and developing economies are facing the potential threat of undertaking too many unfunded liabilities.

Higher levels of immigration, particularly of high-skilled migrants, can help provide a quick fix to these problems. However, it bears emphasizing, this solution is at best a temporary and partial palliative to the ageing population problems that highly developed countries and emerging economies are now experiencing. Lutz and Skirbekk (2005) have noted that even with a steep increase in annual immigration inflow (say, 1.2 million people migrating into the European Union per year), the dependency ratio (population above 65 years old divided by the population between 15 to 64 years old) will almost double by 2050 (Lutz and Skirbekk, 2005). Furthermore, since immigrants are getting older each year, slowing down the age of the population will require constant fresh waves of immigrants. However, as the backlash against immigration emerges in numerous developed economies, politicians are likely going to constrain future increases in the number of foreigners living in these countries.

2.1.2 Skill Shortages

As was noted earlier, about one quarter of Silicon Valley engineers are foreign-born. Foreign-born high-skilled professionals play an increasingly important role in filling scientific, technical, engineering, and mathematical (STEM) positions in the American economy. In 1994, there were 6.2 US-born STEM workers for every such foreign-born worker; by 2006, that ratio had fallen to 3.1:1. The surging number of foreign STEM workers was driven largely by the rapid

growth of the IT industry, which greatly boosted the demand for such talent (Kent, 2011). Some studies have cast doubt on whether the United States really suffers from a shortage of home-grown STEM workers (Salzman et al., 2013). However, the expansion of the foreign STEM workforce in the United States dovetailed with the growth of the high-tech economy, which suggests a shortfall of domestic supply in STEM personnel. In any case, with the support of high-tech firms, the US Government has energetically courted foreign STEM talent through the H-1B skilled worker visa, which allows such personnel to live and work in America for up to six years, depending on the economic conditions (Malekoff, 2013).

Similar to the United States, Europe is also confronting talent shortages, especially with respect to highly qualified STEM personnel. A 2015 European Parliament report identified positions in science and engineering, information and communications technology, and health care industries as three out of the top six European Union (EU) “bottleneck” occupations (i.e., positions that have trouble filling vacancies) (Reymen et al., 2015). These shortages were the major driver behind the 2005 official recognition of the German “Green Card” visa programme and the 2009 EU adoption of “Blue Card” Scheme, both of which targeted highly qualified foreign labour, particularly in the science and technology fields (these initiatives will be discussed in detail in chapter 4 below).

Although immigration can help bridge shortfalls in skilled workers in the short term, it can create numerous problems over the long-run. In particular, when countries become increasingly reliant on foreign talent, they will have less motivation for developing a skilled domestic labour force. Moreover, when citizens are facing severe job competition in fields where high-skilled foreign talents are abundant, they may choose to acquire high-skilled qualifications in the other industries in order to avoid competition. In the United States, for example, some have argued that the country’s heavy reliance on foreign STEM talent has discouraged Americans from entering such professions, thereby stunting the internal development of such talent (Malekoff, 2013). In addition, as is the case with immigration in general, the flow of foreign high-skilled labour into the United States has become a contentious political issue, causing the latest efforts to expand the quota of H1-B skilled workers visas to stall in Congress (Meckler, 2015). Finally, the evidence regarding to the effectiveness of the H1-B visa in drawing highly skilled talent is also mixed. For instance, one research study on the science and engineering occupations in the United States concluded that approximately 75 per cent of the spike in foreign STEM personnel from 1994 to 2006 could be attributed to general immigration trends, rather than any special visa programme (Sana, 2010).

2.1.3 Entrepreneurship and knowledge advancements and research networks

Immigrants differ in many ways from native-born citizens, with one of the most striking differences being their higher proclivity for entrepreneurship. For example, business ownership rates among immigrants to the United States exceed those of native-born Americans. Some 10.5 per cent of the immigrant work force in the United States owns business, while only 9.3 per cent of native-born Americans start up their own businesses (Fairlie, 2012). In 2010, the monthly business formation rate among immigrants to the United States was 0.62 per cent (or 620 out of every 100,000), while the same figure for non-migrants was just 0.28 per cent (or 280 out of every 100,000) (Fairlie, 2012). This trend is not just true for the United States; the International Organization for Migration (IOM) has noted that there is a global phenomenon of migrant urban entrepreneurship (Marchand and Siegal, 2015).

Immigrant entrepreneurs are especially active in newly emerged high-tech industries. Stangler and Wiens (2015) noted that from 1995 to 2006 one quarter of the new technology and engineering firms in the United States were set up by migrants. Another research study conducted in 2012 also found that in the Silicon Valley, 43.9 per cent of all engineering and technology entrepreneurs were immigrants (Rampell, 2013). In addition, in 2006 approximately 25 per cent of the international patent applications filed in the United States have listed foreign nationals as the inventor or co-inventor (Wadhwa et al., 2007). Taking into consideration that this figure excludes those immigrants who had already obtained US citizenships, such a high ratio of foreign inventors clearly underlines the important role immigrants are playing in technological innovation in the American context.

Another crucial knowledge advancement that can be obtained through attracting high quality foreign talent is the drawing of researchers and scholars who can enhance a country's overall research capabilities. The importance of recruiting internationally mobile researchers can be reflected in two aspects: 1) these scholars can improve the quality of host countries' scientific and technological workforce; and 2) they also play a crucial role in expanding the international research scope of the destination countries. One very interesting finding here is that a considerable number of these migrant scholars preserve research links with their countries of origins. Thus, migration of this kind of talent does not necessarily amount to a "brain drain"; instead, it can promote a positive situation for both the country of origin and country of destination (Franzoni et al., 2012).

2.1.4 Reverse migration

Up until recently, developing countries like China and India had mainly served as sources of highly qualified talent, especially in the science and engineering fields. Young people from these developing economies would receive engineering and science degrees in North America, Europe, or Australia and then remain in those regions for their future career. This one-way flow of talent from emerging to developed economies became known as the “brain drain”.

This century, as the governments of countries like China and India began to initiate major programmes for attracting their best and brightest talent back home, a general trend of “reverse brain drain” has started to emerge. For instance, India aims at attracting its large pool of overseas diaspora talent through measures like the Overseas Citizenship of India card (OCI card), which grants Indian returnees numerous rights and privileges that are equivalent to citizens. As of March 2009, the Indian Government had handed out approximately 400,000 OCI cards, with nearly half (43 per cent) of them being distributed through Indian consulates in the United States (Wogart and Schüller, 2011). Growth in distribution has accelerated since then, and in 2012 alone, 1,029,131 OCI cards were issued by the Indian Government (Lum, 2015). China has been energetically courting overseas Chinese talent with national initiatives, such as the “Thousand Talents Programme” as well as numerous provincial and local-level talent attraction plans, which will be discussed in detail in sections 3.2.2 and 3.2.3 below. Bolstered by rapid economic growth rates, these initiatives have attracted large numbers of overseas Chinese back to mainland China (H. Wang and Bao, 2015).

The rapid development pace in emerging economies has intensified the international competition for attracting high-end talent. Advanced economies are no longer just competing against each other; they are also facing increasing pressure from developing countries that successfully obtained high economic growth rates during the most recent global recession. This has thrown a new and interesting wrinkle into the worldwide competition for highly qualified personnel.

2.2 Formal immigration systems

Two basic systems are being widely used for choosing immigrants in developed economies: the points system and the “employer-led” model (Papademetrious and Sumption, 2013). These arrangements have their own distinctive features, and their effectiveness in attracting high-skilled foreign talent remains a contentious issue.

Under the points system, foreign talent is admitted when they have earned enough points based

on a weighted list of criteria. These scoring criteria correspond to the perceived needs of the overall economy, and usually include these following aspects: language ability; technical/scientific research capabilities; business/managerial skills; work experience; and education level. For some countries, age is also included in this mix. The points system was pioneered by Canada and then quickly adopted by Australia and some other European countries.

The employer-led system, on the other hand, admits immigrants largely according to employers' needs, which can be further verified through their willingness to hire skilled immigrants under special government regulations. Such regulations can take several forms. Typically, a "labour market test" is employed, whereby immigrants can only get employed if they do not adversely affect the employment prospects of nationals. In other words, firms are allowed to take on foreign staff only when they cannot find a suitable local candidate to fulfil the job responsibilities. Other regulations might include a minimum qualification standard for salaries and an annual nationwide quota on the number of working visas available for foreigners. In short, under the employer-led model, the market needs and the foreigners' abilities to obtain job offers are the two primary factors that regulate the talent flow.

An ongoing debate exists over the merits of these two systems. According to a 2013 study, the points-based system is more popular among policy-makers because it is transparent and flexible enough to be easily adjusted to meet changing economic circumstances (Papadimitriou and Sumption, 2013). Czaika and Parsons (2015) showed that points-based systems are much more effective in attracting and filtering high-skilled immigrants when compared to the employer-led model.

On the other hand, since employers are able to select workers according to their needs through employer-driven systems, it means that migrants enter the country by virtue of having already secured employment. In such cases, migrants' skills can be put to use immediately and contribute to the local labour market (Papadimitriou and Sumption, 2013). Along these lines, a July 2016 article in *The Economist* recently argued that points-based systems have been facing challenges in meeting the needs of employers. The article pointed out that unemployment among newly arrived immigrants under the points system was much higher in 2013 than immigrants arriving with a job offer. "Pure points don't work", the article quoted an expert at the Migration Observatory at Oxford University as saying.

Given the shortcomings of both the points-based and employer-led talent attraction systems, Papadimitriou and Sumption (2015) proposed a "hybrid" talent selection model which consists of a mix of features from the two old systems. In this new model, points would remain as part

of the criteria for acceptance, which gives the model a certain degree of flexibility. In addition, it also prioritizes employers' demand by requiring applicants to obtain job offers or hold a good record of previous employment in the host country. It is perhaps worth noting that Canada and Australia – both early adopters of the points system – now employ a hybrid mechanism.

In addition, research findings also suggest that a bilateral recognition of diplomas and a comprehensive social security arrangement can foster greater flows of highly qualified personnel, while double taxation arrangements make high-skilled talent less willing to migrate (Czaika and Parsons, 2015).

3. Chinese policies, mechanisms, and administration to attract and retain skilled overseas workers

3.1 Background: China's shortage of educated and skilled human resources

As was noted in the introduction, China stands at a critical juncture in the development of its economy. With the old growth model as the world's biggest export platform for low-skilled labour-intensive goods now losing steam, the country urgently needs to upgrade its industrial structure and reorient itself towards services and knowledge-based activities. To carry out this rebalancing, China will need a large pool of well-educated and skilled talent.

Over the past four decades, the speed of economic development in China showed the world a possible new model for economic development. For example, the World Development Indicators 2016 showed that in the past few decades, year-on-year GDP growth in China remained above 5 per cent, even during the global economics crisis that began in 2008 (World Bank, 2016b). Meanwhile, developed economies like Germany, Japan and Singapore experience negative growth in the wake of the economic crisis (World Bank, 2016b). Chinese enterprises have increasingly expanded to take on a global position, with online retailer Taobao.com and glass manufacturing firm the Fuyao Group serving as successful examples (H. Wang et al, 2016).

Lin (2014) estimates that between 2020 and 2030, China might become a high-income country, with possibly more than 80 per cent of the population living in urban centres. However, as Lin (2014) and Zheng (2014) also highlighted, even though massive opportunities have been created by the rapid economic development in China, the structure of economic development and Chinese society needs upgrading. To do so, China will need large numbers of educated and skilled talents taking part.

China is a country with large numbers of students studying overseas as well as a substantial diaspora living all around the world. In light of the recent economic development in China, large numbers of policies have been implemented by the Chinese Government that aim to encourage these overseas Chinese to return to the country and aid in supporting economic and social development (H. Wang and Miao, 2014; 2016). The Thousand Talents Programme is one of the most well-known examples of such national policies. These policies will be discussed in more detail later in this chapter.

As the process of globalization has increasingly impacted the Chinese economy, Chinese governments have recognized that in addition to reaching out to overseas Chinese professionals,

foreign talents are also important resources that can spur economic growth and innovation while also the relationship between China and the rest of the world. In the early 2000s the Chinese Government started introducing series of policies for attracting educated and skilled foreign talent to China, including a policy trial of the “Green Card” system in Beijing and Shanghai in recent years. More details of such outreach policies will be provided in section 3.2 below.

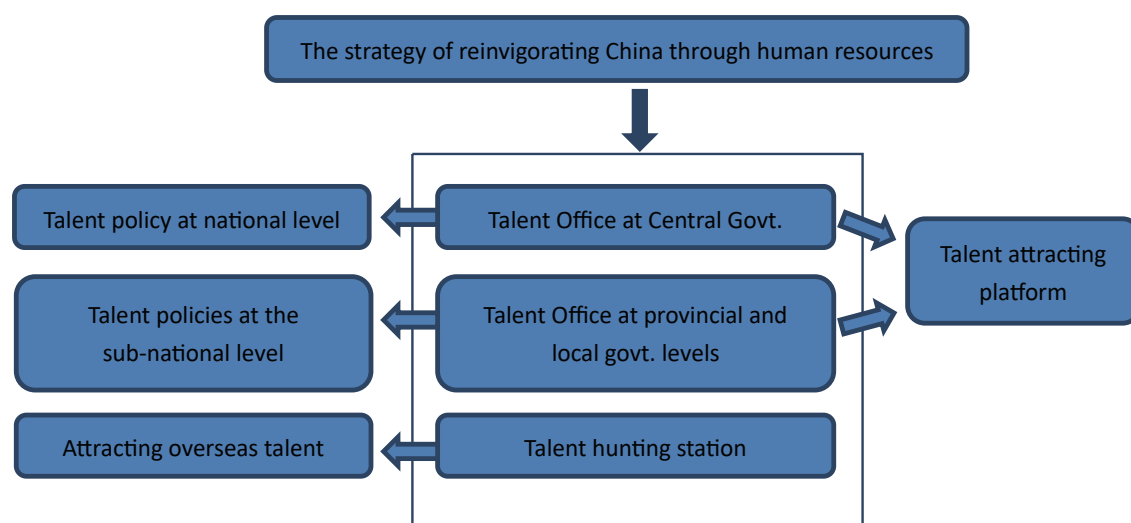
3.2 Chinese programmes for attracting overseas talent

3.2.1 Overview

Chinese leaders have long been aware of the country’s shortage of well-educated and skilled human resources, as well as the need to attract such individuals from abroad. In 2006, the Chinese Government set forth their Medium and Long-Term Talent Development Plan, which aimed to turn the country into an “innovation society”, in part by working to encourage Chinese science and technology talent with overseas higher education and work experience to return to China (Wei and Sun, 2012).

To accomplish this goal, both central and regional governments are involved. Figure 1 below provides a general overview of the Chinese overseas talent attraction system.

Figure 1. Overview of China’s talent attraction system



Governments in China – be they national, provincial, or local – are all energetically courting educated and skilled talent from overseas. Up to 2015, the drive to attract overseas talent was almost exclusively targeting Chinese nationals who have spent time studying and, in

many cases, working overseas. Even though increasing numbers of foreign nationals were already being employed in China before 2015, foreign nationals faced problems in gaining long-term residency status from the Chinese Government. But in 2015 and early 2016, local authorities in Beijing and Shanghai put forward major initiatives aimed at recruiting foreign talent, which involve facilitating visa acquisition, relaxing rules for permanent residency, and improving provisions for spouses and children (Ministry of Public Security, 2015). The State Administration of Foreign Experts Affairs (SAFEA) began building a database of overseas talent to better integrate these individuals into China's workforce in 2016.

The analysis below of Chinese foreign talent attraction programmes first reviews the national, provincial, and local municipal schemes targeting Chinese overseas returnees. It then takes up the problems faced by foreign nationals seeking to work for extended periods of time in China, including the limitations of the 2004 Chinese "Green Card" path toward long-term residency. The chapter concludes by noting the more recent initiatives by local and national government authorities to attract foreign talent to the People's Republic of China.

3.2.2 National-level schemes for encouraging the return of overseas Chinese talent

The two main national government initiatives following from the 2006 Medium and Long-term Talent Development Plan are the Thousand Talents and Ten Thousand Talents programmes, which were launched in 2008 and 2012 respectively (*Xinhua*, 2014). Individuals meeting the requirements for these schemes with respect to educational and professional attainment receive generous financial subsidies for research work, establishing a business, and living expenses, as well as other forms of assistance. At the same time, the Chinese Academy of Sciences has initiated the "Hundred Talents Programme", which has been providing large research grants and other support to encourage top Chinese scientists to return from overseas (H. Wang and Bao, 2015; Wei and Sun, 2012).

Up through 2012, the Thousand Talents Programme had induced 3,319 well-educated and highly skilled Chinese talents to return to the country from overseas. This figure rose to just over 4,000 in 2013, with a similar number of returnees attracted back to China in the first five months of 2014 alone (1000Plan.org, 2015; Wang and Bao, 2015).

These programmes have clearly helped to bring highly educated and skilled individuals back to China, but the numbers recruited under these initiatives are small compared to the overall number of educated and skilled Chinese returnees who have studied and worked abroad. This is possibly due to the fact that the bar set for inclusion in the Thousand Talents and Ten Thousand

Talents programmes is extremely high. For example, applicants to these initiatives must first have obtained a doctoral degree from a top-ranked foreign university; those with an academic work background should have served as a professor-level expert or scholar at recognized foreign universities or leading research institutions. Applicants who do not come from an academic/scholarly background must have held a senior-level managerial or technical position in large foreign companies, and returnees who were self-employed while living overseas have to hold certain patents or possess mastery over a core technology deemed critical for China's development (H. Wang and Bao, 2015).

According to a recent Chinese Ministry of Education (2014) study, 353,500 Chinese who studied overseas returned to the mainland in 2013. Some 60 per cent of these returnees obtained a master's degree, 6 per cent PhD, and 30 per cent a bachelor's degree. The overwhelming majority of these returnees would not be able to meet the standards set for the Thousand Talents and Ten Thousand Talents programmes.

While a joint survey of educated Chinese returnees conducted by the Centre for China and Globalization (CCG) and the Peking University Guanghua School of Management showed that most saw value in talent attraction schemes, more than 70 per cent of the respondents said they "don't know much" about the talent plans in general. Moreover, 84.3 per cent said the same regarding the Thousand Talents Programme in particular. The main reasons cited by the survey participants for coming back to China were: making use of their advantages in professional fields; exploiting opportunities in the domestic market; optimism about the economic outlook in China; and reconnecting with family and friends (H. Wang and Bao, 2015).

In conclusion, the Chinese Government's national-level schemes to encourage the return of skilled Chinese nationals living overseas have helped to spur the return of some very highly educated and skilled talents back to China, but appeared to have had a limited influence on the overall reverse flow of skilled and educated Chinese back to their home country.

3.2.3 Regional-level schemes for encouraging the return of overseas Chinese talent

Beyond the national government, regional governments at the provincial and city levels also have the authority to develop foreign talent attraction schemes at the regional level. Below are schemes implemented by provincial and city authorities to lure back highly skilled and educated Chinese talent from overseas.

3.2.3.1 Provinces

As is the case with China's national government, provincial level governments have been making concerted efforts to encourage overseas Chinese talent to return. For example, Fujian Province issued the "talent residence permit" aimed at high-end overseas-based Chinese professional talent to encourage them to relocate to the province (Government of Fujian, 2012). Holders of the permit are offered privileges in searching for housing, registering a business, obtaining social security, and getting a good education for their children. In 2011, Zhejiang Province initiated the "Seagull Plan" targeting leading academics and top-notch IT and pharmaceutical research and development talent (1000Plan.org, 2011a). Under the Seagull Plan, Chinese academics and professionals do not need to make Zhejiang their permanent home, as those who work in the province for at least two months of the year are eligible for the plan. Successful applicants to the programme receive support from the Provincial Government with residence permits, health care, other social insurance needs, as well as assistance in housing and schooling for their children.

Five years prior to the "Seagull Plan" in Zhejiang, neighbouring Jiangsu Province established its regional scheme focused on attracting returnee entrepreneurs, with the goal of adding 20,000 talented Chinese from overseas within five years. In addition to providing more than CNY 1 million in financial support to qualified entrepreneurs, the programme established liaison offices in eight developed countries, including Australia, Japan, and the United States, to lure back top Chinese talent from overseas. The Provincial Government has also put in place preferential policies to ensure that such returnees can obtain good housing, work for their spouses, and quality education for their children. Features of the Fujian, Zhejiang, and Jiangsu talent attraction programmes can be found, to varying degrees, in other provincial-level schemes, such as the "Zhujiang Plan" in Guangdong Province, which aims to attract innovative entrepreneurial talent (1000Plan.org, 2009; H. Wang and Bao, 2015).

3.2.3.2 Cities

Among cities in China, Shanghai was the first to initiate an overseas talent attraction scheme in 1992, and the city is now competing for global talent through its "Ten Thousand Overseas Returnee Cluster Project" (H. Wang, 2011). This initiative attracted 20,000 overseas returnees to the city, who established 4,000 new business ventures. Beijing on the other hand, has created China's biggest and best-known science and technology zone, aimed at incubating new high-tech ventures. Located in Zhongguancun in the Haidian District, these science and technological zones have been widely referred to as the "Chinese Silicon Valley". By the end of 2011,

the Zhongguancun high tech zone was home to 5,000 companies set up by 12, 000 returnee entrepreneurs, close to half of whom (44 per cent) held patents prior to their return. In 2008, Beijing also set up the Overseas Students and Scholars Service Centre to help recruit overseas Chinese (H. Wang and Bao, 2015).

First-tier cities are not alone in attracting high-end talent overseas returnees. Smaller coastal cities with individual talent plans include less well-known metropolises like Ningbo in Zhejiang Province, which instituted its “3315 Plan” in 2011 (1000plan.org, 2011b); and Chengzhou in neighbouring Jiangsu Province. In the interior and west of China, Wuhan and Chengdu have also implemented major local initiatives to attract high-skilled overseas Chinese. These and other municipal-level overseas talent recruitment initiatives mainly target educated and qualified individuals in technical and scientific fields, as well as those with entrepreneurial skills (H. Wang and Liu, 2016). Such individuals receive generous incentives in the form of housing funds, job placement, education assistance for spouses and children, and financial support for establishing new businesses. Many of these cities, notably Wuhan, have sought to emulate Zhongguancun by creating their own high-tech innovation zones and parks (H. Wang and Bao, 2015). Chengdu, however, stands out among these metropolises in its effort to attract not just high-end scientific, technical, and entrepreneurial talent, but financial talent as well, which is part of its effort to become the financial hub of Southwest China. The city has spent CNY 120 million to offer special incentives to encourage both financial companies and individuals with a strong educational and work background to relocate to Chengdu (Crossley, 2012; GoChengdu.cn, 2014).

3.2.3.3 Assessing provincial- and municipal-level efforts to attract overseas Chinese talent

Up through August 2012, 31 Chinese provinces and municipalities, along with 35 industries, had established 2, 778 local talent plans (H. Wang 2013). Since that date, the number of provinces and municipalities with their own talent plans has risen to 57 (H. Wang et al, 2016). As of April 2013, China also boasted 112 high-level Overseas Talent Introduction Bases and more than 260 entrepreneurial parks for overseas Chinese scholars. Data shows that over 20,000 businesses, and more than 40,000 talented returnees are making use of such facilities (H. Wang and Bao, 2015; 1000Plan.org, 2015).

As with the main national initiatives targeting overseas Chinese nationals, most educated and skilled talents outside appear to not even be aware of these provincial- and municipal-level talent attraction schemes. This notion is supported by one of the major findings of a CCG investigation into the return migration of educated and skilled Sichuan talents from Beijing to

Chengdu (H. Wang et al., 2016). While not expressly about drawing overseas talent, the study hints at a general lack of awareness of provincial and municipal talent attraction schemes, and it is also one of the few studies so far on this issue. The study surveyed Sichuan talents that went back to their home province and those who remained in Beijing. It found that among the returnees, the vast majority were not aware of or attracted by local Chengdu talent attraction schemes. They went back to Sichuan mainly to reunite with their families, or to take advantage of more affordable housing and perceived lifestyle advantages. Among talents from Sichuan staying in Beijing, most did so because they had either already found some measure of success or felt their career would benefit from remaining in the capital. Beijing talent schemes had little influence on drawing these people from Sichuan.

As with national-level talent attraction initiatives, the threshold for successful application to municipal and provincial schemes is high. For example, to qualify for the “innovative” category of the Chengdu Talent Programme, individuals must:

- hold advanced degrees from top-ranked Chinese or foreign universities, mainly in scientific and technical fields;
- have work experience at well-known domestic Chinese or foreign multinational businesses;
- be able to showcase managerial work experience in top-ranked Chinese and foreign companies, with a strong track record of business success; and
- demonstrate a focus on establishing start-ups in cutting-edge scientific and technological fields to fill gaps in the Chinese domestic market (Jun, 2015).

These stringent qualifications for the Chengdu Talent Programme are duplicated in other municipal- and provincial-level programmes, all of which target very high-end returnee talent (H. Wang and Bao, 2015). On the other hand, overseas Chinese nationals are returning in greater numbers, which suggests that beyond these schemes, there are other incentives encouraging these talents to return to China, which might require further investigation.

3.2.4 Visa regulation changes and other new initiatives for attracting skilled foreign talent to China

As noted above, national and regional initiatives for attracting talent from overseas have generally focused on highly-skilled Chinese nationals living abroad, rather than non-Chinese, foreign talent. That is possibly because Chinese nationals are effectively returning home, and can therefore be more easily integrated. In addition, historically China has been an origin country for migrants, rather than serving as a destination country for foreign talent. It might be said that the

country lacks experience in accommodating non-Chinese nationals through policies concerning long-term residence, let alone policies for settlement and citizenship.

To be sure, the main Chinese national-level talent attraction initiative, the Thousand Talents Programme, targets not only Chinese returnees, but also foreigners through the “Foreigner Thousand Talents Programme”. However, according to SAFEA Director Zhang Jianguo (2016), as of January 2016, just 313 top-flight foreign passport-holding personnel were attracted to China by this scheme. The numbers of foreign researchers recruited to work in China has also been limited. SAFEA (2015) indicates that a total of 5,105 foreign researchers/scholars were based in China in 2013; 1,519 were working in technology and economics, and 3,514 in arts.

In 2004, the Government implemented the “China Greed Card” residence permit, its first policy for enabling foreigners to gain permanent residency in China. Since the start of the Green Card initiative, fewer than 10,000 people have obtained such permits. One may argue this small number reflects the fact that Green Cards have only been issued to high-end educated and skilled talents. These include executive personnel from companies deemed to be promoting Chinese economy, scientists working on key technological developments, or individuals making large investments in the country (US\$500,000 or more) (Lefkowitz, 2013). Reports in the Chinese media also indicate that some foreign applicants have been disappointed with the Green Card, believing that it has not been helpful in their day-to-day living in China (Zhang and Zhou, 2016).

Following the 2004 institution of the Green Card, there was a general tightening of visa regulations for foreigners in China. For example, the Exit-Entry Law, 2012, and later revisions to the permanent residency application system subjected foreigners working in China illegally to heavy fines and even detention, while stiff financial penalties were also levied on firms providing fake certificates or invitation letters to unqualified foreigners (Lefkowitz, 2013). As noted above, the number of “Green Cards issued has remained limited. In 2013, for example, just 7,300 of the 600,000 foreigners living in China had long-term residence permits (Zhang and Zhou, 2016). By contrast, in that same year, 1 million people became permanent residents in the United States (Morger and Yardley, 2014).

Since late 2014 there have been series of new official campaigns for recruiting foreign talents, led by Shanghai and Beijing. Both cities took major steps in relaxing visa regulations for foreign nationals, which is part of an effort to promote the high tech sector and entrepreneurship in their local economies (H. Wang and Miao, 2014).

In 2015, the regional government in Shanghai simplified regional visa application procedures

for foreigners and explored ways of enabling international students to remain in the city, by either working for local firms or setting up their own businesses after graduation. The city also significantly relaxed requirements with respect to income thresholds, qualifications, and job-type needed for foreigners to apply for permanent residence status. In early 2016, in order to further develop Zhongguancun, the Beijing Municipal Government set up a new integrated system for evaluating foreign talent, and established a “one-window” service for visa applicants. The latter move involved setting up a visa application office within the technology park itself. The new system also shortened the period of time required for processing visa application and facilitated the acquisition of long-term residence permits by technical talent deemed to be crucial by local firms. Like Shanghai, Beijing lowered the bar for other kinds of high-skilled foreign professionals with regard to application for permanent residence status. In addition, both cities are working to improve provision for the spouses and children of high-qualified foreign professionals (Dezan Shira and Associates, 2015; Dhoud, 2016; H. Wang, 2016; Wright, 2015; Zhou, 2016a).

As the policies adopted by the Shanghai and Beijing local authorities have only just been implemented in 2015–16, it is too early to evaluate their effectiveness. Nevertheless, a recent survey found that among 300 Republic of Korea students studying in China, 90 per cent of them were interested in staying in China, either by finding a job or setting up their own business (Dhoul, 2016).

Apart from new visa regulations, another recent major initiative to attract high skilled immigrants has been undertaken by SAFEA, which is building a database of overseas talents –an initiative that is one of the first such “big-data” projects in China. When it is completed, the database will be the key component in a new digital platform for matching foreign experts with potential employers in China. It will include the nationalities of legally employed foreign workers as well as their areas of expertise, industry of employment, and city of residence (Zhou, 2016b).

While the database is a welcome move, it should be recognized that it remains a policy trial for incorporating more foreign talent into China’s workforce, and there are many challenges to address. First, the number of foreigners employed in China that hold Foreign Experts Certificates is limited. In 2013, there were 22, 209 such individuals (i.e., foreign nationals with PhD degrees) employed in China, with 8,300 being classified as technology and economics experts, while 13,909 had foreign expert status in the Liberal Arts (SAFEA, 2015). That figure amounts to less than 4 per cent of the nearly 600,000 foreigners legally residing in China according to the 2010 population census. Second, the database is clearly aiming at foreign talents already living

in China, so it may have little to no impact with regard to attracting additional foreign talent to the country. That said, the database suggests that – like Beijing and Shanghai – the Chinese Government at the national level is also starting to experiment with methods to retain talents that have already arrived in the country, and retention is an essential component of growing the overall talent pool.

In recent years, in addition to China's focus on encouraging overseas Chinese nationals to return to the country, the government has also intensified its efforts for drawing the global talent required, and has introduced a series of new policies and systems to facilitate the process for foreigners to work in China.

Integration of the two Permits

In December 2015, in accordance with a decision of the State Council's Administrative Examination and Approval Reform Office, the Employment Permit for Foreigners issued by MOHRSS and the Foreign Expert Work Permit issued by SAFEA were combined to become the Foreigner's Work Permit in China. SAFEA takes charge of administering this permit.

A pilot programme for the Foreigner's Work Permit in China was carried out in Beijing, Tianjin, Hebei, Shanghai, Anhui, Shandong, Guangdong, Sichuan, Yunnan, and Ningxia from October 2016 to March 2017. Following this pilot, the permit was rolled out across the country on 1 April 2017.

Management and Service System for Foreigners Working in China

The Management and Service System for Foreigners Working in China was adopted in September 2016 and came into effect on 1 April 2017. The following improvements in the management of foreigners working in China have been achieved through this new system:

1. Unified system

- The department in charge has been unified under the competent authority of SAFEA.
- Application procedures and the materials/documents required have been standardized.
- The code/number for foreign workers has been standardized and personalized. One person will be assigned one code/number, which will remain the same throughout their lifetime.

2. Classification management

- Foreigners working in China are now classified into Categories A, B, and C, namely, high-end talents (A), professionals (B), and other foreign workers (C).

3. Simplified visa and residence permit application procedures

- Visa and residence permit application procedures can be completed online at a designated website. The materials/documentation needed have been simplified in each stage. The kinds and number of materials required have been reduced.
- Employers can submit the required information online. After a preliminary examination by the responsible authority, an employer or an entrusted special service institution can submit the necessary written materials to the responsible authority. Foreign high-end talent (Category A) can submit copies of the corresponding materials online. Hard copy materials are no longer required.
- The requirement that visas can only be applied for upon receipt of an invitation letter issued by the local government department has been abolished.

The new online application system is being piloted in selected regions, such as Shenzhen, from April to June 2017, and will be rolled out across the country in July 2017. The implementation of the new policy and the new management and service system will greatly simplify the application and management procedures for foreigners working in China, thus enhance the country's ability to attract foreign talents to work and live in China.

4. Comparative study of admission policies and mechanisms for attracting foreign talent in Germany/EU, Japan, and Singapore

4.1 Germany

4.1.1 Labour migration to Germany in the early years of the *Bundesrepublik*: The *gastarbeiter* era

Despite diversity in the levels of skills possessed, foreign migrant workers have long been an important part of the German labour market (Sassen, 1999). For example, prior to 1914, large numbers of Polish migrants were working in the agricultural and mining industries (McCook, 2011); indeed, in the early 1920s, one quarter of the population in Germany's Ruhr region mining towns were Polish or had Polish heritage (IOM, 2015). Between the 1950s and 1970s, large numbers of "guest workers" (*gastarbeiter*), including Polish and Turkish migrant workers contributed to the "Economic Miracle" (*Wirtschaftswunder*) in Germany (Euwals et al., 2007; Göktürk et al., 2007). The population of the *gastarbeiter* workforce peaked prior to the economic recession in 1973, with 2.6 million migrant workers living and working in Germany (Sievert et al., 2012).

As with other economically developed countries, the German economy slowed down due to the oil crisis in 1973. Facing a surplus labour force of over 1 million workers, the German Government had to terminate labour recruitment treaties previously signed with countries such as Spain and Italy (Sievert et al., 2012). However, evidence shows that instead of migrating solely for work, many migrants started entering Germany for the purpose of family reunion, for example, reuniting with Turkish migrants who had previously entered the country during the *gastarbeiter* era (Şen, 2003; Euwals et al., 2007). Meanwhile, there were increasing social and political concerns over the growing numbers of migrants in the country. Political and public debate around migrant workers at the time increasingly focused on national security concerns, with migrants being considered a potential source of instability, rather than as an important part of the labour market (Faist, 1996; Göktürk et al., 2007).

Implicit in the above summary of migrant workers in Germany is that governments in Germany (and German society as well) regarded migrant workers solely as guests. This may be one of the reasons why integration and settlement of migrant workers were generally not on the policy-making agenda between 1914 and early 2000s.¹ This attitude toward migrants is one reason why Sievert et al. (2012) argue that Germany has been "a reluctant country of immigration".

¹ See Fetzer, 2000, for more on the impact that public perceptions on immigration have had on German immigration policy.

However, new immigration policies in Germany starting in 2000 have shown possible evidence that the German policy-makers have started recognizing the need for attracting immigrants, particularly talented elites who are highly skilled and educated. The following sections will examine this change in the direction of German migration policies.

4.1.2 The new domestic economic context for foreign labour recruitment in Germany

Comparing official statistics between EU Member States, economic development data and demographic development data are showing a contrasting picture regarding economic development and the labour market in Germany between 2004 and 2015. Germany is among the top five most economically developed countries. Like other advanced economies in the EU, the Germany economy entered recession as a result of the 2008 economic crisis, with negative GDP growth of -5.6 per cent in 2009 (World Bank, 2016; Piirto et al., 2015). However, Germany was among the countries able to most quickly recover from that slide, with 2010 GDP growth jumping to 4.1 percent (which is particularly strong compared to other developed EU economies like France and the United Kingdom who saw 2 per cent and 1.5 per cent GDP growth respectively in 2010). Further, Piirto et al. (2015) notes that after the economic crisis in 2008, the job vacancy rate in Germany has continuously been near the top among all EU Member States, at higher than 2 per cent between 2011 and 2015, while the EU is about 1.5 per cent.

Economic development in Germany may be strong, but demographic data shows possible challenges for the domestic labour force to fill the 568,743 reported vacancies in Germany in 2015 (Germany Federal Statistics Office, 2016). One challenge comes from the low fertility rate in Germany. Data from the World Bank and the European Commission show that the fertility rate in Germany in 2015 was about 1.5, while the average across the 28 EU countries is 2.0 (Piirto et al., 2015). By contrast global fertility rate in 2015 was about 4.0 (World Bank, 2016b), and as noted above, even to sustain population size the fertility rate must be at 2.1 (higher than the EU average, and well above Germany).²

Economic development in Germany now requires both low-skilled labour, like what was typical in the *gastarbeiter* era, and highly qualified labour for advanced industries such as information technology. Lasi et al. (2014) suggests that for industries such as engineering and computing, German businesses and researchers can be regarded as international leaders. But maintaining or extending that leadership position is based on having large numbers of highly skilled and educated elites in mathematics, science, information technology (IT), and technology (or MINT,

² For more on the negative impacts that a low fertility rate can have on labour market development in advanced economies, see Adsera, 2014; Kotowska et al., 2008.

to use the official German acronym) working throughout these industries (Lasi et al., 2014). The fact that the government website *Make it in Germany*³ emphasizes heavily that skilled and educated MINT migrants are in demand Germany, suggests that the Germany labour market is possibly experiencing a shortage of domestic MINT labour.

The next section reviews in detail the national initiatives taken by the country to attract such labour to Germany.

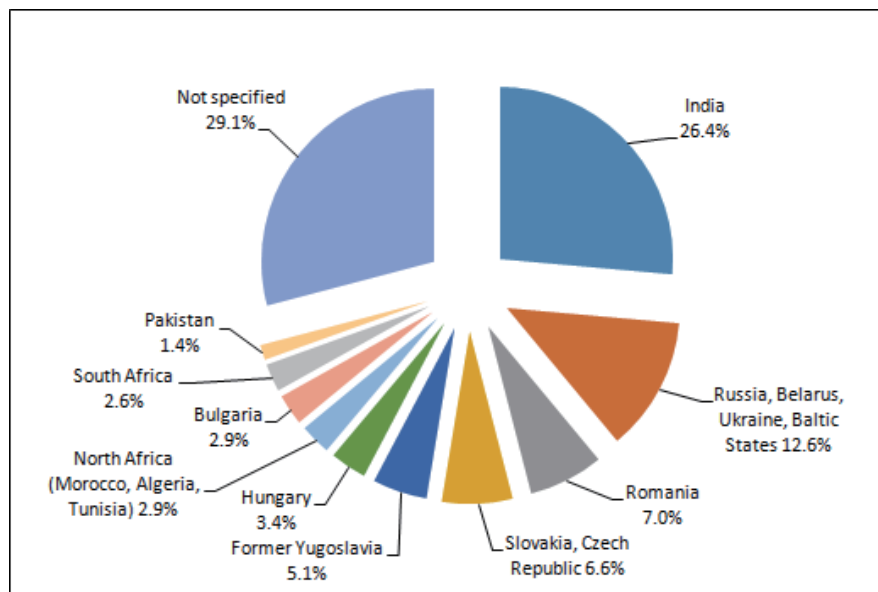
4.1.3 German talent attraction policies

4.1.3.1 The Green Card system

In February 2000, responding to complaints from the German IT and technology industries about skilled worker shortages, Chancellor Gerhard Schröder announced the launch of the “Green Card” programme for such talent (Werner, 2002). This new scheme was implemented in August 2000, marking the first effort by Germany to recruit such professionals from outside of the EU. Under the Green Card programme, German IT firms can hire up to 20,000 foreign, non-EU IT specialists for a maximum of five years. However, this 20,000-person maximum was well below the required 75,000 skilled IT workers that German IT companies claimed to need. The Green Card programme also stipulated that in order to hire foreigners, companies had to show evidence that no qualified German worker was available to fill the vacancy. This scenario has then forced German IT employers to restrict the employment of foreigners to specific sectors (Bauer and Kunze, 2004).

Between August 2000 and July 2003, 14,876 work permits were issued through the Green Card scheme, less than 75 per cent of the target number of 20,000 envisaged by the programme (Jurgens, 2010). As figure 2 shows, India accounted for the biggest single share of IT recruits under the programme, and at least 37.6 per cent of Green Card holders came from Eastern Europe.

³ *Make it in Germany* is an official website for migrant workers looking for jobs in Germany and is managed by the Federal Ministry of Labour and Social Affairs and the Federal Ministry of Economic Affairs and Energy. The site serves as an online platform providing information to inform overseas talent of migration policies, talent programmes, and job vacancies in Germany.

Figure 2. Countries of origin of German Green Card holders

Source: Kolb, 2005, p. 2.

Most of the IT professionals attracted to Germany under the Green Card programme were recruited by small- to medium-sized firms with fewer than 500 employees. Applicants from these companies applied for 11,368 “Green Card” work permits (about 75 per cent of the number issued), while IT businesses with over 500 employees –mainly multinational conglomerates like SAP and Deutsche Telekom – accounted for just 25 per cent of Green Card work permit applications. Kolb (2003) argued that the main reason why large IT companies failed to make greater use of the Green Card lies in the “growing importance of internal, transnational labour markets within individual corporations” (p. 8). He further notes that “multinational corporations have created their own institutional channels to steer the migration of the highly qualified” (Hunger and Kolb, 2003, p. 10). The main impact of the Green Card programme, Kolb (2003) concluded, was to help level the playing field between small- to medium-sized IT firms with their much larger multinational rivals.

4.1.3.2 Immigration Act, 2004

As the Green Card Programme expired in 2004, the German Government passed the far-reaching Immigration Act, which went into effect on 1 January 2005. The Act on the Residence, Economic Activity and Integration of Foreigners in the Federal Territory, 2004, encompasses the rules dealing with the entry into and presence within Germany of foreign workers, including skilled talent. The enacting of this legislation further signalled that the German Government officially recognized Germany as an immigration country.

The law's approach to immigrant labour is based on employment offers, and is therefore to a large extent market-driven. Foreigners looking to find jobs in Germany must have a job offer and must apply for a residence permit. Under Section 18⁴ of the Immigration Act, approval from the Federal Employment Agency is required in order for a residence permit application to be accepted. Decisions regarding the residence permit applications are subject to labour demand in particular occupations and their potential impact on unemployment in Germany. Residence permits can be granted if there is evidence to suggest that no qualified German national can fill the job, and that employment of the applicant is not going to negatively influence the German labour market. Upon approval, a three-year permit can be granted.

All low- and medium-skilled migrants seeking employment in Germany are subject to the Green Card system, and foreigners who have previously passed the labour market test and are not planning to switch jobs, can be exempted from the labour test for permit renewal. However, once the worker changes jobs, the applicant will be subjected to the labour market test prior to taking up the new employment, and will have to make a fresh application for a residence permit.

There is another group of foreigners exempted from the labour market test when initially seeking to work in Germany: under Section 19 of the Immigration Act, "highly qualified foreigners" may be granted a settlement permit – that is, permanent residency – without approval from the Federal Employment Agency. It should be noted that more expansive definitions of "highly qualified foreigners" are not provided elsewhere in German policy, as Section 19 of the Immigration Act is essentially the only policy in Germany for attracting this class of talented people.

Highly qualified migrants must also meet the following three general conditions to enter Germany through Section 19. First, the applicant must present evidence to show that they can integrate well into German society. It should be noted that this "evidence of integration" does not include a requirement concerning German language abilities of the applicant or their family members. Second, applicants must declare that they can support themselves without State benefits. Third, their entry must constitute an "individual case" under the Immigration Act. Highly qualified migrants who meet these conditions are immediately eligible for an unrestricted residence permit, or "settlement permit" (Federal Ministry for Economic Affairs and Energy, n.d.). More will be said shortly about the rights and privilege provided by a settlement permit.

Whether a type of employment is in line with requirements of Section 19 of the Immigration Act depends on the decision made by the local foreign resident authorities, which is also called

⁴ The use of the term "Section" is derived from the English translation of the Immigration Act, 2004, provided by the Federal Ministry of Justice and Consumer Protection. See https://www.gesetze-im-internet.de/englisch_aufenthg/englisch_aufenthg.html#p0268.

the “Foreigners’ Office”. There is no evidence to suggest these offices consult with the Federal Employment Agency when making such decisions. Local Foreigners’ Offices also have the responsibility to decide whether highly qualified migrants who fall under Section 19 meet the “can be integrated into German society” criterion for obtaining a settlement permit.

More importantly, Section 19 emphasizes entry for only the most highly qualified workers, which means that highly educated workers who just starting their careers will have difficulty meeting the relatively high threshold set under Section 19. Indeed, between 2005 and 2011, 1,217 people entered Germany via Section 19. The majority of skilled migrants instead applied for entry through Section 18. Between 2005 and 2010, two-thirds of migrants entering the country under Section 18 were classified as “skilled”. In this context, “skilled” refers to migrants who have certain kinds of “training”, which in this context includes tertiary studies and vocational education, which will be discussed in more detailed in section 4.1.5.

Researchers can choose to enter Germany under Section 19 or Section 20 of the Immigration Act. Section 20 targets scholars signed to short-term research projects with recognized German research institutions, for example, the Max Planck Institute. These individuals are eligible for a temporary residence permit of up to three years’ duration. Prior to 2011, just 668 people made use of Section 20.

The few highly qualified migrants who have managed to secure a settlement permit upon first entering Germany (that is, Section 19 entrants) receive considerable rights and privileges by virtue of holding that type of permit. For example, settlement permits are not restricted in time or scope, and are not impacted by the individual changing jobs. Further, family members of Section 19 settlement permit holders are also excluded from having to show proof of German language ability before entering the country; they are also allowed to seek and secure employment of their own without restriction.

By contrast, the spouse of a residence permit holder must show evidence of “basic” German language skills prior to entering the country. These individuals can work in Germany, provided they meet the criteria for coverage under either Section 18 or Section 19 of the Immigration Act.

Skilled immigrants who did not apply for entry through Section 19 can also apply for a settlement permit after five years of living in Germany under a residence permit, and if they meet four additional conditions. The first condition is having permission to work and the ability to secure their living as well as that of their family (if applicable). The second is to have made mandatory contributions to the statutory German pension insurance for at least 60 months. The third is possession of adequate German language skills. The fourth is to not have a criminal record.

The Immigration Act, 2004, streamlined procedures for immigrants to obtain residence permits. The Act is based on the concept of “one-stop governance”, as only one application has to be submitted to the local Foreigners’ Office. Previous regulations required applicants to submit two applications, one for the residence permit and one for the employment permit. Foreigners from EU Member States and select non-EU countries, including the Australia, Canada, and the United States, are exempted from having to secure a visa before entering Germany, and can apply for residence permits after initial entry. Individuals can stay in Germany for up to three months before obtaining permission to extend their stay in country. Job-seekers entering the country without a visa can apply for a “job-seekers” visa, which is similar to those that require an application prior to entry. Relevant regulations for this visa are covered in Section 18 of the Immigration Act, whereby applicants are given up to six months to find a job in the country. Once in Germany, individuals need to apply through the local Foreigners’ Office with identification documents, certificates of “good conduct” and health, a rental contract (if applicable), and proof of employment/ability to support oneself, as well as health insurance. Prospective migrants will undergo a 10-minute interview; if all the documents required are available, their applications can be processed within one or two weeks. The documents required to apply for a residence permit, as well as the application procedures and regulations vary significantly across different localities in Germany, which will be discussed in more detail in section 4.1.5.

Self-employed and entrepreneurial immigrants are also eligible to apply for residence permits. Migrant entrepreneurs are required to show evidence of having secured financing for their business, and that their products and/or services can benefit the German economy by meeting certain kinds of national or regional needs. In processing applications of residence permits from such individuals, officers in local Foreigners’ Office have to assess the quality of their business plan, previous business record, and the potential contribution the business can bring to research, innovation, and job training. Self-employed applicants can apply for residence permits of up to three years’ duration. Entrepreneur migrants can apply for settlement permits after three years if their business plans are successful, and can demonstrate the ability to support themselves financially.

4.1.3.3 Foreign students graduating from German universities

The Immigration Act, 2004, was heavily criticized from the outset over its apparent inability to provide support to young high-skilled foreign workers, especially recent graduates from German universities. For instance, as noted above, Section 19 of the Act exclusively targets older and more experienced high-end talent, such as top-level executives, elite researchers, and top-flight technical/scientific personnel, effectively excluding young high-skilled migrants. To address this problem, starting in January 2009, some regulations for securing residence permits were eased, particularly with regard to foreign graduates from German universities. Under the Immigration

Act, foreign graduates from German universities can apply for a residence permit in Germany under Section 18. According to the revised regulations, they are also exempted from the labour market test when applying for a residence permit. However, this test continues to be applied to graduates from foreign universities and migrants with IT backgrounds, who are also covered by Section 18 (Wiesbrock and Hercog, 2010).

By fulfilling four conditions, international students who have obtained degrees from German universities are also allowed to apply for a settlement permit after two years, rather than the typical five. First, these individuals are required to have found suitable employment in their field. Second, they should possess one of the following for a period of two years: a residence permit for employment and/or self-employment, or an EU Blue Card (which will be discussed later in this chapter). Third, they must have paid the statutory German pension insurance for 24 months. Lastly, a B1 level of German language proficiency is also required (Federal Office for Migration and Refugees, 2013).

4.1.4 German immigration policy and the EU

As one of the six countries who first signed the Treaty of Rome, 1957, which ultimately led to the establishment of the present-day European Union and European Community (EC, or Common Market), labour immigration policies in Germany have been influenced by policies and labour market situations in the wider EU/EC for a long time. This is particularly the case with the latest major EU talent attraction initiative: the 2009 Blue Card scheme.

4.1.4.1 Labour mobility in the EU/EC and the German stance on immigration

Since the beginning, the EC has emphasized the free movement and exchange of people, including labour, between Member States. This underlining principle of the EU is laid out in Article 50 of the Treaty of Rome, 1957. Therefore, even during the *gastarbeiter* era, labour flowed freely between Member States; especially between France, Germany, and the Netherlands, which all experienced labour shortages. Between 1958 and 1972, 8 million work permits were issued by EC Member States, with one-third of these permits going to migrants from within the EC (Koikkalainen, 2011). The EC further clarified and expanded the Treaty of Rome's stipulations on labour mobility during the 1960s, especially through Regulation 1612/68 (1968). Subsequent amendments to regulations, such as Regulation 1251/70 (1970) and Directive 77/486 (1977), enabled migrants from EU Member States to access benefits similar to those shared by citizens – for example, pension benefits and access to education for their children (Condianizi et al., 2008; *Official Journal of the European Communities*, 1977; *Official Journal of European Union*, 2013).

These moves were paralleled by an expansion in the definition of “worker” beyond labour employed in industry in the EC, as a result of the Deborah Lawrie-Blum case in 1986. A British national, Lawrie-Blum applied to work as a gymnasium instructor in a college preparatory high school in Baden-Württemberg, Germany. But such a request conflicted with employment rules in that state. The European Court of Justice ruled in favour of Lawrie-Blum, and thereby broadened the definition of workers covered by EC freedom of movement rules to include service professionals as well as industrial labour (*EUR-lex*, 1986). Other EC and EU judicial rulings, regulatory measures, and directives extended the categories of workers who could freely move among Member States to include individuals in short-term jobs and apprenticeship placements (Koikkalainen, 2011).

However, nearly two decades after the Lawrie-Blum case, conflict arose between Germany and the EU over the free movement of labour. This conflict was a direct result of expansion of the EU in the 2000s. In 2004 the EU underwent the largest single enlargement in its history when seven former Soviet bloc countries in Eastern European and two Mediterranean countries were admitted as new EU Member States. There was a wide gap in wages between the new members and existing members; for example, wages in Latvia were one eighth of the EU average. This imbalance gave rise to concern over a possible wave of economically motivated migration from new Member States to the more developed economies in the EC. Such concerns were raised again in 2007, when two of the poorest countries in Europe, Bulgaria and Romania, joined the EU. Germany has expressed particular concern over this issue, even though both Germany and Austria were given the right to limit migration from new member countries for seven years – a term that expired in May 2011. Indeed, Germany and Austria have been among the last EU countries to dismantle the transitional controls limiting the influx of workers from new Eastern European Member States (Koikkalainen, 2011; Pytliková, 2014).

A wave of low-skilled immigrants from Eastern European countries did, in fact, take place following 2004 expansion of the EU. The majority of these workers migrated to the United Kingdom and Spain, which were among the first countries to welcome migrants from new Member States. Further, migrants from Poland made up the majority of migrants from the new Member States in Eastern Europe, with 2 million, or 5.3 per cent of the Polish population, migrating abroad. Most male unskilled migrants from Eastern Europe found jobs in construction, possibly due to the housing booms in Ireland, Spain, and the United Kingdom prior to the 2008 global economic crisis. Female unskilled migrants mainly found employment as domestic workers and paid carers (*Spiegel Online*, 2009).

Arguably the rise in the numbers of unskilled labour moving among EU Member States following the 2004 expansion largely mirrored the movements of workers during the *gastarbeiter* era. As

a result, increasing numbers of less-skilled and unskilled migrants have flowed into the more developed EU countries, meaning that the composition of migrant inflows has drifted further away from the highly skilled migrants that are the most keenly sought by countries like Germany. Given these circumstances in the EU labour market, the stage was set for a fresh effort to attract highly qualified talents from outside the EU – the Blue Card system.

4.1.4.2 Background to the Blue Card system

Officials in the EU have long recognized that there are challenges to attracting well-educated and skilled talents from non-EU countries. In the run-up to the institution of the Blue Card scheme in 2007, Franco Frattini, the former EU Justice and Security Commissioner who had been working on this plan for many years, put forward figures showing that while 9.9 per cent of the workforce in Australia, 7.3 per cent in Canada, and 3.5 per cent in the United States are foreign well-educated and skilled migrants, only 0.9 per cent of the EU labour market was composed of well-educated and skilled migrants from non-EU countries. Frattini argued, “These figures show very clearly that, for the skilled workers, Europe is not very attractive and this is the reason why we have to decide to launch this proposal [the Blue Card plan]” (*Spiegel Online*, 2007; Speciale, 2010).

Concerns over the lack of well-educated and skilled non-EU migrants were raised again by projections that between 2015 and 2025, there would be a 23 per cent rise in the number of positions requiring high-skilled labour (68 to 83 million) in the EU. For example, it is expected that the demand for skilled IT workers will grow by about 100,000 per year, but the number of university graduates is failing to meet such demand. Therefore, it is expected that European countries will need to attract about 825,000 non-EU migrant workers in IT and related areas by 2020. In the critical field of health care, a bigger shortfall of nearly 2 million workers is expected by 2020, if one includes health care workers and ancillary professionals (European Commission, 2015). With regard to health care, the adverse demographics of an ageing EU population have amplified the need for skilled foreign labour.

When the Blue Card proposal was first unveiled in October 2007, European Commission President José Manuel Barroso emphasized the need for greater uniformity in EU regulations regarding the admission and long-term residence of highly qualified non-EU migrants. Barroso argued that achieving this goal was hindered by the existence of 27 different national procedures across EU Member States (Speciale, 2010). Therefore, as one uniform regulation, the Blue Card system aimed to attract large numbers of highly skilled non-EU migrants to work in EU Member States. The nature and operation of the Blue Card scheme, including its impact on integrating policies for skilled immigrants across Member States, as well as the Germany’s implementation

is to be discussed in the following section.

4.1.4.3 EU Blue Card: Mechanism, operation, and German application of the scheme

After years of persistent negotiations, and a considerable amount of autonomy being given to Member States regarding their regulations for the admission and residency of skilled migrants, the Blue Card scheme was finalized in 2009 (Cerna, 2014). However, three major EU member countries –Denmark, Ireland, and the United Kingdom rejected the Blue Card system. The Austrian Government condemned the system for taking “centralization too far”, and some German politicians expressed hostility to the scheme (Cerna, 2010). Nevertheless, both countries ultimately decided to take part, with the German Government adopting the Blue Card system in May 2012 (Cerna, 2014). This move was seen as making a major step forward in the long process of liberalizing the country’s labour migration rules (BBC News, 2007; Kolb, 2014).

High-skilled non-EU migrants can apply for a European Union-wide work permit under the Blue Card Directive, 2009. In addition to identity documents and requisite forms, Blue Card applicants are required to provide the following:

- evidence of professional qualifications through education, such as university degree or a vocational certificate;
- a legally binding one-year work offer in one of the eligible EU Member States; and
- evidence to show that your annual gross salary will be 1.5 times the average national salary (or 120 per cent of the average national salary in high demand fields, such as science and IT).

After 18 months of legal residence in the first Member State, EU Blue Card holders can migrate to other EU Member States for employment that demands high skilled and or educational qualifications. Such free movement of Blue Card holders seeks to make the legal status of Blue Card holders transferrable between the 24 EU Member States that have implemented the scheme, and promote greater mobility of talented migrants in the EU. Under the Blue Card scheme, non-EU migrants can gain permanent residency within five years. Blue Card holders are entitled to the same rights and responsibilities as EU nationals, such as tax benefits, social assistance, payment of pensions, public housing, and study grants. Finally, the Blue Card scheme notably offers a “fast-track” admission procedure: applications can be processed within three months, while most national-level alternatives can take longer (European Commission, 2016; Speciale, 2010; Popp and Tietz, 2013).

When the Blue Card Directive was finally implemented in Germany in 2012, it was implemented in a very “immigrant friendly” manner. To start with, EU Blue Card holders in Germany are fast-

tracked for being eligible for a settlement permit. Blue Card holders can apply for a permanent settlement permit after just 33 months (rather than the typical five years), and that period is reduced to just 21 months if the migrant has sufficient command of the German language. Family members of Blue Card holders can legally enter the country and seek employment (Federal Office for Migration and Refugees, 2013; Kolb, 2014). Policies in Germany arguably have been particularly generous towards students and academics applying for entry under the Blue Card scheme. For example, upon graduating from a German university, international students can stay in Germany for 18 months under the Blue Card system to search for employment, an increase of six months compared to the previous 12-month allowance. Furthermore, certain restrictions are not applicable to these well-educated and relatively high-skilled job seekers; for example, advance approval from the Federal Employment Agency is not required for Blue Card applicants who are students and academics. Additionally, like other graduates from German universities, graduates with Blue Cards can still avail themselves of the two-year fast track to a settlement permit. Foreign academics are eligible for an EU Blue Card in Germany providing they hold an employment contract and earn a minimum annual income of €46,800, or €36,200 (as of 2014) for mathematicians, scientists, engineers, doctors, and IT specialists. These relatively low-income thresholds also apply to non-academic highly qualified talents applying for Blue Cards in Germany (Federal Office for Migration and Refugees, 2013; *ICEF Monitor*, 2012; Kolb, 2014). Kolb (2014) argues that all of these reduced restrictions amount to a “general abolishment of the labour market test for Blue Card holders, [with] wage ceilings at the lowest edge of what the EU has defined as minimum requirements and unlimited labour market for family members” (p.65-66). From the perspective of migrants, the major drawback of the Blue Card scheme, as summarized by Wiesbrock and Hercog (2010), is that during the first two years of “legal employment”, the Blue Card holder is required to work in highly skilled positions and for a specific employer. Although the German settlement permit is not tied to holding a specific job, this stipulation of the Blue Card does apply to residence permit holders.

As noted at the top of this section, EU Member States have retained considerable autonomy in making migration regulations and procedures for skilled talents within the framework of the Blue Card scheme. For example, decisions regarding the numbers of migrants admitted fall under the jurisdiction of national governments, rather than the EU (Member States are also encouraged by the Acts of Accession terms to continue giving preference to workers from other Member States) (Cerna, 2010). In addition, the Blue Card Directive sets minimum standards and proscribes a limited number of rights, giving considerable autonomy to Member States through numerous “may” clauses and references to national legislation. In other words, countries can choose between a liberal migration regime, as has been the case for Germany, or a relatively restrictive implementation of the Blue Card scheme. Additionally, many EU countries are keeping in place their national schemes for attracting highly educated and skilled talent, which tend to compete with, rather than complement, the Blue Card system (Desiderio, 2016). For

example, Germany has retained the Immigration Act, 2004, as one of the legal foundations for policies regarding skilled workers (Bauder, 2008).

4.1.4.4 Assessing the Blue Card

Current experiences of implementing the EU Blue Card scheme suggest it may have failed to achieve the expectations of attracting highly qualified talent from outside the EU. According to a 2015 report issued by the OECD, Europe continues to trail other developed countries in attracting highly educated migrants. One quarter of migrants coming to the EU fell into this category, compared to 35 per cent for non-EU OECD countries. Evidence of inefficiency in attracting foreign elites can also be found in Gallup Surveys (2011–2014), which found the EU had a relatively weak attraction for highly educated potential migrants compared to other OECD countries, including the United States (European Commission, 2015). A 2015 European Commission Internal Assessment of the Blue Card scheme also found the results to be a major disappointment, as to the number of Blue Cards issued has been small and well below what had been anticipated (European Commission, 2015).

One of the possible factors behind the disappointing results of the Blue Card scheme is the possible “reverse brain drain” discussed above that has seen emerging economics such as China and India increasingly drawing their overseas nationals back home (Wogart and Schüller, 2011). However, the European Commission has argued that more fundamental flaws exist with respect to the design and operation of the Blue Card initiative. They argue that the fact that the Blue Card system does not supersede existing national schemes for attracting international elites is one fundamental reason for the current failure. The European Commission has admitted that with regard to the Blue Card scheme, “The level of coherence and harmonisation among the EU member countries with respect to rules for skilled migrant from outside the EU across member countries and the facilitation of intra-EU mobility—a clear EU-added value—remains limited.” The Impact Assessment went on to state, “This creates a fragmented and complex landscape of many different regimes for admitting highly qualified third country nationals” (European Commission, 2015). Cerna (2010; 2014) is in accord with this assessment from the EU, arguing that differing national policies around attracting highly skilled migrants have been transferred to the EU level, creating variations in Member States’ positions on the Blue Card system in the form of a two-level game. This divergence, in turn, has rendered the Blue Card scheme relatively ineffective, making it little more than a “marketing tool” (Cerna, 2010).

The EC further summarized two major defects in designing and implementing the Blue Card scheme. First, it is tied to specific employers, so if individuals lose their job or change jobs they are required to apply for a new Blue Card. Second, the Blue Card applies only to non-EU

employees, but excludes entrepreneurs. The flaw in this can be seen in OECD data showing that non-EU migrants have a greater proclivity for owning businesses than EU nationals –13.5 per cent versus 12.6 per cent. Furthermore, similar to findings for the United States, migrants tend to be considerably more entrepreneurial and risk-taking compared to local Europeans (Desiderio and Mestes-Demènech, 2011). These entrepreneurs are often highly educated and contribute disproportionately to job creation in their host countries (European Commission, 2015), but are not supported under the Blue Card regime.

The German Government may have been reluctant to embrace the Blue Card scheme, but Germany quickly became the country that issued the largest numbers of EU Blue Cards. In fact, according to the European Commission Blue Card Assessment, Germany granted 90 per cent of all Blue Cards issued in 2013. The European Commission argues that having such an overwhelming share of Blue Cards issued in one country underscores the failure of the scheme to evenly distribute highly qualified non-EU immigrant talent across Europe (European Commission, 2015).

4.1.5 Overall assessment of German talent attraction efforts

Despite the intense efforts taken over the past decade to attract highly qualified foreign talent to Germany, evidence of the implementation of such policies has showed mixed results. On the one hand, there is evidence of migrants, especially highly skilled and well educated talents, pursuing an increasingly important role in the German labour force. However, the German Government is reluctant to further develop policies for attracting more skilled talent from outside the EU. This situation stems both from on-going problems in the implementation of relevant programmes and the reluctance of many businesses to hire foreigners, even when facing labour shortages domestically.

However, the lack of detailed statistics on the foreign workforce make it difficult to systematically evaluate policies for attracting high-skilled foreign talent to Germany (OECD, 2013). Though it may traditionally be a destination country for migrants, Germany clearly lags behind in collecting and publicizing data regarding migrant labour in the country. There is a Central Foreigners Register in Germany, which is under administration of the Federal Office on Migration and Refugees, that should contain data regarding migrants in country. Unfortunately, this database has been used almost exclusively for internal security and is not opened for studies on labour migration. Figures do exist and are publicly available on the numbers of immigrants coming to Germany through Sections 18, 19, and 20 of the Immigration Act, 2004. However, as it was discussed in section 4.1.3.2, few top-level talented immigrants came to Germany through Section 19, and between 2005 and 2010, two-thirds of the immigrants covered by Section 18 were “skilled” in the sense of having completed “formal training”, which

includes vocational training. The German Government also does not publically share any data regarding international students who have graduated from German universities before entering employment in Germany (OECD, 2013). Finally, German governmental agencies for immigrants do not provide detailed data on most highly-skilled occupational groups, such as international researchers working in country. The limited numbers of migrants who entered Germany from 2005–11 under Sections 19 and 20 of the Immigration Act may indicate that the total number of foreign researchers working in Germany is low.

The one notable investigation conducted on the numbers of skilled and unskilled migrant labour in Germany is nearly a decade old, but may still offer some insights related to the skills composition of migrant workers in the country. Conducted by the German Institute for Economic Research in 2009, this study indicated that about one fifth of migrants living and working in Germany in 2009 could be classified as “skilled”. However, this share is likely to be inflated by the definition of “skills” in the German occupational classification scheme. Skilled workers (*Fachkräfte*) consist of individuals who have at least three years of vocation training, as well as those with higher education degrees. In other words, “skilled” personnel may include both semi-skilled and high-skilled individuals (OECD, 2016).

Another study done by the Berlin Institute for Population and Development in 2009 provides further evidence about skilled migrants working in Germany. According to this research, the German micro-census, an annual sample survey covering 1 per cent of all households in the country, showed that between 2005 and 2008, while one in five Germans holds a university degree, the share of international migrants holding university degree (including those from other EU member countries) is one in three. Meanwhile, prior to implementation of the Blue Card scheme in 2012, Germany began to see positive annual growth in to the number of international students graduating from German universities and in the number of migrant entrepreneurs (Constant and Tien, 2011).

As 2015 EU data shows, immigration to Germany began to surge in 2012; with the number of foreigners working in Germany reaching 4 million in 2014. However, as noted above there is no updated data on the details of these foreign workers in the labour force, for example on the levels of skills. Based on the studies cited above, this report assumes that there may be 800,000–900,000 skilled foreign workers in Germany, a figure that assumes (per the 2009 study by the German Institute for Economic Research) that one in five or perhaps one in four migrant workers could be classified as “skilled”. According to the OECD (2014b), Germany raised from the eighth to the second most popular destination for migrants among OECD countries over the period from 2009 to 2012. Despite the failure of the Green Card initiative and criticisms of recent policies in Germany for attracting high-skilled talents, such a shift in the rankings of

most popular destinations in the OECD for international migrants can be seen as evidence of considerable improvement over a short period of time.

However, the failure of the Green Card system and the aforementioned criticisms mean further improvements in relevant German policies are needed. Although over 1 million people moved to Germany in 2012, which is the largest wave of migrants the country has experienced in many years, nearly two-thirds of these migrants came from other EU countries. Between 2005 and 2010, 18,000 skilled workers migrated to Germany from non-EU countries. As EU economy started recovering following 2010, 25,000 foreign non-EU workers have been settling in Germany each year, there is a lack of detailed data regarding the skill levels they processed. Furthermore, only 2,500 of these migrants entered the country through the skills-driven EU Blue Card scheme, which could possibly suggest a rough estimate of the proportion of highly skilled workers (Dick, 2012; Popp and Tietz, 2013).

As noted earlier, another possible reason that it is difficult to attract high-skilled migrants to Germany lies in the fact that German businesses are reluctant to employ foreign workers, despite rising demand for skilled workers in many sectors. According to an OECD study, between July 2010 and July 2011, nine out of 10 German businesses had vacant positions, but only one in four businesses was willing to hire foreign personnel for these roles. In marked contrast to the operation of the Green Card, small and medium “*Mittelstand*” companies, who are at the core of the German economy, have been especially reluctant to hire skilled foreign workers. The OECD study found that only two out of every ten businesses considered recruiting abroad, due in part to concerns over the cost of recruiting internationally (Popp and Tietz, 2013).

When German employers do recruit internationally, the operation of the German immigration system is also putting limitations on foreign talent entering the country. Although the OECD argues that the new immigration regulations in Germany for skilled migrants are among the most liberal in the world, the procedures involved made it difficult for foreign workers to apply. The application procedure for foreigners, especially for migrants from non-EU countries, is complex, and may take three to six months to process. Furthermore, despite information and relevant official documents being available in six different languages, some documents required for the application process have to be translated into German. In addition, local immigration and employment offices tend to be understaffed, and few of these local-level officials can communicate in a language other than German, this includes English. Although applications for some permits can be processed in a relatively short period of time, getting an appointment can often take months. Finally, evidence suggests that the distribution among relevant government departments of information regarding changes in the immigration system is slow, which could have an impact on the application process (Popp and Tietz, 2013).

The conduct of immigration policy is further complicated by the federal system of governance in Germany, under which power is shared among the central government in Berlin, the 15 states (*länder*), and local authorities. Such a governance structure may generate inconsistency in the application of procedures and regulations related to labour migration, stemming from the diverging approaches and actions taken by states, local Foreigners' Offices, and central labour authorities. The Federal Ministry of Labour and Social Affairs observed, "The special impact of German federalism on the management of labour migration is reflected in the 'jungle' of manifold different regulations in the various *länder*" (Laubenthal, 2012, p.22). A survey conducted by the German Chamber of Commerce supported this notion that complicated laws and application procedures were an obstacle in recruiting highly skilled immigrants for the German labour market (Laubenthal, 2012).

The division of power between German governments has also hindered the mutual recognition of foreign qualifications in Germany. This lack of skills recognition could be another reason why German businesses have been reluctant to hire skilled non-EU workers, since they may not recognize the qualification possessed by a skilled international worker (Oltermann, 2014). Germany did put into effect the Recognition Act, 2012, which is an important step in providing a clear process for evaluating foreign professional qualifications, and which may help attract international talent to the country (Fohrbeck, 2013). However, scholars such as migration expert Bettina Englmann, author of the noted 2007 study *Brain Waste*, have criticized the Act, saying it is by no means applicable to all professions, and in cases when the Act can apply, the guidelines are not as straight forward as they should be. Englmann further stated that the new law has not been uniformly applied throughout the country, due to Germany's complicated governance structure (Popp and Tietz, 2013).

In summary, German policies for attracting highly skilled international professionals are a mixture of successful experiences as well as complications related to implementation. In order to attract international elites to the country, improvements in policy implementation and service delivery are required.

4.2 Japan

4.2.1 Policy-making background in Japan

4.2.1.1 Social context: An ageing and declining population causing labour shortages

Like Germany, Japan currently faces very adverse demographic trends. The ageing and shrinking of Japan's population has now been underway for several years, with the number of

Japanese falling every year since 2011. In 2014 alone, the population of the country shrank by 215,000 people, and approximately one quarter of Japanese are 65 or older (Statistics Bureau of Japan, 2016). A 2012 report compiled by National Institute of Population and Social Security Research warned that the Japanese population will fall from 128 million in 2010 to 87 million in 2060, a decline of nearly one third, and 40 per cent of the population will be 65 or older (National Institute of Population and Social Security Research, 2012).

This demographic decline poses a grave threat to Japan's fiscal future, as it will create major problems in funding pensions and thereby boost government borrowing. Japan is already weighted by one of the largest public debt burdens in the world, with its debt to GDP ratio amounting up to 201.1 per cent as of 2013 (World Bank, 2016a). Due to its future inverted population pyramid, this problem will get significantly worse (*The Economist*, 2014). At the same time, Japanese firms are facing growing labour shortages and problems filling positions (Ganelli and Miake, 2015). In 2014, for example, even with the economy teetering on the edge of recession, Japanese companies were offering 109 jobs for every 100 people looking for work (Slodkowski, 2014).

That gap includes not only shortages in manufacturing and service workers, but in highly qualified talent as well. In particular, Japan suffers from an acute shortage of software engineers for its high-tech economy. For example, DeNA, a Tokyo-based mobile game developer, recently complained to computer talent recruitment firms that only about 10 per cent of engineers on the local market have the skills in Web technology required by the company (Martin, 2015).

Japan also faces a major shortfall in managerial talent for Japanese companies that are seeking to "go global", and in the context of weak domestic economic demand and anaemic growth, diversifying into foreign markets has become imperative for Japanese firms. According to the World Competitiveness Yearbook, Japan is the only developed country ranking near the bottom (51st out of 60) for the availability of senior managers capable of managing overseas expansion efforts (Rosselet, 2013). A study issued by the Daiwa Research Institute argued that the deficit in both skilled and unskilled workers, which is likely to amount to 1 million for both 2015 and 2016, could shave up to 2 per cent off Japan's GDP, or about US\$86 billion (Ganelli and Miake, 2015).

Thus, some Japanese companies are already turning to foreign talent to deal with the shortage of highly qualified Japanese nationals in areas such as high technology. One notable case is Rakuten, Inc., which operates Japan's largest e-commerce site and hires about 80 per cent of its engineers from outside of the country, including from China, India, and the United States (Martin, 2015).

4.2.1.2 Earlier schemes for attracting highly-educated and skilled talent

Unlike many of its developed country counterparts, Japan has been largely closed off to immigration throughout most of its history. The greater difficulties of accessing this country and its insular culture have reinforced perceptions of Japan's homogeneity, making its people unusually resistant to accepting large inflows of foreigners (Burgess, 2010). In 1952, many colonial migrants and their descendants had been declared to be foreigners following the end of the US Occupation of Japan. Although the Japanese economy experienced shortages of industrial workers during its 1960s boom, unlike Germany, the Government and manufacturing firms refrained from importing foreign "guest workers". In 1985, an estimated 850,612 non-Japanese nationals were living in the country. While this number has more than doubled by 2012 to about 2 million (1.59 per cent of the total population), Japan's foreign population remains by far the lowest of any developed economy (Chiavacci, 2012; Green, 2014; Immigration Bureau, Japan, 2012; *Japan Times*, 2013; Kashiwazaki and Akaha, 2006).

The Japanese Government made its first effort to boost the educated and skilled foreign presence during the 1980s, when it put forward a plan of internationalization aimed at increasing the number of foreign students studying at Japanese universities to 100,000 by 2000. International students recruited under this scheme, the bulk of whom came from other developed countries, were not viewed as a source of foreign talent for the domestic labour market. In fact, they were expected to return to their country upon graduation and facilitate Japan's economic and political outreach (Chiavacci, 2012).

According to this plan, most of these foreign students were to finance their studies in Japan by themselves. Foreigners holding student visas were therefore allowed to work up to 20 hours a week to pay for their tuition and living expenses. Prospective foreign students enrolling to Japanese universities also had permission under the student visa programme to study Japanese at private schools in order to be better prepared for higher education in Japan. The visa procedures for these pre-university students were greatly simplified and expedited. As Chiavacci (2012) has noted, the scheme did raise the number of foreign students studying at Japanese universities (the total, however, was less than the target figure, see below), but the policies also had unintended consequences. From 1984 to 1986, the number of pre-college students entering Japan more than tripled, rising from 4,000 to 12,500, while the boost in the total number of foreign students at Japanese universities was more modest, increasing from 4,000 to 6,000. Most of the students entering pre-college language preparation programmes – many of whom hailed from Southern China – actually had no intention of going on to study at universities. They instead used their visas to become de facto guest workers.

The basic policy of the Japanese Government with regard to foreign migration had always been not to accept “unskilled” labour, and this principle was enshrined in the 1951 Immigration Control and Refugee Recognition Act, which has regulated the flow of foreigners into the country (Kashiwazaki and Akaha, 2006; Mori, 1997). Accordingly, authorities began to tightly regulate language schools and closely check the visa applications of their students, leading to a sharp fall-off in their numbers in the early 1990s (Chiavacci, 2012). This move was paralleled by a modest reform of the Immigration Control Act in 1989–90, which reorganized visa categories to facilitate the immigration of professional and skilled individuals, while limiting the influx of unskilled workers. The steps related to limiting unskilled migration included employer sanctions aimed at discouraging “illegal” employment (Kashiwazaki and Akaha, 2006).

Even after these changes, two “back doors” remained open for unskilled labour to flow into Japan. One was the substantial expansion of the trainee system by the 1993 Technical Internship Trainee Program, which allowed firms to take on foreigners as interns. Many then became de facto guest workers, finding employment in sectors such as agriculture, fisheries, construction, and also various branches of manufacturing such as textiles, machinery, and metals. The number of trainees in Japan increased tenfold from the early 1990s to 2008, rising from 20,000 to 200,000. The other “back door” was the granting of residential status with no restrictions on employment to the so-called *Nikkeijin*, or descendants of Japanese emigrants. By 2005, 350,000 *Nikkeijin*, most hailing from South America, especially Brazil, were living and working in Japan. The majority of them found employment as temporary low-skilled blue-collar workers for Japanese export manufacturers, playing a key role in making the production systems of such firms more flexible, especially among auto makers and producers of consumer electronics, and enabling them to better compete on the world market. Many *Nikkeijin* on temporary contracts were laid off during the 2008 to 2009 global economic crisis, which hit Japanese exporters especially hard, causing their numbers to fall below 300,000 by 2010 (Chiavacci, 2012; Kashiwazaki and Akaha, 2006).

The number of less-skilled foreigners in Japan was further increased by the 300,000 International Students Plan, a renewed effort in 2008 to attract international students to study at universities in Japan. The number of international students in Japan had risen to 62,000 by 2003, and the new scheme aimed at boosting this total to 300,000 by 2020 (MEXT, 2004). Under the plan, students were permitted to work, not only while studying at university to pay for their tuition and living expenses, but they could then seek employment in Japan after graduation. Although the measure sought to boost the supply of well-educated talent to fill the growing number of vacant high-skilled positions, most of these students did not wind up finding such jobs. Many instead remained stuck in the low-skilled, dead-end service jobs they had taken on

to help pay for their university studies. The ones able to find other jobs have typically found them in small- and medium-sized Japanese firms, which preferred to take on foreign labour, as these workers can be hired under temporary contracts. Large and well-known Japanese companies, on the other hand, largely shunned foreign labour, hiring Japanese nationals instead. Chinese students in Japan, who make up the biggest group of international students at Japanese universities, have often had to settle for jobs in small businesses with little employment security or long-term career prospects (Chiavacci, 2012; *Japan Times*, 2015; Kamibayashi, 2006; Liu-Farrer, 2011; Murai, 2015).

Although the guiding principle of Japanese immigration policy has been to favour skilled over unskilled migrants, the number of skilled migrants remains very small both in absolute terms and in relation to Japan's overall workforce. According to Ministry of Justice data, 198,000 highly skilled migrants were working in Japan in 2010, comprising just 9 per cent of the 2 million foreigners living in the country (Green, 2014). Some 59 per cent of these individuals fell into the following broad visa categories: engineers/technical personnel (24 per cent) and "specialists in humanities", which includes professionals in the legal, economic, and related social fields, and "international services", whose members range from designers to people working in foreign trade (these two categories combined accounted for 35 per cent of foreign skilled immigrant workers). The next biggest category (15 per cent) consisted of "skilled workers", or trained factory operatives, craftsman, and chefs. The remainder was evenly spread out among intra-company transfers, investors and business managers, instructors, professors, and "other", with researchers likely falling under the professor category (Oishi, 2012). It should be emphasized that aside from the point system criteria of the High Skilled Foreign Professional (HSFP) visa, which is discussed in the next section, Japan has no "official" definition of a "high-skilled worker". Thus, as Oishi (2012) stressed, policy-makers and scholars often use the visa categories to identify professionals and well-educated and trained human resources, including individuals falling into the "skilled worker" group noted above.

More recent Japanese Government data indicates that the numbers of skilled migrants, along with their share of the foreign workforce, remains relatively small. According to a report by the Ministry of Health, Labour, and Welfare –Status of Reporting on Employment Situation of Foreigners – as of October 2013, foreign workers employed in specialized professional and technical work fields accounted for 18.5 per cent of the foreign workforce. The Ministry of Health, Labour, and Welfare put the number of such high-skilled workers at 132,571 (Kodama, 2015).

4.2.2 Highly Skilled Foreign Professional Visa

4.2.2.1 Mechanism and operation

In response to the on-going problem of attracting highly qualified foreign talent to address domestic labour shortages, and facing an economy that remained sluggish well after the 1990s “lost decade”, Japan instituted the High Skilled Foreign Professional (HSFP) visa in 2012 as part of its Points-based Preferential Immigration Treatment for Highly Skilled Foreign Professionals programme. This new scheme is the most recent and far-reaching effort by the Japanese Government to attract well-educated and skilled talent from outside of Japan to work in the country. As is the case with Japanese immigration policy in general, the Ministry of Justice is largely in charge of administering this programme (Green, 2014).

The HSFP visa is a hybrid scheme, drawing on market-based and skills-based visa programmes. In this respect, it combines elements of both the American and Canadian visa programmes to target highly qualified foreign workers. As is typical in market-based systems, foreigners must first obtain a job from a Japanese employer. However, as with other skills-based systems, the HSFP visa requires calculation of number of points across a range of categories in order to qualify. Similar to the German settlement permit, the HSFP visa specifically targets particular kinds of highly qualified talent, with researchers and scholars being one of the three categories of skilled personnel covered by the scheme. The other two categories are “technical activities” and “business management”. The academic category is directed at university-level professors wishing to work for public or private organizations in a research capacity. The technical activities group includes not only engineers and IT personnel, but other foreign specialist talent, including doctors and lawyers. Business management refers to individuals who are corporate executives, involved in banking and finance, as well as investors (Green, 2014).

Each of these categories has its own point system, with a total of at least 70 points required for HSFP visa eligibility. All three categories give points for academic degrees, such as advanced ones (up to 30); annual income (up to 50); work experience (up to 25); and age (up to 15). The academic and technical activities categories also reward research achievements (15 to 25 points), while all three categories give points for “special ambitions” (5 to 15 points), such as working in small firms, graduating from a Japanese university, or having a high level of proficiency in the Japanese language (Green, 2014).

Foreigners meeting these qualifications are then eligible to work in Japan through a HSFP visa. In a June 2014 revision of the HSPF visa scheme, the visa was given for a period of five years,

with its holders generally being eligible for permanent residence in Japan after just three years. This is a much shorter time frame for permanent residency than is the case with other visa categories for foreigners, which generally require ten years' residence in Japan. As is the case with other visas Japan hands out to foreigners, HSFP visa holders may bring their spouse and children to live with them. But the programme provides a unique benefit in this area, namely full-time work permission for the visa holder's spouse. HSFP visa holders can also bring in their parents or their spouse's parents to live with them in Japan, as well as "foreign domestic help" to do housekeeping and work as nannies. A full list of HSFP benefits is presented in the table 1 below:

Table 1. Benefits offered under Japan's HSFP visa

Permission for Multiple Activities

- Can participate in activities other than what is permitted under a single status of residence
- HSFP visa holders may engage in activities covered by different statuses, such as scientific research and business management

5-Year Visa

- All HSFP visa holders receive 5-year visa while other Japanese working visas only last for 3 years or less.

Relaxation of Permanent Residence Requirements

- Eligible for applying permanent residence after holding HSFP visas for 3 consecutive years

Preferential Processing of Entry and Residence Procedures

- Faster processing time for HSFP visa holders. Most immigration applications processed within 5-10 days.

Work Permission for Spouse

- Spouses of HSFP visa holders can work full time even if not meeting the requirements of a working visa.

Permission to Bring Parents

- HSFP visa holders' parents or their spouses' parents may enter Japan if they live with the HSFP and look after a child under 7 years old, or a pregnant/sick HSFP visa holders or their spouse.
- HSFP must have a combined household income of at least 8 million yen per year.

Permission to Bring a Domestic Helper

- May sponsor one domestic helper if: 1) the helper receives at least 200,000 yen per month and the HSFP household has a combined income of at least 10 million yen per year; 2) the helper has been previously employed by HSFP for one year or more; 3) the HSFP visa holders or their spouses are pregnant or ill or they have a child under 13 years old.

Source: Green, 2014, p. 16.

These benefits make Japan's HSFP visa, especially compared to the high-talent visas offered by other countries, very generous. Moreover, there are no quotas on the number of HSFP visas issued, and no labour market tests to determine if the hiring of foreigners will adversely affect domestic employment (Green, 2014). All of this is surprising in view of Japan's long-standing lack of openness to foreigners, as noted above.

Last but certainly not least, the implementation of the HSFP visa has been paralleled by efforts on the part of the Japanese Immigration Bureau to put in a "Fast Track System" for processing visa requests, at least for large companies seeking to take highly qualified foreign talent. In particular, the Bureau has sought to reduce the time required for processing visa applications to a maximum of ten days. Nevertheless, some employers claim that despite these changes, the visa process remains "strict" and "hard to navigate", both for themselves and for foreign applicants.

The HSFP does have two drawbacks for skilled immigrants. First, those on the HSFP visa who leave their job to take a position with another Japanese company must re-apply for the visa with their new employer, starting the process from the beginning. This is not something immigrants falling into one of the other work visa categories in Japan need to do – they are free to change jobs within the area of activity covered by their visa. Second, applying for a HSFP visa involves a lot of paperwork. If an applicant has ten years of experience in a particular industry, they need to prove that legally by providing ten years' worth of "employment certificates" from each employer during that period (or at least enough evidence that adds up to ten years) (Green, 2014).

Although containing some drawbacks, the HSFP visa is, on balance, a very beneficial scheme for highly qualified foreign talent wishing to live and work in Japan. Whether it has helped bring in such talent to help ease Japan's domestic skilled labour deficit is discussed below.

4.2.2.2 Judging the HSFP visa's effectiveness

Despite its many attractive features and the high hopes the Japanese Government had placed in it, the HSFP visa scheme has not been a success. The number of highly qualified foreigners attracted to Japan by this new visa has been disappointingly small.

After the programme was launched in 2012, the Ministry of Justice, the main Japanese Government Agency in charge of immigration policy, had expected to issue 2,000 HSFP visas. It bears noting here that this target amounts to a very small fraction of the 132,571 high-skilled foreign workers already living in Japan as of 2013 (Kodama, 2015). Even with this modest goal, the Government fell well below that mark, granting just 430. After the first 20 months of the

new programme's operation, only 900 HSPF visas had been issued by the Government, or about 50 per month, which is two-thirds below the expectations (no data exists for beyond this period). Most of the HSFP visas issued have been in the technical activities and researchers categories, with the business management category accounting for less than 10 per cent (Green, 2014; Osaki, 2013).

Thus, most high-skilled immigrants in Japan must make do with ordinary work visas. Japan's various work visa categories outside the HSFP visa encompass personnel who could certainly be regarded as highly qualified talent. In this respect Japan resembles Germany, as only a relatively small minority of very high-end foreign talent is able to immediately qualify for a settlement permit, which can be seen as the German equivalent to the HSFP visa. However, Germany provides its foreign workers with a much quicker path to permanent residence status. Even those falling outside of the accelerated tracks (such as EU Blue Card holders and German university graduates) need to wait just five years, as opposed to the ten years required for Japanese non-HSFP visas holders. And those on the accelerated track to German settlement permit can acquire permanent residency status in just two years, versus the three years currently required for HSFP holders.

Criticisms arose after the government implemented the HFSP programme. In a 2013 article by *The Japan Times*, Yuriko Sato of the International Student Centre at the Tokyo Institute of Technology argued that several factors might have contributed to the unsatisfying outcome of the programme. She argues that first of all, the programme only targets "established" people able to accumulate a high number of points based on criteria such as salary, scientific publications, and work experience. This sets the bar too high for foreign students graduating from Japanese universities who are typically fluent or near fluent in Japanese and versed in the culture and capable of adapting to it (Osaki, 2013). This group is not given much credit for such strengths, even in the 2013 HSFP points system revision, which raised the points for Japanese language and cultural skills from 15 to 25 (Green, 2014). Altering HSPF eligibility criteria to enable foreign students studying at Japanese universities to qualify for the programme might boost its impact in recruiting highly qualified talent. However, steps would have to be taken to ensure that these individuals could secure high-skilled positions, as this issue has dogged renewed efforts to boost foreign enrolment at Japanese universities.

Green (2014) also notes that the HSFP visa provides the greatest benefits for highly skilled immigrants intending to remain in Japan for the medium to long term. Most of the perks designed to make the visa attractive to foreigners are aimed at individuals intending to settle down and establish roots in the country, while also being heavily skewed toward migrants with

spouses and children. However, single people as well as couples without children who plan to limit their stay in Japan to one or two years could also be an important source of highly qualified foreign talent. Green concludes that the HSFP needs to provide more incentives targeted at these people in order to fulfil its original goal of boosting the number of highly educated and skilled foreign workers in Japan.

Iwasaki (2014) offers another reason for the inability of Japan to attract large numbers of highly qualified foreign talent, namely the reluctance of most domestic companies to hire such individuals, despite the country's labour shortages. She cites a January 2013 Japan Institute for Labour Policy and Training survey of Japanese firms in which 71.2 per cent of the companies who participated stated they had never employed a foreign worker in Japan. Among the businesses who had hired foreigners, close to half (41.7 per cent) said they had employed "one or more, but fewer than five". The most frequently given reason, which was cited by 60.3 per cent of companies surveyed, for not hiring foreign talent was that it "was not needed". Iwasaki speculates that such responses could be due to firms doing most or all of their business in Japan, or conducting overseas dealings through long-established sales channels, which might make it hard for them to visualize how foreign talent could be used.

However, other surveys and anecdotal evidence contradicts this view of Japanese firms and their hiring of foreigners. For example, *The Wall Street Journal* has reported that according to a 2014 survey by the Japanese recruiting firm Disco, Inc., over a one third (36 per cent) of companies had hired or were planning to hire foreign students in Japan, triple the figure from four years earlier (Du, 2015). The article goes on to cite examples of employers and staffing companies wishing to hire foreign workers, including highly qualified talent, because of high demand for such individuals and inadequate supply, but being unable to do so as a result of complex visa processes. It also adds that even among the big flagship Japanese firms, which have long preferred to hire Japanese nationals, a sea-change is underway in employment practices, as they seek to become bigger players on the global market. The Honda Motor Company announced in 2015 that it would make English its official language by 2020, while firms like Hitachi have added non-Japanese executives to their boards.

If this latter view is correct, then the failure of Japanese companies to take on more foreign talent is not due to their alleged reluctance to hire such individuals, but to the failure of both the HSFP and Japanese skilled immigration policy in general to provide them with an adequate pool of such workers. Japan's effort to attract qualified foreign talent still appears to be a work in progress.

4.3 Singapore

4.3.1 Policy-making background

4.3.1.1 Social context: A long history of being a magnet for migrants, adverse post-1970s demographic trends, and labour shortages

As a small island city-state situated on the intersection of maritime trading routes linking together South-East Asian nations, Singapore's economic fortunes have always been closely intertwined with migration. After its establishment as a British trading colony in 1819, the population of Singapore grew rapidly, rising from a few hundred to a half a million by 1931. Nearly all of the city's population growth before World War II was due to immigration. During this period, the local population often experienced negative growth, due to high mortality rates and a depressed birth rate caused by a highly imbalanced sex ratio in the nineteenth and early twentieth century. Singapore welcomed many migrants, most of whom were labourers, from China, India, and the Malay Archipelago (Yeoh, 2007).

The two and a half decades following World War II, when Malaysia freed itself from British colonial rule, with Singapore becoming an independent entity in 1965, saw a slowdown in migration to the city. Due to stricter controls on the flow of people into Singapore, the share of the city's population taken by non-residents, that is, those who were not citizens or permanent residents but had formal permission to work in Singapore, had dwindled to just 2.9 per cent by 1970. Immigration picked up again from 1970 to 1980, when the size of the non-resident population doubled. The renewed influx of outsiders into Singapore was fuelled by its export-led industrialization, which was the first stage in the city's road to developed country status. The earlier strict controls on unskilled foreign workers were relaxed somewhat to meet the steep rise in demand for such labour in manufacturing and construction. Many of these new migrants hailed from "non-traditional" source countries, such as Bangladesh, India, the Philippines, Sri Lanka, and Thailand, as part of bilateral agreements between Singapore and these States (Yeoh, 2007).

The heavy flow of foreigners migrating to Singapore continued after 1980, when growing numbers of highly qualified workers became an important part of the migrant labour streaming into the city. During the 1980s and 1990s, Singapore sought to shift its economy away from manufacturing and toward one based on services, especially finance, technology, and other knowledge-intensive fields. This reorientation boosted the need for highly educated and skilled immigrants, as the rising demand for knowledge workers could not be filled by home-grown talent. By 2000, foreigners made up nearly 29 per cent of Singapore's labour force, giving the city-state the highest proportion

of foreign labour in its workforce of any country in Asia. Between 1990 and 2006, the non-resident working population of Singapore jumped 170 per cent, from 248,000 to 670,000, of which 580,000 were unskilled workers with the remainder being skilled personnel. By 2009, foreigners accounted for 35.2 per cent of Singapore's total workforce. In December 2012, highly qualified professionals accounted for 13.2 per cent, or 170,600, of the 1.34 million foreigners employed in Singapore. Another 164,700 foreign workers (12.3 per cent) could be classified as "semi-skilled", with the remaining three-quarters of foreign workers (980,800) being designated as "unskilled" (Iwasaki, 2015, p. 5–6; Yap, 2014, p. 220; Yeoh, 2007).

Like Germany and Japan, Singapore faces a worsening demographic crunch. The city's fertility rate fell below the natural replacement rate of 2.1 relatively early, in 1976–77, and now stands at just 1.24 (West, 2014). Projections by Yap and Gee of the Singapore National University Institute of Population show that if this birth-rate holds constant, then the citizen and permanent resident population of Singapore will begin decreasing as soon as 2020. More worrisome is that the population will be greying rapidly, increasing the median age in Singapore from its current age of 39 to 55 by 2050. By that time, Singapore will have just 1.7 persons of working age per retiree, down from the current ratio of about 8 to 1 (Yap and Gee, 2015, p. 4; 2012).

These adverse trends show no signs of being reversed anytime soon. Singapore's Government has responded to the decreasing birth-rate with a set of pro-nationalist policies aimed at making the city more child and family friendly. These policies have included "baby bonuses", tax subsidies for couples with children, and policies to help parents better balance work and child-rearing. Additionally, there has been an active media campaign with slogans like "children – life would be empty without them" (Wong and Yeoh, 2003; Yap and Gee, 2012). Despite all of these measures, Singapore's fertility rates remain stubbornly low. Yap and Gee (2012) further note that according to their projections, even significantly raising Singapore's fertility rate to 1.85, or by one third, will merely slow the population's ageing trend over the next few decades.

Singapore's adverse demographic trends have made it necessary for the city to turn to foreign workers to address labour shortages. Singapore has had to do this for many years in manufacturing, construction, and other so-called "3D" jobs – dirty, dangerous, and demeaning – that are typically shunned by locals (Yap, 2014, p. 222). The shortfall in domestic labour has now extended into high-skilled workers in fields like finance, IT, and other knowledge-based industries. The rising importance of these activities since the 1990s has significantly boosted the demand for high-end talent. Due to its small population and decreasing birth-rate, Singapore has had problems meeting that demand with home-grown talent (Iwasaki, 2015, p. 6). This situation is exacerbated by the decision of some young members of a relatively small domestic

talent pool to seek employment opportunities elsewhere. The Financial Times reported in 2008 that in a global survey conducted at that time, one fifth of Singapore employers said that they were concerned about local employees leaving the city to work abroad, noting that even with the onset of the global downturn, many vacancies could not be filled because of the shortage of suitable staff (Balay, 2008).

Thus, in sharp contrast to Japan and, to a lesser extent, Germany, Singapore is a country with a large foreign influence, which makes it unusual not just compared to these two countries, but to other developed States in general. In 2000, non-residents, that is, non-Singaporean nationals living in the city not as permanent residents, made up 18.8 per cent of the city's population. In 2010, the number of non-Singaporean nationals rose to a quarter or 25.7 per cent of the 5,076,732 people living in the city. In 2014, the city was home to 2.13 million foreign-born residents, including permanent residents and full-fledged citizens, which is equivalent to about 40 per cent of the total population. In fact, the number of permanent residents (more details on that in section 5.4.2.1.2) has in recent years been growing much more rapidly than the number of Singaporean citizens. Between 2005 and 2009, the permanent resident population rose at an annual rate of 8.4 per cent, while the number of Singaporean citizens grew by an average of just 0.9 per cent each year. This trend is reflected in the rapid growth in the share of skilled workers and professionals in the total non-resident workforce, which increased from 14.6 per cent in 2006 to 22 per cent (or 240,000 skilled workers) in 2012. If you also account for permanent residents, the total number of foreign-born professionals and semi-skilled labour working in Singapore up to 335,300 individuals, or 25.5 per cent of the total foreign workforce of the city (Yeoh and Lin, 2012; Iwasaki, 2015, p. 6).

The most recent Singapore Ministry of Manpower (MOM) data on skilled and semi-skilled labour versus less-skilled and unskilled labour within the city's foreign labour force show little change with respect to the numbers and proportions of these workers since 2012. It should be noted here that, like Japan, Singapore has no "official" definition of highly skilled talent. As is also the case for Japan, the size of this talent pool is determined by the numbers qualifying for passes given to skilled and semi-skilled labour, and eligibility for these passes, in turn, depends both on professional qualifications and salary levels (these passes are reviewed in detail in section 4.3.2.1.2). According to MOM (2016a), as of December 2015, 187,900 foreigners in Singapore held Employment Passes, which are given to skilled professionals, while 178,000 were holders of "S" Passes, which are given to semi-skilled workers. The 366,500 Employment Pass and "S" Pass holders comprised 26 per cent of the Singapore's total foreign workforce. With regard to Employment Pass holders, MOM does not divide this total into specific professions, such as legal specialists or business managers and leaders. No data therefore exist

on the number of foreign researchers recruited by the city, even though it has made major efforts to attract this talent (more on efforts to attract researchers in section 4.3.2.1.1).

4.3.1.2 Singapore's past efforts to attract highly qualified talent

Singapore began making an active effort to recruit highly qualified foreign talent in the late 1980s. The first step taken by the city in this direction was the Eminent Entrepreneurs/Professionals Scheme, which was launched in 1988 to encourage extremely qualified personnel to relocate to Singapore from Hong Kong, China by offering them permanent residence (Parliament of Singapore, 1988). This plan was then extended to a much wider range of skilled professionals worldwide, and steps were taken to ease requirements for these individuals to secure permanent residence status (Iwasaki, 2015, p. 6).

During the 1990s, Singapore instituted a new set of policies aimed at attracting highly skilled foreign talent. In 1991, it established the International Manpower Programme under the auspices of the Economic Development Board. This was followed, in 1995, by the creation of the Foreign Talent Unit in the Prime Minister's Office. At the same time, the Ministry of Labour, whose responsibilities had been limited to administrative functions relating to low-skill workers, was reorganized and renamed as the Ministry of Manpower (MOM). MOM assumed responsibility overall foreign workers, including highly skilled talent. This change was followed, in 1998, by the institution of the current framework for regulating the entry of educated and skilled workers and professionals into Singapore – the Employment Pass System. In that same year, the Government set up the Singapore Talent Recruitment (STAR) committee to develop and implement strategies for recruiting and retaining high-calibre professional talent from overseas. As part of this task, STAR was charged with helping to transform Singapore into a global hub for highly skilled human resources (Iwasaki, 2015; MOM, 2016b; Low, 2001).

This last objective of STAR was also reflected in the major initiative for recruiting elite talent enacted in the 1990s – the 1999 announcement of the “Manpower 21: Vision of a Talent Capital” scheme. This strategy called for accelerating the development of Singapore into a “talent capital” by accumulating and developing first-rate human resources. The plan set forth six mechanisms for doing so, one of which was to accelerate the recruiting of such talent from outside of Singapore (Iwasaki, 2015, p. 6). Manpower 21 also stressed the need to create a first-class environment for such talent by enabling them to broaden and develop their potential while holding down stimulating and meaningful employment. Other key objectives of the plan were fostering entrepreneurship and promoting quality education and skills training as an exportable service, with the latter aim dovetailing with Singapore's new research and development orientation for its economy (Low, 2001).

In commenting on this and other 1990s measures for attracting high-quality foreign talent to Singapore, then-Prime Minister Goh Chok Teng argued that bringing such individuals to the city was “a matter of life and death”. He further stressed that in order for Singapore to remain global, it had to create an overall living environment that would appeal to both locals and foreigners (Low, 2001).

Thus, by 2000, Singapore had largely put into place the two main components of its current two-pronged approach to attracting highly qualified foreign professionals and skilled workers (Yap, 2014). The first prong involved creating an overall platform for attracting such individuals to Singapore. The second is the Employment Pass System, which enables highly qualified talent to more easily obtain permission to work and live in the city. The following section reviews in detail these twin policy mechanisms for attracting talent and assesses their effectiveness.

4.3.2 Current talent attraction schemes in Singapore

4.3.2.1 Singapore’s integrated platform for attracting talent and the Employment Pass system

4.3.2.1.1 The integrated talent attraction platform

In a recent review of Singapore’s policies for attracting high-quality talent, Kaori Iwasaki (2015)⁵, senior economist at the Japan Research Institute, stresses the “comprehensive” strategy followed by the city for recruiting highly qualified professionals. This approach goes well beyond the Employment Pass system that targets such personnel, and which will be reviewed in the next section. After 2000, Singapore also put in place complementary institutions and policy initiatives encompassing foreign businesses, students, and scientific talent.

A key institutional component of this approach is Contact Singapore, which is jointly run by MOM and the city’s Economic Development Board. Contact Singapore has offices worldwide to facilitate outreach to both foreigners and potential Singaporean returnees, including students, highly skilled professionals and workers, entrepreneurs, and investors. The office puts out information on work and business opportunities with both local firms and foreign-owned companies in the city. Contact Singapore operates a comprehensive job web portal consisting of foreign and local employers, while also serving as a one-stop source of information for foreigners, as well as overseas Singaporean students, investors, and business owners.

⁵ This report’s summary of Singapore’s effort to build a broad talent attraction platform condenses and summarizes Iwasaki, 2015. It should be noted that Iwasaki’s review was done with the aim of showcasing practices that might benefit Japan in its search for foreign talent.

In addition to Contact Singapore, in 2007 the Government established the “Work Holiday” programme aimed at getting high-calibre foreign students to work in the city. This is an internship programme for undergraduates and recent graduates aged 18–25, who are then eligible for and encouraged to take up formal employment in Singapore after completing their internships. Eligibility for the Work Holiday programme is limited to students from developed parts of the world who have studied at the one of the world’s top 200 universities. The initiative seeks to bring in highly educated and qualified young people who can help Singapore fill its need for skilled professionals and workers (MOM, 2016).

As was already noted, Singapore has been making a concerted effort to turn itself into a high-tech and knowledge-intensive, activities-based economy. The effort to attract world-class scientific personnel is the other main institutional component of Singapore’s comprehensive talent attraction strategy. In 2002, the city created the Agency for Science, Technology and Research (A*STAR), whose mission is to promote innovation in the economy by acting as a bridge between research and development activities in Singapore and industry. In performing these functions, A*STAR is also charged with recruiting top-flight foreign scientists. It has carried out this head-hunting by utilizing the personal contacts of agency leaders, wooing scientists at international conferences, working with local universities, and utilizing social media, especially Linked-In. Top foreign scientific talent are offered other benefits, such as lavish research funding and support for their spouses and children. In addition to these activities, A*STAR runs a scholarship programme to develop high-level scientific and technological talent. The scholarships are available to both local as well as foreign students, and recipients can study not only at top universities in Singapore, but at elite overseas institutions as well.

This last initiative reflects the strong commitment of Singapore to internationalize its institutions of higher learning in order to boost innovation in its economy. These efforts, which began in the 1990s, were intensified in the 2000s. In 2002, the Government launched the Global Schoolhouse Initiative, which sought to accomplish two main goals. First, it would continue earlier efforts to get foreign universities to establish facilities in Singapore. Then, it would mount a new drive to attract foreign students to the city, with a target of 150,000 fully self-funded students set for 2015. This move led to a rapid rise in the number of foreign students at Singaporean universities, which peaked at 18.8 per cent in 2008 and has remained above 10 per cent up until now (Lo, 2014).

As part of this effort, Singapore has energetically sought out foreign researchers to fill research, teaching, and administrative leadership positions at its universities. The current President of Nanyang Technological University, Bertil Andersson, hails from Sweden, while slightly more than half of the professors at the Singapore National University Lee Kuan Yew School of Law are foreign-born. As Iwasaki (2015) emphasizes, this recruitment activity has had a beneficial

snowball effect for Singapore. As the city began to recruit growing numbers of world-renowned scientists from other countries, these scientists attracted similar talent through their own contacts and networking activities. The increased presence of these individuals in Singapore then prompted young and promising researchers and students to move to Singapore. This influx of talent generated a substantial amount of scientific research, particularly in biotechnology, which occurred under the auspices of the A*STAR managed “Biopolis” research community, where practically none had existed just a few years earlier.

Lastly, as a part of its effort to build a broad platform for obtaining overseas talent, Singapore has sought to leverage its assets with respect to living conditions. These include a clean environment; world-class infrastructure with respect to education, health care, and transportation; good cultural amenities; and low taxes on high-income earners. Recent urban development projects aimed at branding Singapore as a culturally vibrant “Renaissance City” or “Great Place to Live, Work, and Play!” are in no small measure driven by the desire to attract high-calibre foreign talent (Yeoh and Lin, 2012). The International Institute for Management Development’s *World talent report* (2014) ranked Singapore 16th out of 60 countries for the ability of its companies to attract and develop human resources. And the city ranked number three in the world behind Switzerland and United States in its appeal to highly skilled, high-earning foreigners.

4.3.2.1.2 The Employment Pass system

Although the economy of Singapore depends heavily on both low-skilled labour and highly qualified talent, the Government of the city-state manages these groups very differently. Low-skilled labourers work in Singapore by holding Work Permits (WPs), while more skilled workers and high-calibre professional talent are given several different kinds of employment passes. Foreigners holding an Employment Pass (EP) and other passes for skilled labour (S Pass and Q Pass) enjoy significantly greater rights and privileges than do those with WPs.

With respect to less-skilled labourers, Singapore has always been fearful of having large numbers of such workers permanently based in the city, due to concerns about their potentially disruptive impact on social stability. WP holders have no chance to secure permanent residence status in Singapore. As Iwasaki (2015, p.4) stresses, WP holders are “used as a buffer against fluctuations in the labour supply” and are “accepted for a limited period”, while also being “strictly managed” by the authorities.⁶ Employers hiring WP holders must pay a foreign worker levy and post a security bond; at the same time, employment quotas limit the hiring of these

⁶ See also Yeoh (2007); Yeoh and Lin (2012); Yap (2014, pp. 228,231) for descriptions of the Work Permit system.

workers. WP holders cannot bring family members with them to Singapore and require special permission to marry either a permanent resident or citizen of the city. These workers must also undergo regular medical examinations, and female WP holders who become pregnant face immediate repatriation without exception (Yap, 2014).

Some of these restrictions are applied to a much more limited degree to S Pass holders, a category made up of medium-skilled workers. S Pass employers must pay the foreign worker levy, albeit at a far lower rate than is the case for WP holders. S Pass holders are also subject to employment quotas. However, their spouses may accompany them to Singapore, provided they meet a certain income threshold. In addition, unlike WP holders, S Pass holders are eligible for permanent residence status in Singapore, but they cannot obtain a long-term social visit pass (Yeoh and Lin, 2012; Iwasaki, 2015; Yap, 2014).

S Pass holders are positioned below Q Pass and Employment Pass (EP) holders, with the latter two categories consisting of varying degrees of well-qualified talent. Personnel falling into the Q Pass category consist of individuals with recognized qualifications and some work experience. EP holders are highly skilled professionals, managers, executives, and specialists. Unlike EP holders, workers on a Q Pass are not eligible for a long-term social pass. However, all of these pass holders are permitted to hold permanent residence status; obtain passes for their spouses and dependents (these are not subject to special conditions); and are not subject to employment quotas. Firms employing such workers are also not required to pay the foreign worker levy (Iwasaki, 2015; Yap, 2014).

As permanent residents, EP, Q Pass, and S Pass holders have an available path toward becoming citizens of Singapore. The criteria for permanent residents are relatively high, as they must have lived in Singapore for at least two to six years immediately prior to the date of application. Applicants should also be of “good character” and financially secure, which skews the process in favour of EP holders. However, more than a few foreigners with permanent residence have become citizens of the city-state. In 2005, for example, 13,000 permanent residents became Singaporean citizens (Yeoh, 2007).

In 2007, in response to the rising global competition for elite talent, Singapore introduced a new kind of EP, the Personal Employment Pass (PEP). Only top-of-the-line professionals, managers, executives, and specialists with very high incomes are eligible for the PEP. The EP is tied to a specific employer and when the EP holder loses their job, they must leave Singapore immediately. Those changing jobs must get a new EP form from their new employer. The PEP, on the other hand, is tied to the individual who holds it. This means that PEP holders can change jobs without violating their current PEP. If they lose their position, then they can still remain in

the city for up to six months without being employed (Iwasaki, 2015; Yap, 2014).

The different types of passes for skilled personnel, along with eligibility criteria and benefits, are summarized in table 2 below:

Table 2. Singapore passes for semi- and high-skilled migrants: Eligibility and benefits

Type of pass	Criteria and restrictions	Salary range ¹	Dependent Pass	Long Term Social Visit Pass
PEP	For top-flight professionals, managers, executives and specialists	Basic salary >\$7000	Eligible	Eligible
EP	For professionals, managers, executives and specialists	Basic salary >\$350	Eligible	Eligible
Q1 Pass	For those who possess recognisable qualifications or skills and years of experience	Basic salary >\$250	Eligible	Not eligible
S Pass	For middle level skilled manpower	Basic salary ≥\$1800	Eligible if basic salary ≥\$2500	Not eligible

¹ Salary figures refer to monthly salary.
Source: Adapted from MOM website www.mom.gov.sg; Yap (2014, p. 230).

As was noted above, as of December 2015, 187,900 highly-skilled foreign professionals were living and working in Singapore on an EP. MOM data on EP holders does not contain separate figures for the number of PEP holders. However, this total is quite small, due to the very high standards for obtaining a PEP.

For employers and employment agencies, applying for and receiving an EP for a highly-skilled foreign migrant is a relatively simple and quick process. According to MOM (2016b), companies and agencies wishing to bring in professionals who qualify for an EP can apply for the pass online. If done online, application processing typically takes seven working days, with some cases requiring more time, whereas applying manually can take five weeks for processing. Highly qualified professionals who have secured a job offer in Singapore therefore face relatively little red tape and bureaucratic issues in obtaining an EP. Individuals trying to obtain a PEP, which is not tied to a specific employer, can go online themselves for expedited processing of their applications.

Two other kinds of passes issued by the Singapore Government provide preferential treatment for foreigners wishing to live in the city. One is the Entre Pass, which was introduced in 2004

and is targeted at entrepreneurs seeking to form companies offering cutting-edge products and services. To qualify for this pass, entrepreneurs must meet stringent requirements. These include investment or equity participation by a government-approved venture capital company; possession of intellectual property; a partnership with A*STAR or a local university; and support from a government-sponsored incubator (Iwasaki, 2015). In 2004, the Singapore Government launched the Global Investor and Financial Investor plans. Under these programmes, individuals willing to invest major sums of money into Singaporean businesses could qualify immediately for permanent residence status (Contact Singapore, 2012). Even EP and PEP holders typically have to wait to become permanent residents, so for those who can afford it, this is the preferred option.

4.3.2.2 Evaluating Singapore's talent attraction efforts

Singapore's drive to attract foreign talent has not been an entirely smooth process. The influx of large numbers of foreigners into the city, particularly between 2000 and 2010, led to local backlash against migrants, which extended to highly educated and skilled foreign nationals. In response to this backlash, the Government has somewhat tightened immigration rules and that, in turn, has led to a slowdown in the relocation of highly qualified individuals to Singapore.

A wide-ranging poll conducted in 2007 revealed that many local Singaporeans were unhappy with the perceived red carpet treatment given to migrants. In that survey, nearly 9 out of 10 feared losing their jobs to overseas professionals brought in by policies aimed at luring such talent to the city. Many local residents also expressed negative views regarding the Government's handling of the issue. Some 43 per cent of Singaporeans surveyed felt that the Government was more concerned about foreign workers than its own people, and respondents were sceptical about whether the openness policy would create new jobs and opportunities (*The Straits Times*, 2007). Popular scepticism also exists over the heavy subsidies given to foreign scientists, with many questioning whether the payoffs have been worth the costs (Iwasaki, 2014).

Such sentiments made the Government's liberal immigration rules a major issue in the 2011 election. Popular disapproval of immigration policy, coupled with growing Government concern that Singapore was becoming too dependent on foreign talent, led to modest tightening of immigration regulations for high-skilled personnel. Income thresholds for the EP, Q Pass, and S Pass were raised, and more stringent conditions were put in place regarding the entry of family members (Iwasaki, 2015). As of August 2014, companies applying for an EP had to advertise their job vacancies to local Singaporeans for at least 14 days on the Jobs Bank Employment website operated by the Workforce Development Agency. These changes have slowed the pace of migration among highly qualified individuals to Singapore, following a peak in 2011 (*Daily Telegraph*, 2012).

5. Qualitative comparison of the case study countries

The above review of talent attraction policies in Germany, Japan, and Singapore reveals that these cases contain notable differences in how they attract highly qualified foreign talent and, to a significantly lesser extent, in their methods for doing so. These characteristics make them highly suitable for a focused comparison of talent attraction schemes and for the small-scale surveys conducted for this study on the efficacy of these policies. This chapter will first summarize the similarities and differences across these case study countries in two areas based on the review presented in chapter 4. The next chapter will then explore the methodology and results of the small-scale surveys used to gain further insight into the effectiveness of German, Japanese, Singaporean, and Chinese approaches to attracting highly educated and skilled migrants.

Based on the preceding discussion, the three cases can be placed on a continuum, ranging from “highly successful” to “limited success” with regard to the outcomes of their talent attraction efforts. Singapore and Japan fall near the opposite ends of this spectrum, with Singapore arguably being “highly successful” at attracting overseas talent, while Japan can be seen as having “limited success” in this endeavour. However, Singapore’s open policies have drawn criticism from Singaporean nationals over congestion and competition for jobs.

In the case of Singapore, foreigners, including non-Singaporean permanent residents, comprised approximately 40 per cent of the city’s population as of 2010. A little over a third of all workers in Singapore in 2009 were foreigners, with highly skilled professionals accounting for over 10 per cent of this group. Along with semi-skilled labour, they comprised one quarter of the migrant workforce in 2012.

That said, the overall number of migrant workers in Japan defined as “skilled” in 2014 slightly exceeded that of Singapore (208,000 versus 176,000), and these skilled migrants comprised around a quarter of the country’s 788,000 foreign workers. There are, however, two important things that are worth noting here. First, as mentioned above, the Japanese definition of “skilled labour” covers many gradations of skill, so a significant number of those 208,000 migrant workers would be defined as “semi-skilled” in Singapore. Second, the 788,000 figure for the total size of the migrant labour force in Japan only counts individuals working with valid visas, thereby overlooking illegally employed foreign workers, who may or may not be considered skilled workers. Moreover, given the big disparity in the size of their economies (and populations) and the large needs both have for highly qualified foreign talent, one would expect an even bigger gap between Japan and Singapore with respect to the overall number of

skilled migrants in each country. Indeed, given the size of Japan's working age population the percentage of foreign workers in the overall labour force amounts to just 0.3 per cent, placing it last among advanced economies, where the average is 5 per cent, and well behind Singapore, where more than one third of workers are migrants (Ganelli and Miake, 2015, p. 11).

Germany ranks in between these extremes. Compared to Japan, Germany has a much higher overall foreign presence, with 11 million migrants living in the country in 2014, or five times as many as Japan. A fifth of the population of Germany is now classified as having an immigrant background. Germany's migrant labour force of 4 million also exceeds that of Japan by a factor of five. Roughly one fifth of these 4 million migrant workers are skilled workers, but not all of these can be classify as highly skilled professionals. This disparity in overall numbers of migrant workers is even more striking when one considers that Germany's population is three-quarters that of Japan's, and the German economy is slightly smaller than that of Japan. It should be further recognized that Germany also stands out within the EU with respect to its foreign labour presence. As of 1 January 2014, there were an estimated 33.9 million non-nationals living in EU Member States, a figure that includes migrants both from other EU countries and non-EU countries, and more were to be found in Germany than any other country in the EU (Eurostat, 2015a).

While Germany appears to be well ahead of Japan in attracting migrant labour, it lags somewhat behind Singapore with respect to attracting skilled foreign talent. Both Germany and Singapore are fairly similar with respect to the share of skilled human resources in their overall foreign labour forces, which stand at roughly 25 per cent in both countries.⁷ That said, Singapore's pool of skilled migrant labour is much higher than Germany's in relation to the size of the overall population. While the estimated total of German "skilled labour" exceeds the number of EP and S Pass holding immigrants in Singapore by a factor of two to three times (800,000–900,000 in Germany to 366,500 in Singapore), the population of Germany is 15 times higher than that of the city-state (81 million versus 5.4 million).

The three case study countries mainly differ in their basic approaches and in the administrative structures of their talent recruiting systems. In terms of basic approaches, Germany and Singapore are fairly similar, leaving Japan's approach to be a bit of an outsider in the group. However, all three countries have very different administrative structures for overseeing high-skilled immigration.

⁷ It should be noted that the German categorisation of "skilled" foreign labour extends to those defined as "semi-skilled" in Singapore, including vocationally trained labour; see section 4.1.5.

The basic approaches of both Germany and Singapore to admitting high quality talent are employment-driven, with skilled migrants' ability to gain entry into the country dependent first and foremost on securing a firm job offer. In Germany, large numbers of these skilled migrants must also pass a labour market test, which is not the case for S Pass, Q Pass, EP, and PEP holders in Singapore, who face no employment quotas. Even with the introduction of Singapore's 2014 modest restrictions on the hiring of foreigners, Singaporean employers trying to obtain such passes for foreign workers are only obligated to locally advertise positions for a limited two-week period before searching for non-local candidates. That said, Germany can be seen as converging somewhat with Singapore in this area. In addition to very high-end talent, foreigners graduating from German universities are exempted from the labour market test when first applying for positions (Mayer, 2013). Furthermore, more and more categories of skilled migrants in Germany now have a fast track available to acquire a settlement permit; this includes not just the aforementioned foreigners with German university degrees, but EU Blue Card holders as well. No data currently exists on the number of migrants in Germany with residence permits who are also in the process of applying for settlement permits. However, given the recent changes in German skilled labour immigration rules, that number is surely growing and now likely includes more than just a relative handful of migrants, as was previously the case.

It is Japan that stands out among the three case studies with respect to its overall approach to attracting high-skilled migrants. Unlike Germany and Singapore, Japan has a hybrid system based on employment offers and a points system. The latter is used for determining eligibility for the different categories within the HSFP visa. Income levels and, to a lesser extent, professional categories serve as the criteria for being eligible for a German settlement permit, while both income and professional category are the main criteria in Singapore for determining the appropriate employment pass for varying levels of skilled personnel.

Germany, Japan, and Singapore all notably differ in the administrative systems employed in their overseas talent attraction efforts. Germany is marked by a high degree of administrative fragmentation, due its federal system of government. This characteristic also applies to the Blue Card system, given the EU's status as a supranational body of 27 countries. Japan is very different from Germany in this respect, given its highly centralized prefectural governmental structure and concentration of immigration policy-making in the Ministry of Justice. Singapore's status as a small island city-state by definition limits the degree of complexity and division within its government. Nevertheless, multiple agencies, such as MOM and A*STAR, play a major role in attracting skilled migrants to Singapore, and seem to work effectively together to form an integrated platform for bringing such talent to the city. The contrasting basic talent attraction approaches and administrative structures of Germany, Japan, and Singapore are summarized in table 3 below:

Table 3. Summary of approaches and administrative structures for recruiting skilled immigrants in Germany, Japan, and Singapore

Country	Approach to recruiting skilled immigrants	Administrative structures for attracting foreign talent
Germany (includes EU Blue Card scheme)	Employer-driven, with resident permit holders subjected to labour market test; settlement permit holders and foreigners graduating from German universities exempted from such tests.	Very decentralized (both in Germany and with regard to the EU Blue Card).
Japan	Employer-driven and points-based Hybrid Model (HSFP visa).	Highly centralized (policy-making and administration largely concentrated in the Ministry of Justice).
Singapore	Employer-driven, with skilled and semi-skilled personnel facing no labour market test; income levels and qualifications determine eligibility for different passes.	Integrated skilled immigrant attraction platform (MOM and other relevant agencies work together to attract highly qualified talent to the city).

In evaluating the three cases with respect to the overall rights and privileges of skilled migrants and the administrative hurdles they face in dealing with immigration bureaucracy, there is not one country that appears to be wholly successful. Each country possesses its own specific strengths and weaknesses in this arena.

For example, the Japanese HSFP stands out due to the rights and privileges it provides for the spouses and family members of skilled migrants. These privileges exceed to varying degrees those given to EP holders in Singapore and residence permit holders in Germany. Japan and Singapore are alike in exempting the HSFP and EP, respectively, from employment quotas, and their holders from the labour market tests applied to German residence permit applicants. Both the HSFP and EP are tied to specific jobs, but applicants for the HSFP visa face a more troublesome application process than do those seeking to work in Singapore on an EP. Germany's application procedures are even more complex, and residence permit seekers are subject to labour market tests.

However, getting a German settlement permit is much easier than obtaining the Japanese HSFP or a Singaporean PEP. The settlement permit is equivalent to Japan's HSFP with regard to spousal or family privileges, and equivalent to the PEP in not being tied to specific employment (both the HSFP and EP are tied to the migrant's job). With the recent changes in Germany's high-skilled immigration rules, particularly rules enacted to implement the EU Blue Card scheme, those failing to qualify for a settlement permit when first migrating to Germany can

acquire one in a relatively short period of time. Furthermore, while all three countries are trying to make it easier for foreign students graduating from local universities to fill skilled employment positions, Germany stands out vis-à-vis Japan and Singapore with its fast-track provisions for such individuals to get a settlement permit after two years. Finally, in Germany the qualification criteria faced by migrant entrepreneurs are somewhat lower than those for Singapore's Entre pass.

Thus, while Germany, Japan, and Singapore vary in how successful they are in attracting skilled immigrants, none stand out as being notably better or worse when it comes to the general mix of advantages and disadvantages faced by foreign talent seeking to relocate to them. The three do differ in their overall approaches to attracting foreign talent and in their administrative structures for skilled immigration. These differences do not dovetail with what might be expected in terms of outcomes, at least based on the existing scholarly work addressing the efficacy of employer-centred vs. points-based skilled immigration approaches. In particular, the recent study done by Czaika and Parsons (2015) cited in section 2.2 above stresses that points-based approaches work best for attracting high-skilled immigrants. Yet Singapore and Germany have had greater success in attracting high-skilled migrants, even though Japan is the only case study country to make use of a points-based system, although admittedly one that contains employer-driven components.

6. Surveys with highly skilled migrants in case study countries

6.1 Survey background and methodology

In order to better understand why the three case study countries have markedly different levels of success in attracting well-qualified talent and to further assess their methods to attract such talent, 29 highly skilled immigrants living and working in Germany (10), Japan (8), and Singapore (11) were surveyed for this study, with some participants also agreeing to provide more detailed information through a written statement. This small-scale survey asked the participants about the administrative mechanisms, rules, and incentives used by Germany, Japan, and Singapore in their talent attraction programmes. In particular, the study was interested in seeing if and to what extent a gulf exists with respect to the theory and objectives behind these measures versus their actual results. The ultimate aim is to determine what China can learn from these three countries policies and approaches, and therefore as part of that effort, the study also surveyed ten skilled foreigners working in China.

Potential survey participants in Germany, Japan, and Singapore were contacted by Centre for China and Globalization (CCG) representatives based in those countries. These representatives relied on both their own personal networks and individuals within those networks to connect the study with highly qualified talent living and working in these countries. Since the CCG representatives based in Germany, Japan, and Singapore are themselves Chinese nationals, the fellow foreigners in their local overseas personal networks also tended to be other citizens of China. The valid survey responses therefore primarily consisted of Chinese citizens, but also other foreign nationals living and working in these countries.

It is important to note, the heavy representation of Chinese nationals surveyed in this study introduces a large degree of bias into our sample group. Although this is the case, having a strong Chinese presence is useful for evaluating the foreign talent attraction policies of the individual countries and their applicability to and lessons for China. In the case of Germany, the Chinese nationals who were surveyed confronted a social and work environment that was very different from China, giving rise to major “culture shock” and forcing them to make significant personal adjustments. In this respect, their experience in Germany can serve as a useful proxy for what highly qualified Western talent, which China is seeking to attract, might face in trying to live and work in China. The Chinese participant’s responses can offer some insight into how China may need to adjust its initiatives aimed at easing the transition issues faced by foreign talent relocating to China. Finally, Germany is now home to the fourth largest Chinese community in the EU (170,000 people), tied with Spain and behind Italy, France, and the United

Kingdom. However, unlike Italy and Spain, which have been marked by slowing Chinese migration, the number of Chinese moving to Germany has been growing rapidly in recent years (Latham and Wu, 2013, p. 27, table 4).

Singapore stands at the opposite end of this particular spectrum, due to its large ethnic Chinese population, who make up 2.8 million of the 3.8 million permanent residents and Singaporean citizens living in the city in the 2010 Census (Yeoh and Lin, 2010, table 2). As a result, Chinese nationals living and working in Singapore are a good proxy for Chinese diaspora talent, that is ethnic Chinese who do not hold a Chinese passport, interested in relocating to China. In addition to mainland Chinese returnees and foreign Western talent, the overseas Chinese diaspora constitutes another large pool of highly qualified foreign talent that the Chinese Government can look to in its effort to attract skilled migrants to the country.

Japan can be seen as falling in between Singapore and Germany. Despite the cultural similarities between Japan and China, Japan has its own distinct Shinto religious and philosophical belief system. In addition, Japan also lacks a large Chinese ethnic presence, which contributes to the extremely small number of foreigners in its population and workforce. So while there may be some cultural linkages between China and Japan (certainly more so than with Germany), they would not be nearly as strong as what one would expect between China and the predominantly ethnically Chinese Singapore.

As noted above, this study also includes survey participants based in China. The ten participants in China included ethnic Chinese holding foreign passports and migrants from other national and ethnic backgrounds. The survey of China participants took place in Guangzhou at the Foreign Experts Bureau Research Forum on 20 January 2016. Meanwhile, the CCG also held an open forum on the problems faced by foreign researchers in China. The combined feedback offered at these events from skilled migrants living and working in China provides a direct ground-level assessment on the ongoing Chinese Government efforts to attract high-end human resources.

Survey participants were asked multiple questions regarding talent recruitment efforts by their country of residence, be it China, Germany, Japan, or Singapore. These survey questions have been organized into three different sections:

1. The first section of the survey asked respondents to evaluate the post-admission policies they faced and their living experiences in these countries. They were asked to rate them on a number of dimensions, ranging from efficiency in dealing with immigration paperwork and residency to infrastructure and social or cultural inclusion.

2. The second section asked participants to identify existing problems with the talent attraction programmes of their country of residence.
3. In the final section of the survey, respondents identified what aspects of their country of residence's overall systems for bringing in skilled immigrants needed improvement.

The participants were invited to provide their own thoughts on any relevant issues.

The small sample size of this study means that our findings can in no way be generalized to the broader population of skilled migrants living and working in the four countries under consideration in this report. Nevertheless, a small group of participants also provided detailed information in the open-ended survey questions. This gave participants the freedom to respond however they may like, without the restriction of choosing a pre-determined answer, and offered more comprehensive, qualitative assessments of the policies and living conditions they experienced.

This study seeks to provide an initial look at how foreign talent might view the available channels for drawing them to these countries and the conditions they experienced once moving abroad. Our conclusions and recommendations are therefore best viewed preliminary suggestions, rather than firm or definitive answers on what China can do to improve its own formal rules and channels for recruiting high-end foreign talent.

6.2 Makeup of survey respondents

The 39 high-skilled migrants in Germany, Japan, Singapore, and China surveyed in this study were first asked to provide general information, such as their gender, age, marital status, and current nationality. They were also questioned about their professional occupations. With respect to the first three characteristics, respondents across the four countries were, with a few notable exceptions, fairly similar.

Turning first to the similarities, respondents in Germany, Japan, and Singapore tended to be Chinese citizens. With regard to the participants in China, four of the ten respondents were ethnic Chinese holding non-Chinese passports (two of these were from the United States). The other six China survey respondents came from Canada, Colombia, Japan, Russia, Spain, and the United Kingdom – one from each country.

Among the Germany, Japan, and Singapore, Germany was the only country where the survey respondents included individuals holding passports from other Western countries (two out of

ten). Eight of the 11 respondents in Singapore hailed from Mainland China (7) or Hong Kong, China/ Taiwan Province of the People's Republic of China (1), with the other three coming from other Asian countries. In the case of Japan, seven of eight respondents were from Mainland China (6) or Hong Kong, China/ Taiwan Province of the People's Republic of China (1), with the remaining participant holding a passport from another Asian country. As noted above, this sample, save for those surveyed China, is heavily biased toward participants from the People's Republic of China.

In terms of gender, age, and marital status, participants from three of the four case study countries are basically alike, with one country standing out from the pack. With respect to gender, those surveyed in China, Japan, and Singapore were overwhelmingly male. Germany is the big outlier here, with six of the ten survey respondents being female. With regard to age, with the notable exception of China, survey respondents were between 20 to 50 years old, with Germany tilted toward younger participants (four of 10 being 20–29), while Japan and Singapore were more weighted toward the 30–39 age bracket. Lastly, in China, Japan, and Singapore, most of respondents indicated that they were married, and nearly all of these married respondents had children. Here Germany is once again an outlier, with six of the ten respondents saying they were single, while two of the married participants did not have any children. The general characteristics of the survey respondents are summed up in table 4 below:

Table 4. General characteristics of survey respondents by country of residence (N=39)

		Survey location (country)			
		S'pore	Germany	Japan	China
Gender	Female	1	6	2	1
	Male	10	4	6	9
Age	20–29	—	4	1	—
	30–39	6	6	6	4
	40–49	3	—	1	—
	50 and above	2	—	—	6
Marital Status	Single/divorced	1	6	3	1
	Married without children	3	2	—	1
	Married with child/children	7	2	5	7
Current Nationality	China (Mainland)	7	8	6	—
	Hong Kong, China/ Taiwan Province of the People's Republic of China	1	—	1	—
	Western/Latin countries	—	2	—	9
	Other Asian countries	3	0	1	1

Save for the outlying cases noted above, the characteristics of these survey respondents with respect to age, marital/family status, and gender tend to mirror those of high-skilled immigrants in general. With regard to age, a recent study of high-skilled immigrants in the EU, other OECD countries, and certain emerging economies indicates that they tend to be younger and economically active individuals (Gagnon, 2014). Less empirical research exists on the marital status of highly skilled migrants. However, according to the latest American census data, 74.8 per cent of the Indian nationals living in the United States, most of whom are well-educated and skilled individuals, are married (Ushakov, 2015).

Lastly, although women now account for half of global migration, the male–female mix with respect to skilled migrants remains tilted somewhat toward men. While high-skilled females account for an important and rising minority share of the IT and high tech migrant labour force, women continue to be disproportionately represented in skilled caregiver professions, especially among migrant nurses and, to a lesser extent, doctors. As recent feminist scholarship on immigration emphasizes, this reflects the “gendering” of global migration stemming from the distinctive obstacles faced by high-skilled female migrants. For example, points-based immigration systems discriminate against women because of lingering pay gaps between men and women. At the same time, carer duties, which often require long, irregular hours and are borne disproportionately by women, can make it hard for many women to attend professional language instruction classes when moving to a new country (Focus Migration, 2009).

In contrast to the general similarity among the demographic information presented above, survey participants varied markedly across the four countries with respect to their occupations. Germany and China stand out for having the biggest spread among occupations, with survey respondents being fairly evenly distributed across six categories of work. In Japan, on the other hand, five of the eight respondents were IT engineers, with the other three falling into the professor/scholar/researcher (2) and CEO/leader (1) categories. Singapore is similar to Japan, except that the survey respondents largely fall into two categories: Close to half (5) checked the manager/director category, while four participants were in the professor/scholar/researcher category. This is in line with Singapore’s emphasis on attracting high quality management talent and world-class scholars. The occupational breakdown of survey respondents is summarized in table 5 below:

Table 5. Survey respondents by occupation and country of residence (N=39)

Occupation category	Survey location (country)			
	S'pore (N=11)	Germany (N=10)	Japan (N=8)	China (N=10)
CEO/leader	–	–	1	2
Manager/director	5	4	–	–
Business owner/ entrepreneur	1	1	–	1
Professor/scholar/ researcher	4	1	2	3
Freelancer	–	2	–	1
Engineer	1	1	5	2
Lawyer	–	1	–	–
Other	–	–	–	–

The four countries under consideration therefore provided a group of skilled migrant survey respondents spanning a wide occupational spectrum. The professor/scholar/researcher category was also well represented in every group, save for Germany, where just one respondent fell into this category.

Finally, in the case of China, one survey respondent had a Green Card. This individual is an ethnic Chinese US citizen with PhD in biochemistry from Cornell University who was recruited under the Foreigner Thousand Talents Programme. He indicated that it took him two months to obtain the Green Card.

6.3 Survey respondents' evaluation of high-skilled immigration policies in case study countries

As noted earlier, survey respondents were asked three questions to evaluate the effectiveness of the Chinese, German, Japanese, and Singaporean efforts to attract highly qualified foreign talent. One question called upon the respondents to use a four-point scale to evaluate aspects of immigration rules and the overall immigration system for high-skilled individuals. The other two questions asked respondents to list problems with immigration rules and procedures and check off suggestions on how they could be improved in each of the countries.

When gauging immigration rules and systems, respondents were asked to rate particular immigration rules and living experiences as being “excellent”, “good”, “fair”, or “poor”.

“Excellent” responses were scored a 4; “good” a 3; “fair” a 2; and “poor” a 1. The researchers summed up scores provided by participants and then divided the aggregate totals by the number of respondents to get the average score for each specific policy and post-admission living experience. In asking respondents to assess the latter issue, the study provides points of comparison among China, Germany, Japan, and Singapore with respect to the overall environment for high-skilled immigrants. These survey results are displayed in table 6 below:

Table 6. Survey respondents’ average rating of immigration procedures and post-admission living conditions by country of residence (N=39)

	Survey location/country being rated			
	S’pore (N=11)	Germany (N=10)	Japan (N=8)	China (N=10)
Efficiency in dealing with immigration paperwork	3.46	2.00	3.00	2.00
Residency	2.91	2.80	2.50	2.63
Working conditions	3.27	3.20	2.63	2.75
Medical/health conditions	3.18	2.80	3.13	2.38
Provision for children/spouse	3.27	2.90	2.88	2.50
Infrastructure	3.55	3.40	3.14	2.88
Degree of social/cultural inclusion	3.36	2.40	2.63	2.50
Financial and tax policy system	3.36	2.20	2.71	2.57
Intellectual property service and protection	3.46	3.20	2.88	1.29
Note: Evaluation standard: 4-Excellent, 3-Good, 2-Fair, 1-Poor				

The first area to be rated dealt solely with immigration procedure matters. Here Singapore easily comes out first, with a relatively high average rating of 3.46. This is very much in line with what the qualitative desk study of the city-state suggests, namely that it has a relatively user-friendly immigration system. Likewise, Germany’s low score also comes as no surprise, and the fact that China fairs equally poorly indicates that it is not emulating the best practices among the other three case study countries in this crucial area.

The second area pertains to both immigration procedures (i.e., those surrounding gaining temporary or permanent residency) and, by extension, the ease of one key dimension in settling down in a foreign country, namely obtaining housing. The four countries have fairly similar ratings, ranging from 2.91 for Singapore to 2.50 for Japan.

The low Japanese ranking for residency could reflect the soaring housing prices in cities with high concentrations of skilled immigrants, such as Tokyo and Osaka. The reason for this spike in prices can be attributed in part to the increase of Chinese investor migrants bidding up prices and paying cash for property (Chu and Kuwako, 2015). In fact, housing prices in Tokyo have become “seriously unaffordable”, according to the Demographia *International Housing Affordability* Survey (2016). Another factor for Japan’s low score in this area could be the large number of Japan survey respondents who are not on the HSFP visa, which has generous provisions for long-term residency (we investigate this hypothesis further below). It should be noted, however, that Japan is not alone in having rising housing costs, which may account for the relatively tight cluster of scores across all four countries. Demographia (2016) notes that Singapore also has housing affordability problems, and foreign migrants in China are largely concentrated in first cities, where property is much dearer than in the rest of the country.

With respect to housing costs, Germany is the outlier here. As of November 2015, only 15.9 per cent of the German population paid more than 40 per cent of their income on housing, which is the lowest share among the EU member countries (Eurostat, 2015b). Consequently, the low Germany rating on residency is perhaps stemming from nearly all Germany respondents likely still holding residence permits and therefore lacking long-term resident status.

Overall, the results in table 4 place Singapore infirmly in the lead among all four nations, as the city-state has the highest average score in every area rated by respondents. It is also notable that, even though scores vary from topic to topic, participants considered the talent attraction policies and living conditions in all four countries to be above “fair”, with one exception. IP protection in China received the lowest score, 1.29, which means participants generally judged the country’s IP protection policies to be “poor”. The average respondent scores suggest that, although China started late and is relatively inexperienced compared to the other case study countries when it comes to attracting foreign talent, Chinese policies are catching up in the international competition for talent. However, the results in table 4 also show that further reform in IP protection in China is required, which may even be one of the most urgent reforms needed to attract international talent, including entrepreneurs.

Respondents’ ratings of policies and living conditions in Germany, on the other hand, are less in line with the country’s middle ranking among the three case study countries (i.e., Germany, Japan, and Singapore) in terms of attracting high-skilled migrants. Germany does score relatively high in some areas, including working conditions, infrastructure, intellectual property (IP), and, to a lesser extent, provision for spouses and children. However, it lags behind both Singapore and Japan with respect to medical/health conditions, the financial and tax policy

system, and degree of social/cultural inclusion. The poor ranking in the latter category is not at all surprising, given the heavy representation of Chinese nationals among the Germany survey group and the large gulf that exists between German and Chinese cultural and social norms. Interestingly, Germany fares even worse with respect to its financial and tax policy system. That ranking reflects Germany's extremely high worldwide ranking, second only to Belgium, in the share of income taken by taxes among single people and couples without children (thanks to generous child tax credits, couples with two or more children have much higher after-tax earnings) (Carter, 2014). Eight of the 10 German group respondents are either single/divorced (6) or married without children (2).

As shown in table 4, Japan scores below 3 in all aspects except efficiency in processing paperwork and infrastructure. However, unlike under Japan's ordinary work visa, for highly skilled migrants in Japan under the HSFP, the terms and conditions of work, residency, and support for family actually compare very well on paper with Germany and Singapore. Researchers therefore separately examined the responses provided by the three IT engineers who likely hold a HSFP visa (see section 6.2) to see if they gave Japan higher scores in these areas noted above. We found that the likely HSFP visa holders did give Japan significantly higher marks (3.0) for residency than the rest of the survey respondents (2.2). However, on working conditions and provision for spouses and children, they gave Japan scores of 2.67 and 3.0, respectively, which is only slightly higher than the rating the country received from the other five respondents working there (working condition: 2.4; provision for spouses and children: 2.8). The small difference with respect to provision for spouses and children is rather curious, given the significant benefits HSFP holders enjoy in this area. One possible explanation is that being at the high-end of the labour force, these individuals could have very high expectations regarding their rights and privileges, which may be hard to fulfil.

China does poorly in the final seven areas in table 4, which all focus on general post-admission living conditions for skilled migrants. China finishes behind Germany, Japan, and Singapore in five of these areas, coming in third in only social/cultural inclusion degree and financial and tax policy system, where it is ahead of Germany but behind Japan and Singapore. With respect to social/cultural inclusion degree, China's 2.50 barely tops that of Germany, even though 4 of the 10 China survey respondents are ethnic Chinese (we return to this issue below). In the case of the financial system and taxes, the gap between China and Germany is a little bigger, but not too wide apart.

Two things bear noting with regard to financial systems and taxation. First, similar to Germany, China has high levels of income taxation, which economists see as one factor constraining

the “rebalancing” of its economy toward consumption (Zhu, 2016, p. 140). Second, the 2011 Chinese Social Insurance Law stipulates that foreigners should participate and pay into local pension schemes, even though practically none of them will stay long enough to benefit from these programmes. According to a recent posting on *teflSearch*, a website advising English teachers about working in China, this law has been unevenly implemented across the country. However, the posting states that foreigners paying into the system will find it very difficult or impossible to claim their contributions upon leaving China (*teflSearch*, 2015). China also scores low in medical/health conditions, reflecting problems such as recent high profile scandals, including an incident around fake vaccines (O’Connor, 2016). Lastly, as noted above China does very poorly in intellectual property service and protection, where it received the lowest score of any country in any area, and which stems from the generally inadequate legal and regulatory safeguards around IP.

We also separately evaluated the responses of researchers surveyed within the four countries. Their ratings are shown in table 7 below, though it should be cautioned that these ratings are based on very small sample groups, with Germany in particular just having one survey respondent in the researcher category.

Table 7. Survey respondents’ average rating of immigration procedures and post-admission living conditions by country of residence, researchers only (N=10)

	Survey location/country being rated			
	S’pore (N=4)	Germany (N=1)	Japan (N=2)	China (N=3)
Efficiency in dealing with immigration paperwork	3.50	3.00	4.00	2.50
Residency	2.75	3.00	2.00	3.00
Working conditions	3.25	4.00	2.00	3.00
Medical/health conditions	3.25	3.00	3.00	3.00
Provision for children/spouse	2.75	3.00	3.00	2.50
Infrastructure	3.75	4.00	2.75	2.00
Degree of social/cultural inclusion	3.25	2.00	2.00	2.00
Financial and tax policy system	3.25	3.00	2.00	2.00
Intellectual property service and protection	3.50	3.00	2.50	1.33
Note: Evaluation standard: 4-Excellent, 3-Good, 2-Fair, 1-Poor				

Comparing table 6 and table 7 shows that differences exist between the ratings provided by researchers and those of the groups as a whole in all four countries, with those being especially pronounced in Germany, Japan, and China. In Singapore, these responses are the same in five of the nine areas; in the other four, the researchers gave the city higher rankings in one area and lower rankings in the remaining three. However, save for provision for children/spouses, the scores for the other areas are quite close.

In Germany, on the other hand, the one researcher among the survey respondents gave the country higher ratings than the group as a whole in all but two areas— intellectual property service and protection and degree of social/culture inclusion. This result could reflect the difficulties that non-nationals or academics with foreign academic backgrounds face getting into the German university system (European University Institute, 2015). At the same time, the single researcher in the German group gave the country a better rating when it came to provision for family members, possibly reflecting the greater privileges enjoyed by settlement permit holders in this area (again, being a researcher, this individual may well hold a settlement permit). The opposite pattern prevails in Japan, with researchers giving the country lower marks in all areas save for efficiency in dealing with immigration paperwork, when compared to the average ratings received from all eight Japan respondents.

In China, the researchers surveyed gave the country generally higher or equal ratings with respect to immigration procedures and overall living and working conditions. This was the case in six of the nine areas, with China being rated lower by researchers in just three yardsticks for judging an immigrant's general living and work environment. The Chinese case is certainly skewed by two Thousand Talents Programme participants being in the researcher subgroup, as these individuals are covered by the programme's particularly generous incentives. Aside from the Chinese-American Green Card holder, this pair included a Russian scientist.

In addition to rating various immigration procedures and the post-immigration living and working conditions, survey respondents were asked two other questions. One asked them to note existing problems with their country of residence's foreign talent attraction policies. The other question asked respondents to provide suggestions for improving these policies. For the first question, respondents were given eight choices and could select as many of them as they thought applied. These choices and the number of times they were selected by respondents from each country are displayed in table 8 below.

Table 8. Existing problems with the high-skilled talent attraction policies as identified by survey respondents (N=39)

	Survey location/country being assessed			
	S'pore (N=11)	Germany (N=10)	Japan (N=8)	China (N=10)
The policies are not specific enough	1	3	1	2
The policies have not been fundamentally implemented	1	1	5	4
Some policies are outdated	3	2	1	1
The policies' attractiveness and preferences are not enough	5	6	4	4
Policies overrate the ability of foreign high-level talents	—	—	—	2
Policies underestimate the ability of foreign high-level talent	—	2	1	—
Cultivation and development of local talent is neglected	1	—	1	—
Government's publicity on policies are insufficient	2	8	5	—

Note: This was a multiple choice question. Survey respondents were able to select multiple answers.

Three points stand out about these responses. The first is that about half of the respondents in all four countries stated that the foreign talent attraction policies are insufficiently attractive and fall short with respect to preferences. That result may simply stem from the steep expectations skilled immigrants might hold regarding policies targeting such individuals.

The second notable feature of the responses is the manner in which Germany, Japan, and, to a lesser extent, China stand out with respect to a number of choices checked off by respondents. More than a few German respondents also checked off “policies not specific enough” and “government’s publicity efforts are insufficient”. The large numbers checking off the latter problem dovetails with the criticism of German Government behaviour mounted by Christine Langerfeld, chairwoman of the Expert Council of the German Foundation on Migration. Langerfeld argues that the “German government is acting too defensively”, adding that Germany lacks modern “immigration marketing” and needs to put its 2012 initiatives to woo high-skilled immigrants “in the display window”, not “under the counter” (quoted in Popp and Tietz, 2013).

Researchers separately broke down the responses to this question made by researchers surveyed in Germany, Japan, Singapore, and China. These results are shown in Table 9 below.

Table 9. Existing problems with the high-skilled talent attraction policies as identified by survey respondents, researchers only (N=10)

	Survey location/country being assessed			
	S'pore (N=4)	Germany (N=1)	Japan (N=2)	China (N=3)
The policies are not specific enough	1	–	–	1
The policies have not been fundamentally implemented	–	–	2	3
Some policies are outdated	1	–	–	–
The policies' attractiveness and preferences are not enough	1	–	–	1
Policies overrate the ability of foreign high-level talents	–	–	–	1
Policies underestimate the ability of foreign high-level talent	–	–	–	–
Cultivation and development of local talent is neglected	–	–	–	–
Government's publicity on policies are insufficient	–	1	1	–

Note: This was a multiple choice question. Survey respondents were able to select multiple answers.

As table 8 shows, migrant researchers in these countries were less likely to select the issues that were viewed as the biggest problems by respondents as a whole. For example, the lone researcher in the Germany group only cited lack of government publicity as being a problem with Germany's efforts to attract high-skilled talent. One of the Japanese researchers also selected a lack of promotion as a problem, while two pointed to "the policies have not been fundamentally implemented", indicating that both researcher and non-researcher members of the Japan group viewed this as a problem.

Our final question gave respondents a menu of immigration policies and asked them to select those that they believe could be further improved. As with the previous question, respondents could select as many choices as they felt to be applicable to their host country. The feedback on this question from the four survey groups is shown in table 10 below.

Table 10. Policies that need further improvement according to survey respondents (N=39)

	Survey location/country being assessed			
	S'pore (N=11)	Germany (N=10)	Japan (N=8)	China (N=10)
Personal financial assistance	3	2	–	3
Personal entrepreneurial incentive and service system	2	5	2	1
Favourable terms on personal income tax	2	9	–	1
Residency conditions	1	2	–	3
Talent cultivation system	2	5	–	1
Supportive policies for spouses and children	3	7	–	4
Housing/housing subsidies	3	3	–	3
The assessment mechanism for job promotion	–	4	1	3
Medical insurance, social security, and similar	3	2	–	4

Note: This was a multiple choice question. Survey respondents were able to select multiple answers.

Germany stands out among the four cases in having more respondents select various suggestions for areas that could use improvement. Over half of the Germany respondents surveyed felt that Germany could improve in four categories: personal entrepreneurial incentives; personal income tax; talent cultivation system; and support for children and spouses of high-skilled migrants. A substantial minority, cited housing assistance (3) and the job promotion assessment mechanism (4) as areas where Germany could improve.

Three-quarters of the Japan group respondents felt that Japan also needed improvement in the personal income tax regime for foreign talent, while half said the same about supportive policies for their spouses and children. Other areas of potential improvement, however, were marked by few Japanese participants.

Almost a third of the Singapore survey respondents (3 out of 11) selected support for children and spouses; housing assistance; and medical insurance, social security, and similar as areas where the city could do better in attracting high-skilled migrants.

Three or more survey respondents from the China group cited personal financial assistance; residency conditions; support for spouses and children; housing assistance; and medical insurance, social security, and similar as areas that needed improvement. Indeed, the share of the China survey respondents who selected the medical insurance and social security was 40 per cent, which exceeds the other three countries. This high share likely reflects the problems within the Chinese health-care system and the fact that contributions into the state pension funds are now formally required for foreigners working in China. By contrast, the very low number (1 out of 10) who selected personal income tax as an area for improvement is somewhat at odds with the responses to the responses shown in table 6, which had respondents rating China's tax policies as only between "fair" and "good".

For this last question, the researchers also separately noted the selections made by researchers in each survey group. These results are shown in Table 11 below.

Table 11. Policies that need further improvement according to survey respondents, researchers only (N=10)

	Survey location/country being assessed			
	S'pore (N=4)	Germany (N=1)	Japan (N=2)	China (N=3)
Personal financial assistance	–	–	–	2
Personal entrepreneurial incentive and service system	–	–	1	1
Favourable terms on personal income tax	1	–	1	–
Residency conditions	–	1	1	–
Talent cultivation system	–	1	1	–
Supportive policies for spouses and children	2	1	1	1
Housing/housing subsidies	1	–	–	–
The assessment mechanism for job promotion	–	–	–	–
Medical insurance, social security, and similar	1	–	–	1
Note: This was a multiple choice question. Survey respondents were able to select multiple answers.				

As the data show, few options were selected by the researchers. Compared to the survey

respondents as a whole, this sub-group seemed to feel that the policies of their adopted countries for attracting high-skilled immigrants had less need for improvement. Nevertheless, several things do stand out here. The first is that two of the three Chinese researchers surveyed selected “personal financial assistance”, and notably these two respondents were not recruited under the Thousand Talents Programme, which has generous financial incentives. Their responses suggest that China may need to provide incentives to researchers who do not quite meet the high bar set by the Thousand Talents Programme to attract foreign academic/research talent.

Two of the four Singapore researchers selected “supportive policies for spouses and children”, accounting for two-thirds of all such responses from the Singapore group as a whole. The lone German researcher also selected supportive policies for spouses and children, along with “talent cultivation system”.

In addition to answering the close-ended questions above, survey respondents were asked to write down personal comments on a blank space on the questionnaire, if they so desired. The main highlights of this qualitative feedback for each country are summarized below.

Germany:

- Regarding residency, a number of respondents made positive comments on the accelerated two-year path to permanent residency through obtaining a settlement permit provided for foreign students graduating from German universities.
- Respondents wrote that immigration procedures were very frustrating, complaining about unfriendly officials.
- Some respondents wrote that the German Government was too focused on attracting new high-skilled migrants to the country and was not doing enough to retain the foreign talent already based in there.
- Another complaint regarding the post-admission environment was that foreigners have difficulty freely searching for work once settled in Germany, which has to do with residence permits and EU Blue Cards being tied to specific jobs.
- Lastly, in line with Germany’s low ratings for degree of social/culture inclusion, respondents stressed that language and culture are the two biggest barriers for settling down in Germany. Since our respondents were largely Chinese nationals from a very different social and cultural background, this kind of “culture shock” problem is not particularly surprising.

Germany and the EU Blue Card scheme:

As was noted earlier, two respondents in the Germany group were EU Blue Card holders. These individuals offered very different assessments of the programme in their responds to the closed

and open-ended questions:

- The negative assessment came from a manufacturing feasibility analyst engineer working for a German firm. This individual complained about his current salary and the lack of certainty about career development in Germany. He also stressed that the Blue Card's link to a specific employer hindered his ability to look for better employment. Adding to these problems is the slowness of immigration procedures and failure of local Foreigners' Office officials to provide clear target dates. Additionally, this Blue Card holder found it difficult to culturally blend into Germany and bring his family members to the country.
- By contrast, the second Blue Card-holding respondent, a lawyer working for a German law firm, was quite happy with her salary and had an optimistic view of her future prospects in Germany. This individual was relatively satisfied with the German high-quality talent attraction policies, noting that all of the steps involved in processing her application had taken a total of three months. Unlike the other respondent, she also had no problems blending in locally or with family reunion issues.

Japan:

- Three of the IT engineer respondents found the "points-based" system attractive, on account of its clarity and transparency; however, one complained about his visa (presumably an HSFP) being tied to a specific employer.
- Regarding career prospects in Japan, some respondents felt that while chances for advancement were not any better than in China, they could earn a higher salary in Japan. Others said Japan offers "fair" employment opportunities for foreign talents (such responses came from both the engineers and non-engineers).
- Individuals in the Japan survey group said they had problems bringing their spouses, children, and other family members to Japan, with these complaints being more pronounced among the non-HSFP work visa holders.
- The researchers in the survey group noted that academics are highly respected in Japan, and respondents generally praised the country for respecting the knowledge and skills of high-quality talent.

Singapore:

- As they did in choosing ratings, respondents also praised Singapore in the written, open-ended feedback for its simple and efficient immigration procedures involving minimal paperwork, short processing times, and good provisions for immediate family reunion.
- With respect to the overall work and living environment, people in the Singapore group emphasized its abundant job opportunities, low taxes, and good overall working and living environment, with many planning to remain in the city over the long term.

- However, one respondent did complain that foreigners in Singapore are legally restricted from purchasing property in certain parts of the city, which helped drive down its rating with respect to “residency.”
- Another Singapore survey respondent claimed that the city’s current foreign talent attraction was geared completely toward single individuals, as opposed to those with families, adding that little help is given in placing children in good schools. However, most of the other respondents gave Singapore high ratings in this area.
- Finally, a few respondents complained that Singapore’s attractive immigration policy created extra pressure on them to stay competitive in its labour market, giving rise to greater working pressure and career uncertainty.

China:

- In their written comments, respondents faulted China for having complicated and time-consuming immigration procedures, adding that the overall lack of information and political transparency created further hurdles for foreigners, particularly when it came to competing with local people in grasping good business opportunities.
- One of the researchers in the China group, who also has a company on the side and was one of the ethnic Chinese (from the United States) in the group was especially adamant on the difficulties facing immigrants in grasping business opportunities, arguing that China should enable him and other foreigners to acquire dual citizenship to make it easier for them to conduct business in the country. (This researcher was not one of the two respondents recruited under the Thousand Talents Programme).
- With regard to social and cultural inclusion, the China survey respondents complained that language and cultural barriers are hard to overcome, and that they always experience segregation from the local Chinese staff when working for local businesses and organizations.
- Most of the survey respondents were unaware of the various Chinese Government schemes for attracting overseas talent, a result that is in line with the CCG–Guanghua School of Management survey of returnee talent (see section 3.2.2above).
- Another common complaint written by respondents was that China’s current foreign talent efforts are too focused on attracting very “top tier” talent, as opposed to well qualified and experienced foreign immigrants. Respondents also faulted Chinese policy for focusing too much on those intending to stay in China for the long haul.
- Lastly, respondents cited the Internet firewall, pollution, and expensive housing as negatively affecting their overall living environment while working in China.

It bears emphasizing that these negative feelings regarding Chinese immigration procedures and the overall living and working environment for foreigners were not only held by non-Chinese

members of the China survey group. In fact, the responses by ethnic-Chinese participants were not all that different from the others for both the closed questions and in open-ended responses, particularly with regard to the last two bullet points above. This similarity does not bode well for Chinese efforts to emulate India's success in tapping into its large overseas diaspora talent pool through initiatives such as the Overseas Citizen of India (OCI) card scheme (see section 2.1.4). To be sure, no valid inferences can be drawn from the very small sub-group of ethnic Chinese in the China foreign respondents group. However, that they held similar views to the other individuals surveyed regarding the Internet firewall, lack of information and political transparency, and workplace culture are fairly striking. If these views are even just somewhat representative of those held by the Chinese overseas diaspora population at large, then China may have difficulty a harder time attracting this cohort than the country has had in bringing back Mainland China returnees.

To obtain further feedback on Chinese policies for attracting high-skilled migrants, CCG and China's State Administration of Foreign Experts Affairs held an open research forum on this issue in Guangzhou on 20 January 2016. During the forum, Chinese Government officials reviewed a number of problems in China's efforts to attract high-skilled immigrants. They noted that a mismatch exists between the qualifications and fields of expertise of foreign talent and employment opportunities in domestic companies. Hence, the new Chinese Government "big data" initiative aimed at better matching foreign expert certificate holders and potential employers (see section 3.2.4 above).

Foreign researchers holding foreign expert certificates raised two very important concerns not noted in the survey responses. These concerns pertained to research funding and assembling research teams in China.

With regard to research funding, existing Chinese Government regulations on spending research funds create major headaches for foreign experts engaged in such activity. According to these regulations, once the research funds have been approved by the Government and deposited into a local bank account, they must be used within the same calendar year. However, most researchers stated that they typically get the funding in September or October, leaving them with little time to plan, and making it difficult to put the money to its best use. They added that the application process for research money is very complicated.

Regarding the assembling of research teams, foreign researchers participating in the forum noted that successfully carrying out complex scientific investigations require a stable and high-qualified research team. Currently most of their research assistants are local Chinese graduate

students who are keen to work for foreign companies after getting their degrees. That, in turn, leads to a great deal of instability in the makeup of research teams. The foreign researchers added that in their home countries, the research assistants on teams conducting extremely complex projects are typically post-doctoral fellows. In addition to being better educated than graduate students, these fellows are more willing to make long-term commitments to specific projects.

7. Conclusion: Lessons learned and recommendations for China's competitive policies

This report provides an assessment of the German, Japanese, and Singaporean efforts to attract highly qualified foreign personnel. The assessment has been made based on two different aspects: 1) desk study of the skilled immigration policies and policy-making mechanisms of the three case study countries (and China); and 2) small-scale surveys with highly skilled migrant professionals on their working experience in these four countries. Based on information gathered through the above two methods, this concluding section lays out a list of suggestions for China on how to improve its strategies for attracting highly skilled international talent.

Comparing China's policies for attracting international talent to those of the three case study countries, it is clear that China still has a great deal of room for improvement, despite a host of new efforts to boost China's attractiveness as a destination for high-quality foreign talent. This is borne out by the comparatively small numbers of skilled migrant currently living and working in China and the current state of progress with regard to implementation of new talent attraction initiatives.

Turning first to the numbers of foreigners working in China, it is true that most can be classified as "skilled" to "high-skilled". That said, China's working population (from 16 years old to 59 years old) stood at 915.83 million in 2014 (National Bureau of Statistics, 2015). According to ILO (2015) figures, the labour participation rate in China is 70.5 per cent, or approximately 645.7 million workers. So even if every single one of the 600,000 foreigners currently living in China is actively employed (which is a highly improbable assumption), the ratio of foreign workers to national workers in the labour force would come to just 0.09 per cent. This highly inflated ratio is still significantly lower than the already low share in Japan (0.3 per cent) and way below the 5 per cent average for advanced economies. Moreover, the actual number of highly qualified foreign talents recruited under the Thousand Talents Programme is just 313, while over 5,000 Chinese experts have returned to China under the same programme (SAFEA, 2015). These figures are evidence that talent attraction policies in China can be reformed to be more open towards educated and skilled foreign talent.

Considering the recent initiatives undertaken by the national authority and the municipal authorities in Shanghai and Beijing, China is slowly improving its policies with regard to its overall administration system, immigration regulations, and incentives for attracting skilled immigrants. However, it is worth noting that most of these new steps – such as the liberalisation of residency requirements, improved provision for the foreigners' spouses and

children, and streamlined visa processing – were already implemented by Germany, Japan, and Singapore long before. Singapore has set a relatively low standard for professionals to apply for Employment Pass (EP) status. Germany also provides a fast track to a settlement permit for its residence permit holders and EU Blue Card holders. Although the Japanese HSFP visa has attracted only a limited number of highly qualified foreign talents to Japan, this visa does provide numerous rights and attractive privileges to those who qualify. Therefore, China should not simply be satisfied with implementing policies already prevalent in developed economies around the world. Rather China can learn more from unique policy initiatives in countries like Germany, Japan and Singapore, and should work to innovate so that Chinese policies continue to keep up with or even exceed the most up to date policies utilized by other countries.

Last but not least, in the small-scale surveys with highly skilled migrants, China came in last or tied for the last in nearly all areas under consideration in the survey. China fared poorly in the close-ended survey questions, while the open-ended responses were uniformly critical. Some of these problems can be easily fixed through simple administrative changes, while the rest of the issues might need further reform in relevant policies, and will take a longer time to initiate. The following section of this report takes a closer look at the existing problems China faces and seeks for possible solutions based on the case studies examined above.

Particular Policies:

- *Simple and easy application procedures matter.* One very clear lesson stemming from the qualitative country comparisons and the survey results is the importance of implementing user-friendly application procedures for and timely processing of visas and permits. With the easy online application process for EPs, Singapore clearly stands out in this area. Complicated procedures in Germany, by contrast, demonstrated obstacles with regard to implementing the country's actually liberal migration schemes for skilled migrants. Recent developments in Germany's talent attraction policies can be regarded as potential solutions to these obstacles. In the same way, the introduction of the new Management and Service System for Foreigners Working in China will also play a positive role in further simplifying the application procedures and improving the efficiency of foreign talent management.
- *Avoid setting the bar impossibly high for all but the extremely high end of foreign talent.* The Japanese HSFP visa is illustrative in this regard. A main factor in its failure to meet talent attraction targets is the stiff qualification standard Japan has implemented for its HSFP programme. China's Thousand Talents Programme arguably has similar problem of targeting at the very high end of foreign talent. These high standards have not been dramatically reduced in the recent relaxation initiatives made by Shanghai and Beijing.

For instance, the income requirement to apply for permanent residency has retained a fairly high threshold, and the online application of the new Management and Service System for Foreigners Working in China is only applicable for foreign high-end talents (Category A).

- *Provide less arduous paths to permanent residency.* Policies in Singapore and Germany provided examples for China in this respect. Singapore's EP, as noted above, sets a relatively low income standard for professional talent to apply for permanent residency status. In addition, the German Government has set up a fast-track process for acquiring a settlement permit, with similar timelines provided for its residence permit holders, foreign graduates of German universities, and EU Blue Card holders. Moreover, the thresholds for getting on that fast track, particularly with respect to salary, are not that high.
- *Ensure generous provision for foreign talents' spouses and children.* Again, Singapore stands out here in both comparative desk studies and survey analysis. Among survey respondents, Singapore fares much better than China, Germany, and Japan with regard to providing extended benefits to the family members of skilled foreign workers. Furthermore, these accommodations are not only granted to EP holders, but also to the other pass holders who fall into the semi-skilled category. Germany hasn't been as efficient as Singapore in developing and implementing its talent attraction policies, but the German settlement permit is very similar to Singapore's pass system and covers a growing number of skilled foreign personnel who are not at the highest end of the spectrum. Germany also provides a considerable amount of assistance to the spouses and children of highly skilled migrant workers. Although the new talent attraction initiatives for Shanghai and Beijing seek to do this as well, they are still much like the Japanese HSFP visa in so much that the qualification standards remain quite high.
- *Do not couple visas and work permits too tightly to specific employers.* For the vast majority of skilled foreign personnel in Germany and Singapore— including those viewed as highly skilled – their work/residency permits are tied to a particular job or a specific employer. (Here the report refers to EP holders in Singapore and residence permit and EU Blue Cardholders in Germany). In Japan, the link between an HSFP visa and a particular employer is even tighter than those who hold normal work permits. This creates potential hurdles in attracting competitive foreign talent, particularly those wishing to have more freedom in switching jobs while overseas. One lesson China can learn from these case studies is to relax any policies that strictly bond skilled foreign workers to specific employers.
- *Enable foreign students getting degrees from local universities and make their transition into domestic labour force easier.* It is worth emphasizing that the main positive feedback

Germany receives is linked to the easy transition to domestic employment for foreign graduates of German universities. Singapore has also made similar efforts to retain foreign graduates. As for China, the recent Shanghai and Beijing initiatives for attracting skilled foreign personnel also place special attention on the foreign students in these two cities. Recent survey results of Republic of Korea graduates with Chinese university degrees indicate that 90 per cent of these Korean students are interested in landing jobs or starting up businesses in China (Dhoul, 2016), which perhaps suggests that these new initiatives may already be paying off.

- *In attracting researchers, both special outreach and good administrative procedures matter.* As with many other areas, Singapore stands out for using a variety of initiatives implemented across a number of administrative areas to attract foreign researchers, with particular success among those coordinated by A*STAR. China has also set up various programmes for luring foreign researchers, such as the Thousand Talents Programme. However, despite efforts that emulate Singaporean practices, such as launching generous talent attraction programmes, the feedback received at the Guangzhou forum underscores some crucial areas where China needs to implement reforms, such as improving the disbursement procedures for research funding and establishing mechanisms to ensure higher quality personnel for research teams. While China can address some of problems through an easy administrative fix, other issues, such as improving the quality of research assistants, will require more time and will likely prove more difficult to solve.

Implementation:

- Beyond providing generous incentives and privileges to attract foreign talent, having a smooth and effective implementation process can also greatly influence the talent attraction results. In this respect, Germany provides a good lesson to China. Even though, Germany has been relatively successful in attracting foreign talent by lowering barriers to migration, the country still faces essential problems with policy implementation progress. For instance, most of the Germany respondents surveyed for this study give Germany a relatively low rating for its troublesome permit application process and its failure to adequately publicize immigration policies. Such failure in this area clearly indicates how insufficient implementation can block the potential outcomes of a policy. In this case, Germany's failings might be an essential reminder for China as it seeks to boost its drawing power for qualified foreign talent.

Administrative Issues:

- *Avoid administrative fragmentation.* Germany also provides a clear negative lesson for China

in this arena. As emphasized above, the structure of Germany's federal government and the consequent fragmentation in implementing immigration policy have hindered Germany's ability to attract foreign talent. At the opposite end of the spectrum, Singapore's integrated platform for talent attraction provides a much better administrative role model for China.

- *Potential pitfalls for China.* China's previous experience in other policy issues underscores the potential administrative problems that China might need to face when implementing its skilled foreign talent attraction policies. Recently, China began to relax its centralized power as the Government began carrying out the newest environmental policy. However, this decentralized practice has led to a series of implementation problems. One of the most distinctive examples would be the enactment of the national sound policies at the local level (Ran, 2013). Although China needs to encourage more innovations in foreign talent attraction policies at the local level, it should strike a balance between promoting local innovations and ensuring a degree of integration and uniformity across its overall system for managing skilled immigration.

In conclusion, this report underscores the fact that good policy and proper implementation are not the only things that matter in enhancing a country's competitiveness for attracting skilled foreign personnel. The overall lifestyle context, particularly environmental conditions, housing, tax policies, cultural amenities, and cultural inclusion, are some of the other crucial factors that will influence foreign talents' interest in moving to China. Based on the research studies, Singapore comes out fairly well in nearly all of these areas. Germany, by contrast, fares poorly with respect to its tax regime and degree of social/cultural inclusion.

However, both non-Asian and ethnic Chinese survey respondents gave China a low rating in most of these categories. This result might indicate that in order to attract the large population of Chinese diaspora and other foreign talent overseas, much more needs to be done. Furthermore, respondents from both groups (ethnic Chinese and non-ethnic Chinese) noted the difficulty in grasping good business opportunities, which stemmed largely from the cultural emphasis on social networks and personal connections. This result clearly indicates the fact that Chinese governments might need to provide more assistance on cultural inclusion, in addition to providing generous financial incentives and accommodation options to its targeted talent.

Finally, China also receives a low rating on its overall living conditions for skilled foreigners. According to the small scale survey results, China receives low marks for tax policies, health care, environmental quality, and increasingly strict Internet firewall. Unlike changing research grant disbursement regulations, which only require a small fix to administrative systems, many

of these complaints are problems that require long-term adjustments. China still has a long way to go in this regard.

In recent years, China has achieved major success in attracting overseas Chinese and foreign professionals to work in China. However, China still stands in the beginning phase of its immigration development progress. The comparative qualitative analysis and survey results in this report indicate that China still has much to learn from the three sample countries. In order to enhance its competitiveness in attracting foreign talent, China will need to implement some major modifications as it devises fresh policies and other incentives for targeting foreign professionals.

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ILO Country Office for China and Mongolia
1-10 Tayuan Diplomatic Office Building, Beijing, China
Tel : +86 10 6532 5091
Fax : +86 10 6532 1420
beijing@ilo.org
www.ilo.org/beijing