LABOR MIGRATION IN ASIA

Increasing the Development Impact of Migration through Finance and Technology

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Asian Development Bank Institute
Kasumigaseki Building 8F
3-2-5, Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan
www.adbi.org

Organisation for Economic Co-operation and Development
2, rue André Pascal
75775 Paris Cedex 16
France
www.oecd.org

International Labour Organization
Regional Office for Asia and the Pacific
United Nations Building, 11th Floor
Rajdamnern Nok Avenue, P.O. Box 2-349
Bangkok 10200, Thailand
www.ilo.org/asia

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FOREWORD

Employment is the dominant impetus for migration in Asia, with workers moving to fill relative and absolute labor shortages and to find decent work. In 2015, over 5 million Asians migrated, most to the Gulf Cooperation Council (GCC) countries and to destinations in Southeast Asia and East Asia for work in elementary and medium-skilled manual occupations. While the demand in some sectors such as care, which is mainly done by women, is set to increase, compared to 2014, migration flows have dropped, in particular to the GCC. The fall in demand correlates with lower oil prices, more restrictive policies in certain destination countries, selective migration bans, and an increase in options at home in some countries of origin.

Asia also continues to be a source for skilled workers. Of the top 10 origin countries in 2015 for immigration to Organisation for Economic Co-operation and Development (OECD) members, five were Asian, with four of these involving skilled workers and students. Asia has also seen forced migration flows in 2015–2017, including from such countries as Afghanistan and Myanmar.

Since 2011, the Asian Development Bank Institute and OECD have organized an annual roundtable on labor migration in Asia. Since 2013, the International Labour Organization has also participated, with the result being the joint publication of an annual report. The theme of this year's report, the fifth in the series and the product of the Asian Development Bank's co-organizing the January 2017 conference in Manila, is "Using finance and technology to increase the development impact of migration." Chapter 1 focuses on labor migration trends, while Chapter 2 looks at the interface between technology and remittances, with Chapter 3 looking more broadly at diaspora finance and remittances. The fourth chapter studies information technology (IT) professionals' changing labor mobility patterns with reference to India.

Reducing remittance costs is salient to reaping development gains. In Asia, remittances have gone down to 8% of the remitted amount, but are still above the global average, and the target set by the United Nations Sustainable Development Goals (3%). Cultivating digital finance will significantly improve the remittance process and have positive externalities such as financial inclusion. A conducive environment and good governance is also crucial for potential investment from remittances and attracting diaspora funds. Although most migrant remittances address immediate needs, studies have found that a proportion is saved. Nevertheless, investment products have not proved to be popular with ordinary migrant workers. More success is seen in initiatives to increase formal remittance channel efficiency and coverage and, in such countries as the People's Republic of China and India, to engage the diaspora and mobilize investment.

Though the international movement of IT workers is quite commonplace, patterns are now changing. Japan is trying to recruit foreign-born IT professionals, and is providing incentives such as relaxing residency requirements. At the same time, countries such as the United States and the United Kingdom that have been traditionally more open to skilled migrants, including IT workers, are re-examining their policies.

This publication is intended to help contribute to the work of policy planners, experts, and practitioners in the region. We hope that this volume, including the statistical annexes on labor migration stocks and flows, proves useful to readers.

Chul Ju Kim
DEPUTY DEAN
ASIAN DEVELOPMENT BANK INSTITUTE

Jean-Christophe Dumont
HEAD OF INTERNATIONAL MIGRATION DIVISION
DIRECTORATE FOR EMPLOYMENT, LABOUR AND SOCIAL AFFAIRS
ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Panudda Boonpala
DEPUTY REGIONAL DIRECTOR
REGIONAL OFFICE FOR ASIA AND THE PACIFIC
INTERNATIONAL LABOUR ORGANIZATION

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CHAPTER 1

Trends in Labor Migration in Asia

Organisation for Economic Co-operation and Development

1.1 Introduction

In 2015, over 40% of all migrants in the world originated from Asia. Indeed, Asian migration, within and from the continent, has predominated internationally for decades, notably because of the importance of temporary labor movements to Gulf countries and of high- and lower-skilled migration to the Organisation for Economic Cooperation and Development (OECD) member countries. In the past few years, however, conflict has increasingly fueled Asian migration, notably from Syria and Afghanistan, and, more recently, from Myanmar.

The demand for foreign labor in traditional Asian migration destination countries has had an impact on overall movements, but only to a limited extent. The global context of slower growth in many OECD countries and faster growth in several Asian developing economies has not yet slackened migration from those countries where population is growing faster than job opportunities.

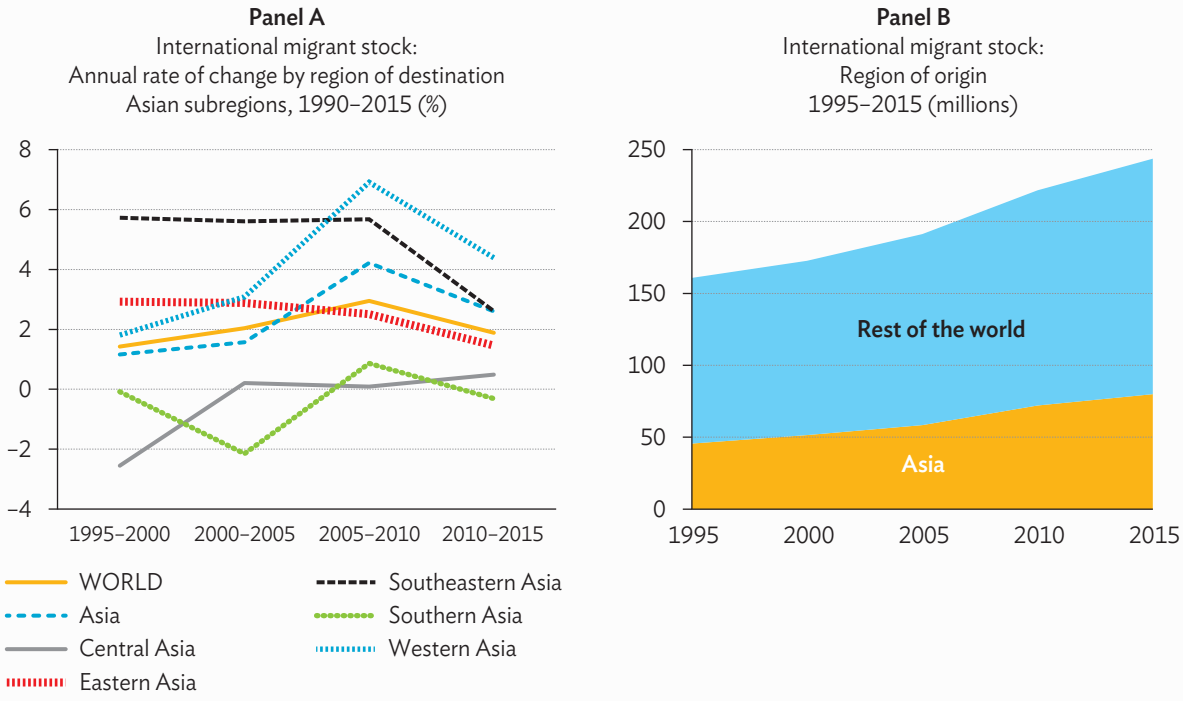
This chapter provides the latest available statistics on the migration trends within and from Asia. The first section compares Asia to other regions of origin and destination, in terms of migrant stock. The subsequent sections analyze labor migration flows from Asia to the Gulf and within the rest of Asia on one hand, and to OECD countries on the other hand. This is followed by a presentation of the international movement of Asian university-level students and an analysis of recent trends in remittances sent to Asia.

1.2 How Asia Fits into Global Migration—Medium-Term Trends

Over the past 20 years, Asia has played a major role in migration, as a region of both destination and origin. As a destination region, Asia hosted 30 million more international migrants in 2015 than in 1995. This is a 60% increase, to be compared with the 50% increase worldwide. The number of migrants in Asia increased particularly sharply between 2005 and 2010 (24%, or 4.4% per year on average). The annual growth rate of the migrant stock was, however, higher in western Asia during that period (7%), but close to zero in Central and Southern Asia. Between 2010 and 2015, the stock of migrants in Asia grew by an additional 2.6% (i.e., about 0.5% per year), which illustrates a marked slowdown. Data available for the most recent years seem to confirm this trend and a stabilization of the total migrant stock in Asia.

The number of Asian-born migrants worldwide jumped from less than 60 million in 1995 to almost 100 million 20 years later. Over these 2 decades, the share of all migrants originating from Asia rose from 36% to 41% (Figure 1.1, Panel B). This increase is almost entirely due to migrants originating from Southeastern and Southern Asia. The trend in the most recent 5-year period is influenced by migration out of Syria, which accounts for about half of the increase of Asian-born migrants between 2010 and 2015.

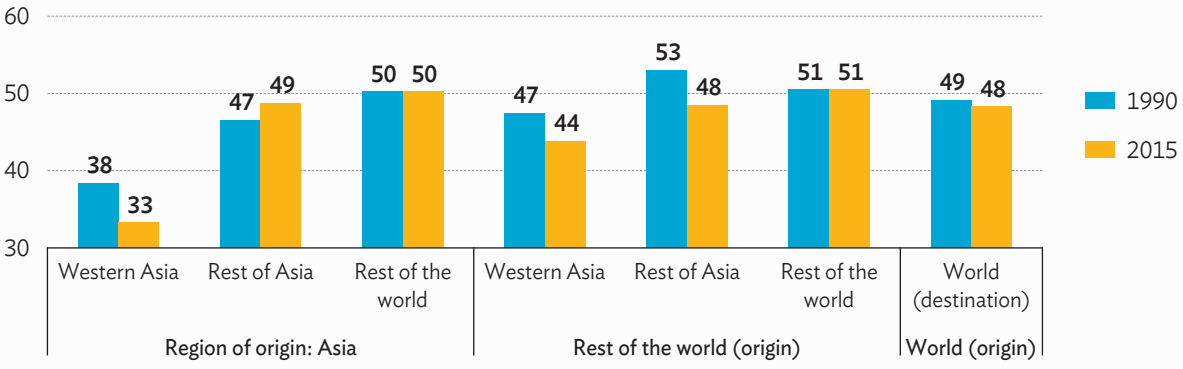
Figure 1.1: International Migrant Stock: The Role of Asia as a Destination and Origin Region



Source: United Nations Department for Economic and Social Affairs. International migrant stock 2015. http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml (accessed November 2017).

In 2015, women comprised 118 million of the global migrant stock, or 48% of the total, only slightly (–0.8 percentage point) down from their share 25 years earlier (Figure 1.2). The share of women among migrants born in Asia was somewhat lower at 45%, which represented a greater decrease (–1.7 percentage points) from 1990. However, the picture is not uniform among destination regions. Among those living in Western Asia, the share of women dropped sharply, from 38% to 33%, while it went up from 47% to 49% among those living in the other parts of Asia. Outside Asia, half of the migrants from Asia were women, the same as in 1990.

Figure 1.2: Share of Women among Migrants by Origin and Destination, 1990–2015 *(%)*

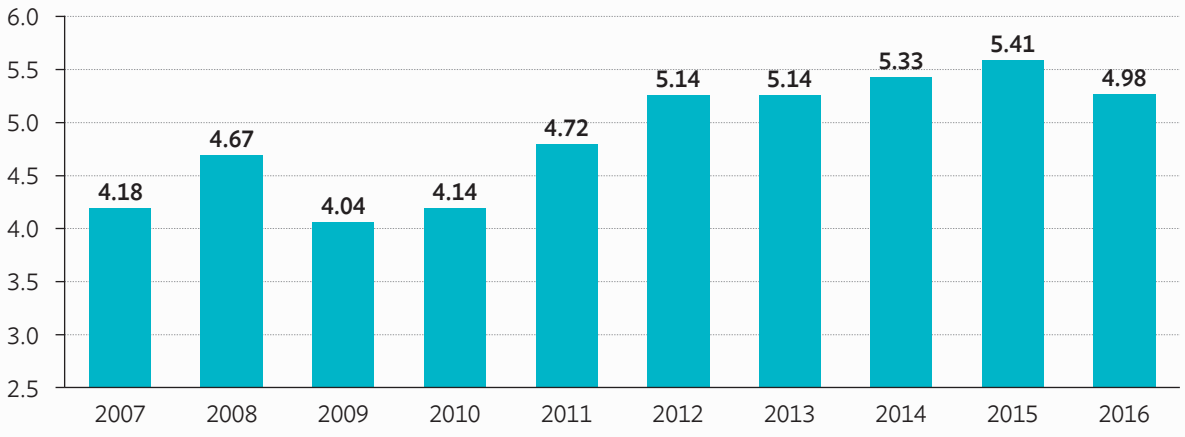


Source: United Nations Department for Economic and Social Affairs. International migrant stock 2015. http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml (accessed November 2017).

1.3 Labor Migration Flows from Asia to Non-OECD Countries

Labor migration from Asia appears to have paused in 2016. After years of sharp increases in many countries, and high global levels, reported outflows of workers from several major Asian origin countries declined in 2016. This is partly due to the decline in oil prices in 2015 and its consequences on the economic situation in the Middle East, which remains the main destination region for Asian workers. Policy changes in Saudi Arabia and Malaysia have reinforced the downward trend. In total, about 5 million workers were deployed from the 12 main Asian countries of origin in 2016. This corresponds to an 8% decrease compared to the previous year (Figure 1.3).

Figure 1.3: Total Outflows of Workers from Selected Asian Countries, 2007–2016 (million)



Note: Total of the 12 countries presented in Table 1.1. Philippines estimates are based on the change in stock 2015–2016 applied to 2015 flows.

The Philippines has long been the largest single country of origin of labor migrants in Asia, but the stock of overseas Filipino workers declined by 8% in 2016, from 2.45 to 2.24 million. Labor migration from Pakistan also declined 11% in 2016 to 840,000 people after it had reached a peak year in 2015 (Table 1.1). This downward trend is likely to continue into 2017 since partial figures up to October indicate only 450,000 departures for overseas employment from Pakistan. The same trend is observed in India where 521,000 emigration clearances were granted by the offices of the Ministry of External Affairs in 2016, one-third less than in 2015. The decline in the recorded outflow of migrants from India can be partly attributed to the introduction in 2015 of the new "e-Migrate" overseas worker management system.[1] The drop in the

[1] This online platform is managed by the Protectorate General of Emigrants under the Indian Ministry of External Affairs. E-migrate applies to Indian nationals recruited for employment in one of the 18 countries requiring Emigration Clearance, but exempts those with a secondary school pass certificate (excluding nurses) or those paying taxes. The system requires foreign employers to register with Indian missions in their countries. The online processing of migration clearances and recruitment agency licenses has increased transparency and efficiency. Employment contracts are posted online, along with employer, recruiter, and worker information.

number of registered e-Migrate Indian workers may be partly due to their becoming less attractive for recruiters and employers due to the requirement to use the online platform. Moreover, the minimum referral wages set by the Indian government are high relative to other countries in the region (Sasikumar and Sharma 2016), and the rising wages in India have made international migration less attractive. At the same time, the decline may not be as steep as the figures indicate, with reports that more Indian workers are migrating with tourist visas or "emigration clearance not required" passports. About 500,000 workers were also deployed from the People's Republic of China (PRC) in 2016, but in that case the decline was less marked (–7%). Sri Lanka also witnessed a second consecutive drop in departures for foreign employment in 2016 (–8%, 240,000 persons).

Table 1.1: Outflows of Workers from Selected Asian Countries, 2007–2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2015–2016 % change
Bangladesh	820	875	475	391	568	608	409	426	556	788	42%
Cambodia	9	9	15	30	26	35	23	25	41	85	109%
PRC	372	427	395	411	452	512	527	562	530	494	–7%
India	809	849	610	641	627	747	817	805	781	521	–33%
Indonesia	690	636	630	567	594	460	469	430	276	235	–15%
Lao PDR	3	2	4	19	34	7	23	8	51	58	15%
Myanmar	8	12	6	5	18	68	67	65	95	146	53%
Nepal	205	249	220	294	355	385	451	520	500	419	–16%
Pakistan	282	425	396	358	453	635	620	752	947	839	–11%
Philippines	716	870	991	1,124	1,319	1,435	1,469	1,431	1,438	1,328[a]	–8%[a]
Sri Lanka	218	250	247	268	263	282	293	301	263	243	–8%
Viet Nam	64	87	73	86	88	80	88	107	116	126	9%

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic.

[a] Philippines estimates are based on the change in stock 2015–2016 applied to 2015 flows.

Sources: National authorities and ILO ILMS for Myanmar, Cambodia, and the Lao PDR.

In 2016, around 420,000 Nepalese citizens left their country to work abroad, which represents a 16% decline compared to 2015. Labor emigration from Indonesia also declined in 2016 by 15%, with about 230,000 workers deployed, only a third of those registered in 2007. This was also likely related to a slowdown in registered departures for Malaysia, a major destination. In both cases—Nepal and Indonesia—this trend can be partly explained by Malaysia suspending recruitment of foreign workers in February 2016 (OECD 2016). Recruitment was reopened in May 2016, but only for certain sectors, notably excluding the service sector. In 2017, certain service sector jobs were authorized, although most remain off-limits for foreign workers.

A few countries in Asia have witnessed an increase of labor emigration in 2016. Viet Nam is one, although numbers remain much lower than for the above-mentioned origin countries. The outflows of Vietnamese deployed abroad reached 130,000 in 2016, a 9% increase compared to the previous year. Other countries in Southeast Asia—Myanmar, Cambodia, and the Lao People's Democratic Republic (Lao PDR)—also saw

official flows increase, primarily to Thailand. Bangladesh is the only country in South Asia that saw an increase in worker departures in 2016. More than a recovery, this increase stood at 42% to reach almost 800,000 workers deployed, similar to the levels last observed a decade ago, prior to the global financial crisis. 2017 will see another increase in labor emigration from Bangladesh as, according to partial figures up to October 2017, more people have already been deployed than during all of 2016. The increase in Bangladeshi workers going to Saudi Arabia can be attributed to the end of a 6-year ban on recruitment, which was lifted in mid-2016.

Table 1.2: Flows of Workers to Gulf Cooperation Council Countries, 2016 (in thousands)

	Philippines	India	Pakistan	Nepal	Sri Lanka	Bangladesh	Indonesia	
	2016e	2016	2016	2016	2016	2016	2016	Total
Saudi Arabia	375	165	463	139	63	144	14	1,362
UAE	210	164	296	53	40	8	3	773
Qatar	123	31	10	129	60	120	1	474
Oman	21	63	45	3	10	188	1	331
Kuwait	79	72	1	10	32	38	1	234
Bahrain	20	12	8	3	3	72	0	119
Total GCC 2016	**827**	**507**	**822**	**337**	**208**	**571**	**20**	**3,292**
Total GCC 2015	**896**	**761**	**977**	**308**	**282**	**543**	**53**	**3,820**

GCC = Gulf Cooperation Council, UAE = United Arab Emirates.

Note: e = Philippines estimates are based on the change in stock 2015–2016 applied to 2015 flows.

Sources: International Labour Organization (ILO) and national authorities of origin countries.

Looking at the main non-OECD destination countries in Asia, the Gulf Cooperation Council (GCC) countries received 528,000 fewer Asian workers in 2016 than in 2015. Saudi Arabia, despite a 9% drop in 2016, remains the top destination, with an inflow of more than 1 million Asian foreign workers. The drop observed in 2016 can be related to the country's economic situation, as well as to the ongoing "Saudization" policy, first introduced in 2011, which aims at reducing foreign worker reliance. In 2016, Saudi Arabia instituted additional measures, including a labor market test for companies intending to hire foreign workers (i.e., the requirement to first post the vacancy locally) and higher visa fees. Smaller inflows were also observed in the United Arab Emirates, with 140,000 fewer migrants, and Qatar, with 50,000 fewer migrants. The decline in flows to Qatar occurred despite the importance of infrastructure investments related to the 2022 football World Cup, to be held in that country. On the other hand, 28,000 more Asian workers migrated to Oman and 41,000 more to Bahrain, representing a slight increase, though not enough to balance out the decline in other GCC countries.

The busiest corridor in 2016 remained Pakistani labor migrants going to Saudi Arabia. Over 460,000 citizens of Pakistan have followed this route, which represents an 11% drop, but remains higher than in any year since 2005. Nonetheless, in 2017, Bangladesh appears to have replaced Pakistan as main labor force provider to Saudi Arabia.

Aside from this decline, flows in most corridors to Association of Southeast Asian Nations (ASEAN) member countries have been fairly stable in 2016 compared to 2015 (Table 1.3). All ASEAN destination countries have seen slightly lower levels of labor migration flows from Asia, although 2016 data for the Philippines were not available at time of publication. Several countries, however, have seen increases in migration to ASEAN countries. Notably, recorded flows from Myanmar rose from 89,000 to 139,000, a 56% increase. Outflows from Cambodia, which traditionally sends most of its workers to Thailand, also increased. Further, irregular migration in ASEAN countries is particularly difficult to measure, and inflows to Malaysia and Thailand may be higher than official figures suggest.

Table 1.3: Flows of Workers to ASEAN Countries, by Origin and Destination, 2015–2016

	Philippines	Myanmar	Indonesia	Nepal	Bangladesh	Cambodia	India	Pakistan	Thailand	Sri Lanka	Viet Nam
Destination	2015	2016	2016	2016	2016	2015	2016	2016	2016	2016	2016
Brunei Darussalam	11,478		8,152	139	5,836	99		85	1,461	14	
Malaysia	31,451	25,154	87,616	60,979	40,126	807	10,604	10,625	3,263	2,916	29
Singapore	140,205	707	17,700	75	54,730	99		33	5,843	1,840	
Thailand	6,653	113,210	6	37		16,163	1				2,108
Total 2016		**139,071**	**113,474**	**61,230**	**100,692**		**10,605**	**10,743**	**10,567**	**4,770**	
Total 2015	**189,787**	**89,031**	**128,613**	**196,748**	**92,360**		**20,924**	**20,369**	**12,429**	**4,709**	

ASEAN = Association of Southeast Asian Nations.

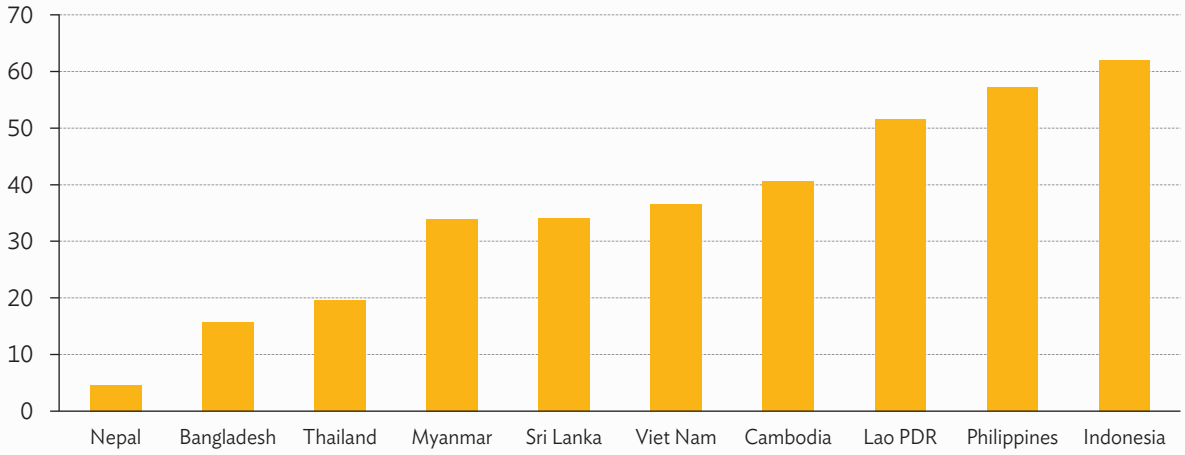
Note: Missing cells indicate no data available.

Sources: ILO International Labour Migration Statistics database in ASEAN (ILMS) for ASEAN countries and national authorities of other origin countries.

In terms of gender, there are very important differences in the share of women in the flows of labor migrants from Asian countries, according to both origin and destination countries (Figure 1.4). Labor migrants from Indonesia and the Philippines are predominantly women. This is related to the important share of occupations traditionally filled by women—domestic work, nursing, and caretaking—among labor migrants. Domestic workers, caretakers, and housekeepers comprised 44% of labor outflows from Indonesia in 2016 and 40% of outflows from the Philippines in 2015. Nurses comprised 4% of the outflow from the Philippines in 2015. From Sri Lanka, housemaids comprised 27% of labor deployment in 2016. Restrictions on emigration for these occupations in other origin countries, such as Pakistan and Nepal, contribute to the low share of women among labor migrants. India, for example, limits emigration by low-educated women for domestic employment. Of the Indian labor migrants subject to Emigration Clearance, which applies to low-educated workers, only 0.2% were women in 2016.[2] Other origin countries impose age limits on emigration of female workers, for example, by allowing only women older than 30 to work as domestic workers in certain destination countries.

[2] Higher-educated women are exempt from emigration clearance; nurses who are subject to it are not included in this figure and represent a large outflow from India.

Figure 1.4: Share of Women among Labor Migrants, by Origin Country, 2016 or Latest Year, Selected Asian Countries (%)



Lao PDR = Lao People's Democratic Republic.

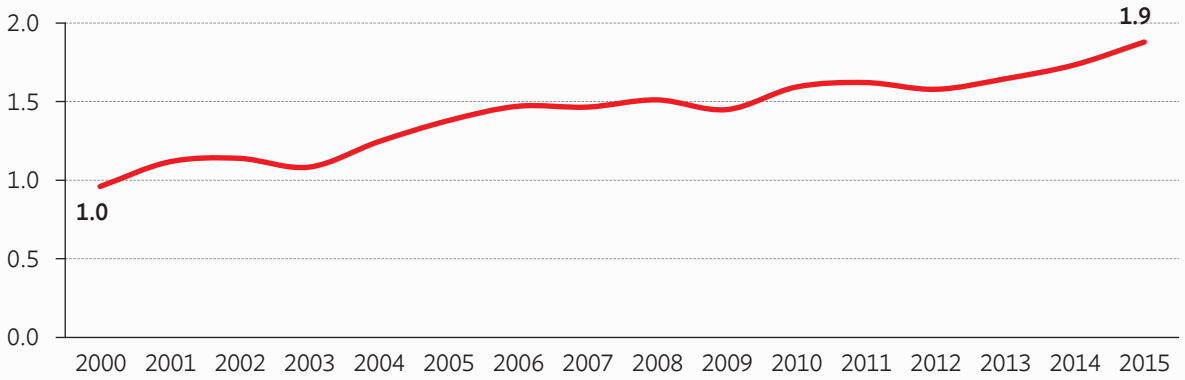
Note: Philippines is stock data for 2015. Nepal is 2015–2016. Thailand is 2015. Indonesia includes informal and formal channels.

Sources: Official data from national authorities (Nepal, Bangladesh, Sri Lanka) and ILMS for ASEAN countries.

1.4 Migration Flows from Asia to OECD Countries

Migration from Asia to OECD countries has been increasing since 2012. In 2015, 1.9 million people originating from Asia migrated to OECD countries for employment, family, protection, or education. This corresponds to an 8% increase since 2014 (Figure 1.5). Asian migration to OECD countries has been following a relatively steady upward trend since 2000, and has been less affected by the 2007–2008 economic crisis than inflows coming from other parts of the world. In 2015, 27% of all new migrants to the OECD originated from Asia.

Figure 1.5: Migration Flows from Asia to OECD Countries, 2000–2015 (millions)



OECD = Organisation for Economic Co-operation and Development.

Source: OECD International Migration Database.

The PRC is by far the most represented nationality in recent inflows to the OECD area (Table 1.4). In 2015, despite a 2% decline, 543,000 PRC nationals migrated to the OECD area, accounting for 8% of the total. The second-largest Asian country of origin was India, with 269,000 new arrivals, a 6% decline compared to 2014. Overall, India ranks fifth among origin countries in the OECD area in 2015, behind Syria, Romania, and Poland. Three other Asian countries appear in the top 10 origin countries: Afghanistan, the Philippines, and Viet Nam. Migration flows of Afghans to the OECD more than tripled in 2015 to 140,000 people (0.4% of the population of Afghanistan), gaining 26 places in the ranking of top origin countries to the OECD area between 2014 and 2015.

Table 1.4: Top 15 Asian Countries of Origin for Migration to OECD Countries, 2005–2015

	Average Flows 2005–2014 ('000s)	Flows 2014 ('000s)	Flows 2015 ('000s)	% of Total OECD Inflows 2015	% change 2014–2015	Rank in 2015	Difference in ranking vs. 2014	Difference in ranking vs. 2005–2014	Expatriation Rate 2015 (per million inhabitants)
Afghanistan	24	45	140	2.0	+213	10	+26	+46	4,311
Bangladesh	44	47	51	0.7	+8	39	–5	–8	315
PRC	509	555	543	7.8	–2	1	0	0	394
India	230	285	269	3.9	–6	5	–1	–1	205
Indonesia	30	35	35	0.5	–1	51	–3	–4	135
Japan	34	34	37	0.5	+10	49	+4	–8	295
Korea, Rep. of	73	70	66	0.9	–6	31	–9	–11	1,307
Malaysia	19	19	22	0.3	+14	67	+5	–1	717
Myanmar	17	23	27	0.4	+18	57	+8	+15	504
Nepal	25	42	47	0.7	+12	40	0	+15	1,637
Pakistan	83	78	100	1.4	+27	18	+1	–2	527
Philippines	165	158	181	2.6	+15	6	–1	0	1,800
Sri Lanka	31	29	31	0.4	+6	55	–1	–11	1,491
Thailand	55	87	64	0.9	–27	32	–15	–7	936
Viet Nam	93	125	152	2.2	+21	9	+1	+2	1,628
Asia	**1,544**	**1,734**	**1,879**	**27.1**	**+8**				

PRC = People's Republic of China, OECD = Organisation for Economic Co-operation and Development.

Source: OECD International Migration Database.

The Philippines ranks sixth, with 181,000 new migrants to the OECD area in 2015. This represents a 15% increase compared to the previous year. Migration from Viet Nam to the OECD area rose even more sharply (+50% between 2013 and 2015) and surpassed 150,000 people for the first time in decades. Nepal also registered an increase and its highest level of outward migration to OECD countries (47,000 in 2015) in more than 10 years. Most of this increase is asylum related, and directed toward Germany. Bangladesh (51,000) and Myanmar (27,000) also saw a historically high number of their citizens migrating to an OECD country in 2015.

Table 1.5: Top 15 OECD Destination Countries for Asian Migration, 2015

	Number of Migrants in 2015 (thousands)	Difference with 2014 Absolute	%	% of Inflows from Asia to OECD	Main Asian Countries of Origin			
United States	349	–13	–4	18	PRC	India	Philippines	Viet Nam
Korea, Rep. of	305	–37	–11	16	PRC	Viet Nam	Thailand	Philippines
Japan	299	45	18	16	PRC	Viet Nam	Philippines	Korea, Rep. of
Germany	209	99	90	11	Afghanistan	India	PRC	Pakistan
Canada	143	10	8	8	Philippines	India	PRC	Pakistan
United Kingdom	125	–13	–9	7	PRC	India	Pakistan	Malaysia
Australia	124	–6	–4	7	India	PRC	Philippines	Pakistan
Italy	63	–1	–1	3	PRC	Bangladesh	Pakistan	India
New Zealand	45	8	21	2	India	PRC	Philippines	Japan
Austria	28	18	178	1	Afghanistan	PRC	India	Pakistan
Spain	25	1	3	1	PRC	Pakistan	India	Philippines
France	21	–3	–13	1	PRC	India	Sri Lanka	Bangladesh
Netherlands	21	2	12	1	India	PRC	Indonesia	Japan
Belgium	15	5	53	1	Afghanistan	India	PRC	Japan
Sweden	15	0	–1	1	India	Afghanistan	PRC	Thailand

PRC = People's Republic of China, OECD = Organisation for Economic Co-operation and Development.

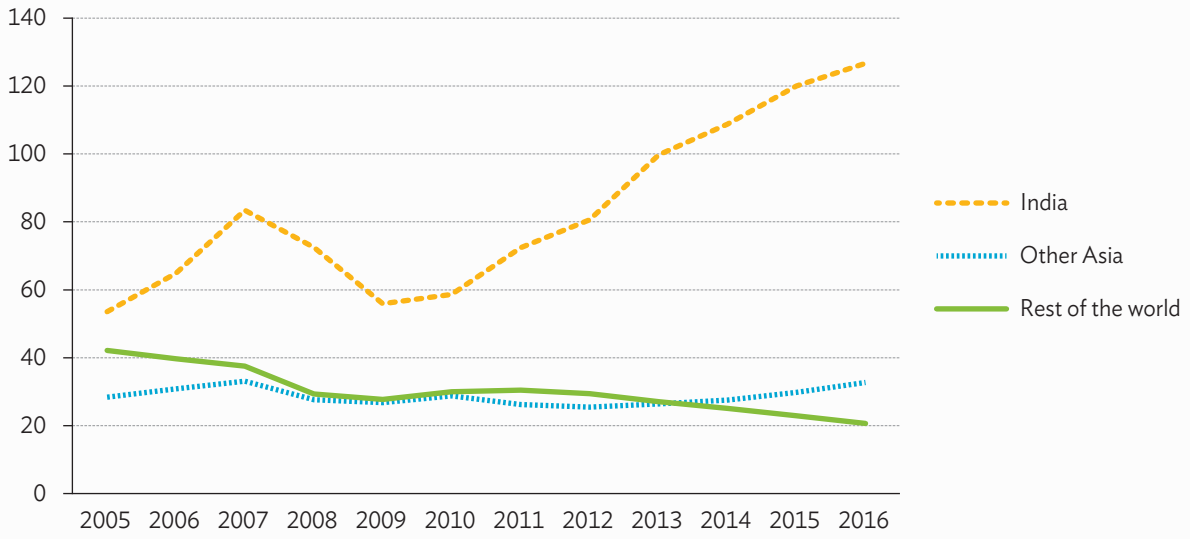
Source: OECD International Migration Database.

The three main OECD destination countries of Asian migrants, the United States (US), the Republic of Korea, and Japan, have not changed ranking in recent years. Together, they receive half of the migrants from Asia in the OECD area (Table 1.5). In 2015, around 350,000 Asian migrants were granted permanent resident status in the US, 13,000 fewer than in 2014. The PRC is the main country of origin, with 75,000 new PRC permanent residents, stable compared to 2014. India follows next and accounts for the entire overall decline, with only 64,000 new Indian permanent residents in 2015, against 78,000 the year before. Inflows from the Philippines rose back to their 2011 level at 57,000 new permanent residents, and those from Viet Nam are stable at 30,000.

The pattern is different with regard to temporary migration in the US. Almost 90% of all H-1B visas, the main temporary program for highly skilled foreign workers, were granted in 2016 to Asian workers (Figure 1.6). In absolute terms, 160,000 Asian nationals received an H-1B visa in 2016, twice as many as in 2005. Most of the recipients were Indians (127,000, +6% on 2015) and PRC nationals (22,000, +18%).

The Republic of Korea received slightly more than 300,000 new Asian migrants in 2015, significantly below the 2014 peak (–11%). Most of the decline is due to the number of Thai citizens migrating to the Republic of Korea, which returned to its recent average level of around 20,000 migrants. The PRC, which remains the main origin country, with 177,000 new migrants to the Republic of Korea in 2015 (–8%), also contributed to this decline. The second main country of origin is Viet Nam, from which 30,000 citizens, the highest number ever registered, migrated to the Republic of Korea in 2015.

Figure 1.6: H-1B Visas Issued by the United States, by Region of Origin, 2005–2016



Source: US Department of State (2017).

In contrast to declines in the US and the Republic of Korea, there was an 18% increase in Asian migration to Japan in 2015. Among the 300,000 new Asian migrants to Japan, around 100,000 are PRC nationals, as in the last 5 years. The second main Asian origin country is Viet Nam, with 65,000 migrants (+53%). The Philippines, with 24,000, and the Republic of Korea, with 23,000, follow rather far behind.

The most striking change in 2015 among the OECD destination countries for Asian migrants is Germany, which jumped from seventh to fourth place in one year, to receive more Asian migration than traditional destination countries such as Canada, Australia, or the United Kingdom (UK). Germany received 209,000 new Asian migrants in 2015, almost 100,000 more than a year before. This is mostly due to the dramatic rise in migration from Afghanistan and, to a lesser extent, Pakistan. Indeed, 85,000 Afghans and 24,000 Pakistanis arrived in Germany in 2015, most of whom asked for asylum. However, even without these two nationalities, migration from Asia to Germany would still have increased by about 15%, driven by migration from India, which has been on the rise every year since 2005. In 2015, Germany received more than 26,000 new Indian migrants (+17%).

Canada also received more permanent Asian migrants than ever in 2015 (143,000, an 8% increase compared to 2014). Its three main origin countries are Asian (the Philippines, 51,000 migrants; India, 40,000; and the PRC, 20,000) and Asia represents more than half of overall migration to Canada. Among these permanent entries of Asian citizens, more than 70% were under the "economic" category (including both principal applicants and accompanying family), a little more than 20% for family reunification, and less than 5% for humanitarian reasons (Citizenship and Immigration Canada 2017).

For the first time since 2008, the main country of origin of migrants to the UK is not an Asian country, but Romania. However, the PRC, with 43,000 new migrants, and India, with 36,000, are still major origin countries, respectively second and fourth.

Overall migration to Australia has been declining since 2013, and so has Asian migration to Australia, which stood at 124,000 migrants in 2015 (–4%). India is still the main country of origin (34,000 migrants), but has contributed to most of the decline. The PRC follows with 27,000 migrants. Migration flows from the Philippines (12,000, a 15% increase compared to 2014) and Pakistan (8,000, a 41% increase) were relatively high in 2015 compared to the previous years.

1.5 Labor Market Situation of Asian Migrants in Settlement Countries[3] and in Europe

Asian-born workers represent a quarter to half of the foreign-born labor force in the US (26% in 2016), Canada (45%), Australia (41%), and New Zealand (38%). They also represent more than 10% of the total labor force in Canada, Australia, and New Zealand, and 5% in the US. The overall picture of Asian-born integration to labor markets is rather bright, even in Europe, where migrants usually have poorer labor market outcomes than the native-born.

In the US, the unemployment rate of Asian-born migrants is extremely low. In 2016, only 3.4% were unemployed, which is 1 percentage point lower than that of the other migrants, and almost 2 percentage points lower than the US-born (Table 1.6). Even in the depths of the 2011 economic crisis, it never rose above 7%. Their employment rate, however, has only increased by 0.7 percentage points since then, and is now slightly below that of other foreign-born nationals.

Labor market outcomes of Asian-born migrants in Canada are very favorable as well. Although their unemployment rate (6.4% in 2016) is higher than in the US, its 2.5 percentage point decrease since 2011 made it lower than those of other foreign-born and Canadian-born. In addition, their employment rate increased by 4.5 percentage points in 5 years to 72.2%.

The situation of Asian-born workers on the Australian labor market is also rather favorable, although their employment rate has declined slightly since 2011 and stood at only 67.2% in 2016. They also have a slightly higher unemployment rate (6.2%) than their peers from other regions of the world, as well as the Australian-born, but the gap has been narrowing since 2008 and is now very small.

In New Zealand, Asian-born migrants' labor market outcomes have improved between 2011 and 2016. Their employment rate went from 64.3% to 71.4%, and their unemployment rate declined from 7% to 5.7%.

In Europe, the situation is somewhat less positive, although with a 64.5% employment rate and an 8.1% unemployment rate in 2016, Asian-born migrants still have better labor market outcomes than other migrants, and sometimes the native-born.

[3] Note: Settlement countries include Australia, Canada, New Zealand, and the US.

Table 1.6: Labor Market Indicators for Native and Foreign-Born in the United States, Canada, Australia, New Zealand, and in the European OECD Countries

Residence	Place of Birth	Age 15–64, 2008, 2011, and 2016 (%)											
		Employment Rate				Unemployment Rate				Participation Rate			
		2008	2011	2016	"Change 2011–2016 (% pts)"	2008	2011	2016	"Change 2011–2016 (% pts)"	2008	2011	2016	"Change 2011–2016 (% pts)"
United States	**Asia**	**72.2**	**68.6**	**69.3**	**0.7**	**3.9**	**6.7**	**3.4**	**–3.3**	**75.1**	**73.5**	**71.7**	**–1.8**
	Foreign-born	70.8	67.5	70.0	2.5	5.9	9.1	4.3	–4.8	75.2	74.3	73.2	–1.1
	Native-born	69.4	65.1	67.9	2.8	6.0	9.2	5.2	–4.0	73.8	71.7	71.5	–0.1
Canada	**Asia**	**69.9**	**67.7**	**72.2**	**4.5**	**7.1**	**8.8**	**6.4**	**–2.5**	**75.3**	**74.2**	**77.1**	**2.9**
	Foreign-born	70.7	68.9	71.7	2.8	7.2	8.9	7.6	–1.3	76.1	75.6	77.6	2.0
	Native-born	74.3	72.7	72.8	0.2	6.0	7.2	6.9	–0.3	79.0	78.3	78.3	–0.1
Australia	**Asia**	**67.6**	**67.6**	**67.2**	**–0.4**	**5.8**	**5.8**	**6.2**	**0.4**	**71.8**	**71.7**	**71.7**	**0.0**
	Foreign-born	69.8	70.5	70.3	–0.2	4.7	5.2	6.0	0.8	73.2	74.4	74.7	0.3
	Native-born	75.0	73.8	73.7	–0.1	4.2	5.2	5.8	0.6	78.2	77.9	78.3	0.4
New Zealand	**Asia**	**63.5**	**64.3**	**71.4**	**7.1**	**4.8**	**7.0**	**5.7**	**–1.3**	**66.7**	**69.1**	**75.7**	**6.6**
	Foreign-born	69.9	70.3	75.0	4.8	4.6	6.1	5.0	–1.1	73.3	74.9	79.0	4.1
	Native-born	76.3	73.4	75.8	2.4	4.0	6.2	5.5	–0.7	79.4	78.3	80.2	2.0
European OECD countries	**Asia**	**63.2**	**62.4**	**64.5**	**2.1**	**7.5**	**9.8**	**8.1**	**–1.7**	**68.3**	**69.1**	**70.1**	**1.0**
	Foreign-born	66.8	63.4	63.0	–0.4	9.3	14.2	14.1	–0.1	73.6	73.9	73.4	–0.6
	Native-born	65.8	63.8	67.6	3.9	6.3	9.5	8.1	–1.4	70.3	70.4	73.6	3.2

OECD = Organisation for Economic Co-operation and Development.

Note: The population refers to working-age population (15–64) for the employment and participation rates and to active population aged 15–64 for the unemployment rate. European OECD countries do not include Germany and Turkey because no data by region of birth are available for these countries. Among European OECD countries, the data for Switzerland in 2008 are based on the second quarter only. The regions of birth could not be more comparable across countries of residence because of the way aggregate data provided to the Secretariat are coded. The data for European countries refer to the first three quarters only.

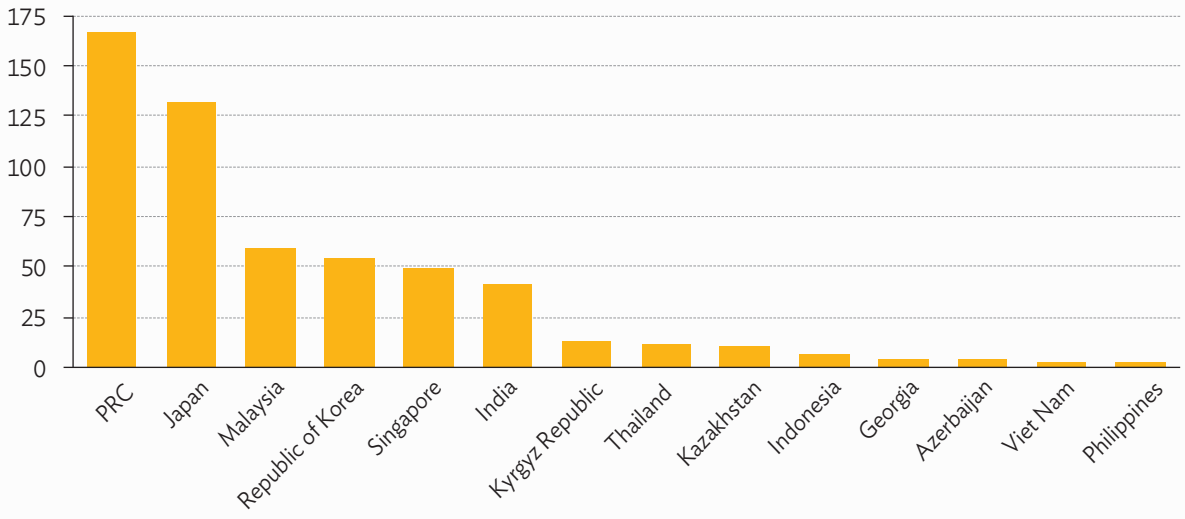
Sources: European countries: Labour Force Surveys (Eurostat); Australia, Canada, New Zealand: Labour Force Surveys 2008, 2011 and 2016; United States: Current Population Surveys 2008, 2011 and 2016.

1.6 International Mobility of Students to and from Asia

The mobility of students around the world has been steadily increasing for decades, although the pace has been slowing down recently. Asia has always provided tertiary-level students to other countries' universities, and it is now also playing its part as a destination region.

The position of the PRC—including Hong Kong, China, and Macau, China—as a key destination for international students is rapidly growing. In 2015, almost 170,000 international students were enrolled in PRC universities (Figure 1.7). Japan is the second main Asian country of destination, with 130,000 students, far ahead of Malaysia (60,000), the Republic of Korea (55,000), Singapore (49,000), and India (42,000). Overall, Asian countries host just over 12% of all internationally mobile students.

Figure 1.7: Top 15 Asian Destination Countries for International Students, 2015 (thousand)



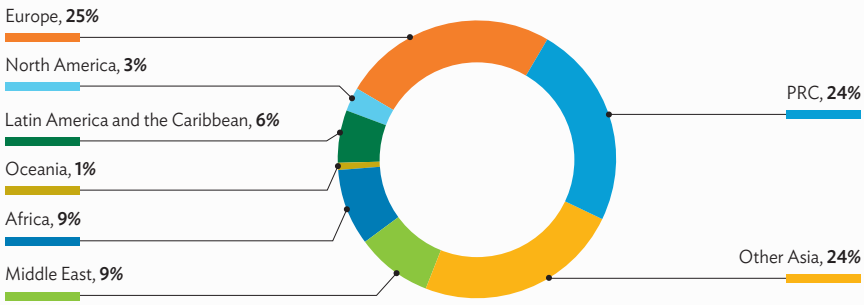
PRC = People's Republic of China.

Note: 2015 or most recent available year.

Sources: OECD education database and UNESCO Institute for Statistics education database.

In 2015, the PRC was the country of origin of almost one in four internationally mobile students in the OECD area (Figure 1.8). Another one in four came from the rest of Asia, so that the total share of Asian students in global international mobility increased again in 2015, standing at 48%.[4] The rise in Asia's share of mobility is reflected in the declining share of European students in international mobility, which decreased again slightly, to 25%. The proportion of students from the rest of the world remained stable in 2015 compared to 2014 (27%). In particular, the proportion of African students enrolled in OECD tertiary institutions was stable at 9%, as was that of the Middle East.

Figure 1.8: International Students in OECD Countries by Region of Origin, 2015 (%)



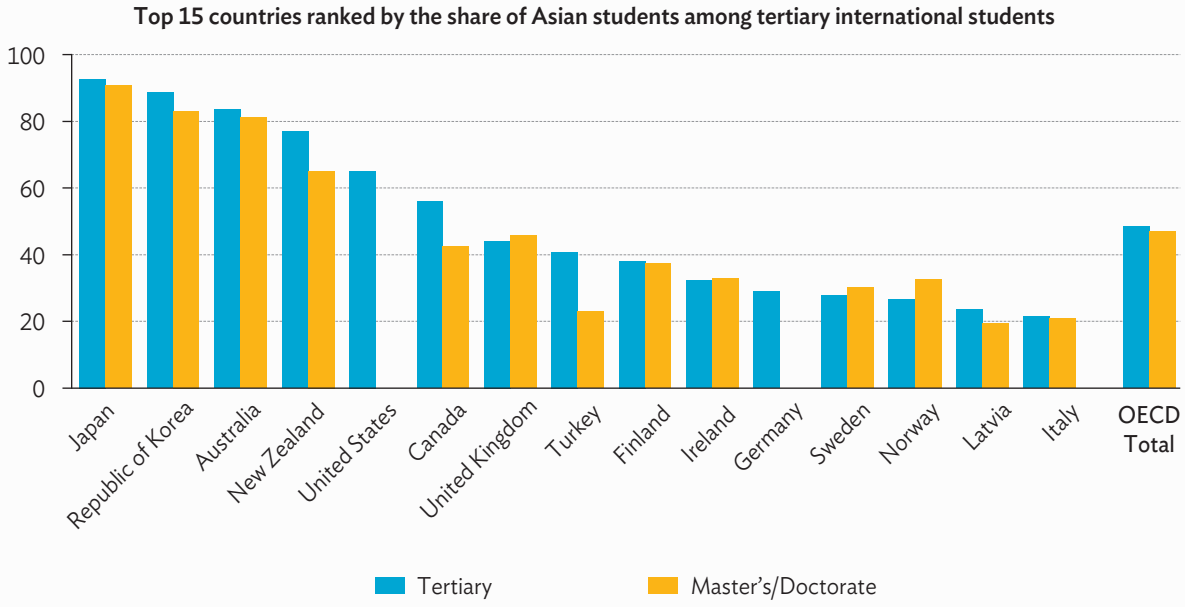
PRC = People's Republic of China, OECD = Organisation for Economic Co-operation and Development.

Source: OECD education database.

[4] This report uses the post-2016 OECD, UNESCO, and the EU data, which refer to international students (OECD 2016). These data on "international students" include only students who actually move to another country and not those who were already living in a foreign country before they started the school year. However, its use makes comparison with previous data (which used a broader definition) more difficult.

Unsurprisingly, the highest shares of Asian tertiary students among international tertiary students are found within the region, in Japan (93%) and the Republic of Korea (89%) (Figure 1.9). The settlement countries follow, with proportions ranging from 84% in Australia, 77% in New Zealand, 65% in the US, and 56% in Canada. The UK, Turkey, Finland, and Ireland are the other countries where at least one in three international tertiary students comes from Asia.

Figure 1.9: Students from Asia among International Students by OECD Country of Destination, by Level of Education, 2015 *(%)*



OECD = Organisation for Economic Co-operation and Development.

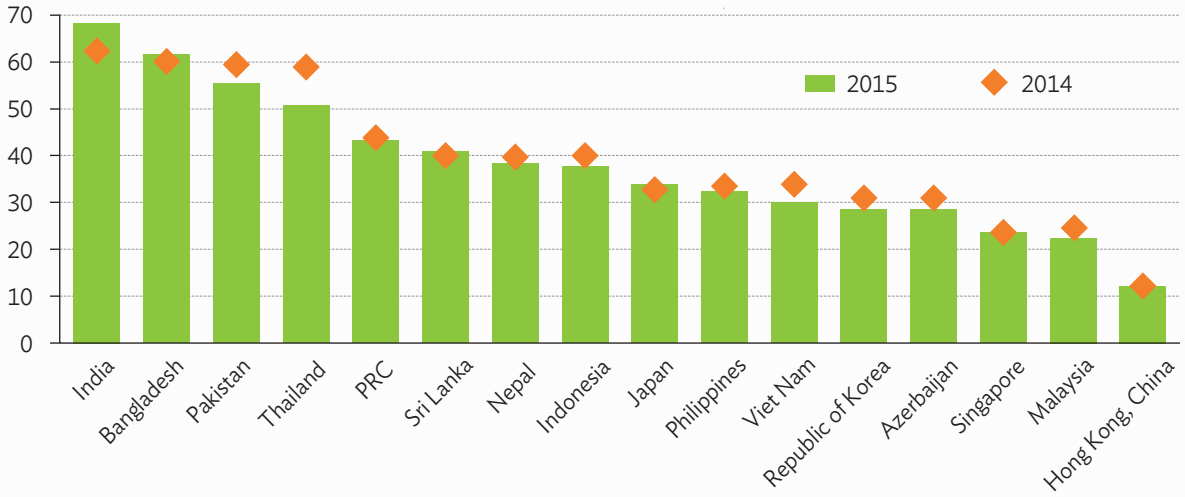
Source: OECD education database.

Data by tertiary education level show that Asian students represent similarly high shares of the total also at the highest education levels (ISCED 7&8).[5] Overall in the OECD area, 47% of the internationally mobile students at the master's and doctorate levels in 2015 came from Asia. In the UK, Sweden, and Norway, there are even more Asian students at these levels than at the lower ones. The opposite is true in Turkey, New Zealand, and Canada.

Looking at the phenomenon by country of origin, 68% of Indian students in OECD countries in 2015 were enrolled at the master's or doctorate level (Figure 1.10). The majority of students from Bangladesh (61%), Pakistan (55%), and Thailand (51%) were also studying at the highest levels.

[5] International Standard Classification of Education (ISCED) level 7 corresponds to master's or equivalent; ISCED level 8 corresponds to doctoral or equivalent.

Figure 1.10: **Share of Master's and Doctoral Students among Tertiary International Students Enrolled in OECD Countries by Asian Country of Origin, 2014–2015** (%)



PRC = People's Republic of China, OECD = Organisation for Economic Co-operation and Development.

Source: OECD education database.

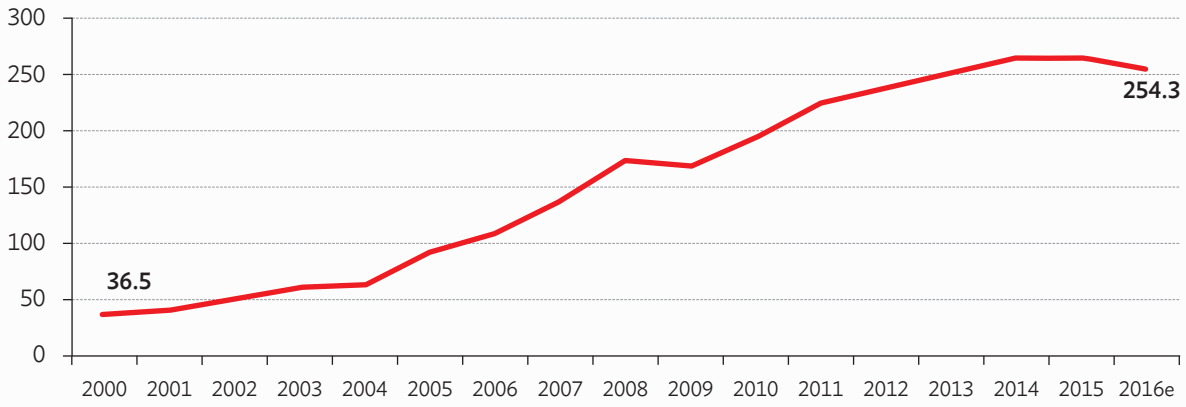
1.7 Remittance Flows to Asian Countries

Remittance volume is affected not only by the number of emigrants, but also by their educational attainment and income, as well as by their remittance behavior. Available evidence shows, for example, that migrants with higher education contribute more to origin country remittances, although they remit relatively smaller shares of their income. In some destination countries, scarce employment opportunities or low wage levels may prevent migrants from sending large amounts back to their home country. Further, exchange rates may fluctuate over time, changing the monetary volume of remittance flows expressed in US dollar terms, but also affecting the incentive to remit. All these factors should be taken in account while contextualizing trends in remittances.

In addition, available figures for remittance flows may have insufficient coverage of informal channels, which range from individuals carrying currency themselves to non-institutional channels such as private courier networks. In some corridors, this may even be the majority of flows. According to the MAP FinScope survey conducted in 2015, for example, an estimated 68% of remittances from Thailand to Myanmar went through informal channels (Aneja, Gravesteijn, and Hwang 2017). The analysis in this section, however, refers to World Bank data on formal remittance flows.

Between 2000 and 2016, the total amount of Asian remittances multiplied sevenfold, from $36 billion in 2000 to $254 billion estimated in 2016 (Figure 1.11). This increase can partly be explained by the growth in the number of Asian migrants after 2000, notably emigration to OECD areas, where high-skilled, high-wage-earning migrants send more remittances (OECD 2012). In addition, high-skilled migrants are over-represented in OECD countries and the increase in the number of high-skilled Asian migrants was about 80% between 2000–2001 and 2010–2011 (Arslan et al. 2015).

Figure 1.11: Remittances to Asia, 2000–2016 ($ billion)



e = estimate.

Note: Figures in current US dollars.

Source: World Bank Migration and Remittances Data.

The rapid increase in remittances seen in the 2000s—doubling in the first part of the decade and doubling again between 2004 and 2008—gave way to more gradual growth following the 2007–2008 economic crisis. Further, according to estimates, 2016 saw the first significant decrease in total incoming remittance flows in Asian countries since 2009, by about $10 billion, or 4%.

Regarding receiving countries, India and the PRC accounted for half of all Asian remittances in 2016, with India receiving $63 billion and the PRC receiving $61 billion (Table 1.7). India has been leading in terms of remittances received since 2000. The remittances sent to the PRC, on the other hand, were much lower in 2000, but increased 80 times between 2000 and 2016. Among Asian countries, India and the PRC had the highest numbers of high-skilled migrant populations in OECD countries in 2010–2011, 2.2 million and 1.5 million, respectively (Arslan et al. 2015), which may contribute to the high remittance volume. The Philippines is the third main receiver in Asia, with 12% ($30 billion) of all Asian remittances in 2016. Following next is Pakistan, which received 9% of the continent's remittances (Figure 1.12b). Bangladesh and Viet Nam, each with remittances of more than $10 billion in 2016, are the other main Asian recipient countries. In addition to the PRC, remittances to Nepal, Myanmar, Mongolia, and Pakistan have increased remarkably since 2000, albeit to a smaller extent. Looking at remittances from 2010 onward, the highest increase in the first half of the decade is observed for Myanmar (30 times). Remittances to Cambodia, Japan, Nepal, and Pakistan more than doubled between 2010 and 2016.

As mentioned above, fluctuations in the exchange rate can affect remittances significantly. One example is that of Central Asian countries whose labor migrants are largely employed in the Russian Federation. Remittances to these countries reached their peak in 2013 and decreased in the following years. This can be attributed to the Russian ruble losing more than half of its value relative to the US dollar between 2013 and 2015. In other words, the decline in the remittance value between those years reflects the exchange rate more than any decline in the tendency of workers to remit from Russia or to reduce the share of their ruble earnings which they remit.

Table 1.7: Remittances by Receiving Country, 2000–2016e ($ billion)

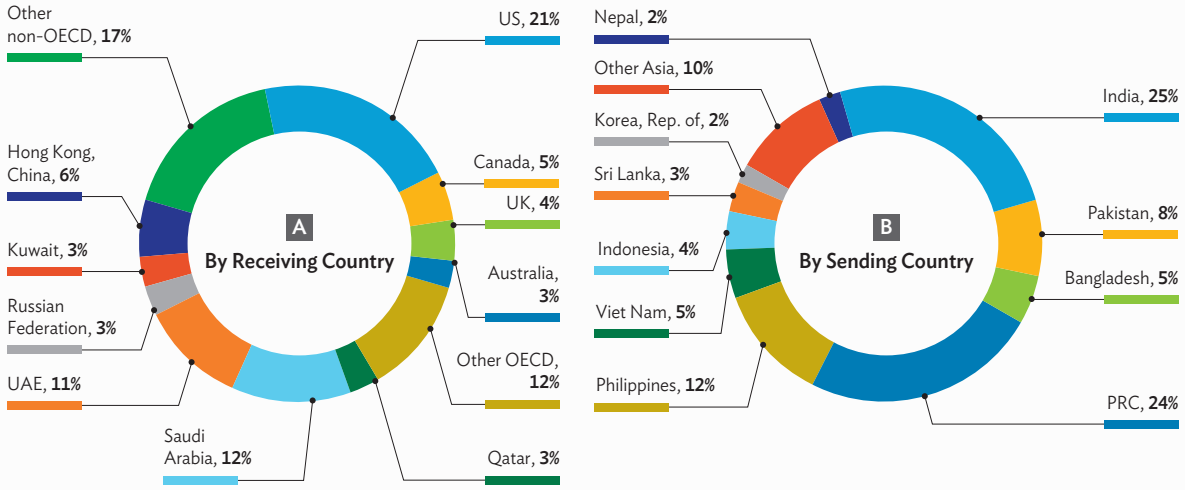
Country	2000	2005	2010	2011	2012	2013	2014	2015	2016e
Afghanistan	0.0	0.0	0.3	0.2	0.3	0.3	0.3	0.3	0.3
Azerbaijan	0.1	0.6	1.4	1.9	2.0	1.7	1.9	1.3	0.6
Bangladesh	2.0	4.6	10.9	12.1	14.1	13.9	15.0	15.4	13.7
Cambodia	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3
PRC	0.8	23.6	52.5	61.6	58.0	59.5	62.3	63.9	61.0
Georgia	0.2	0.5	1.2	1.6	1.8	2.0	2.0	1.5	1.5
Hong Kong, China	0.1	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
India	12.9	22.1	53.5	62.5	68.8	70.0	70.4	68.9	62.8
Indonesia	1.2	5.4	6.9	6.9	7.2	7.6	8.6	9.7	9.2
Japan	1.4	0.9	1.7	2.1	2.5	2.4	3.7	3.7	3.7
Kazakhstan	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Korea, Rep. of	4.9	5.2	5.8	6.6	6.6	6.5	6.6	6.5	6.4
Kyrgyz Republic	0.0	0.3	1.3	1.7	2.0	2.3	2.2	1.7	2.0
Lao PDR	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1
Malaysia	0.3	1.1	1.1	1.2	1.3	1.4	1.6	1.6	1.6
Mongolia	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Myanmar	0.1	0.1	0.1	0.1	0.3	1.6	3.1	3.2	3.3
Nepal	0.1	1.2	3.5	4.2	4.8	5.6	5.9	6.7	6.3
Pakistan	1.1	4.3	9.7	12.3	14.0	14.6	17.2	19.3	19.9
Philippines	7.0	13.7	20.6	21.9	23.4	25.4	27.3	28.5	29.9
Sri Lanka	1.2	2.0	4.1	5.2	6.0	6.4	7.0	7.0	7.3
Tajikistan	0.0	0.5	2.3	3.1	3.6	4.2	3.4	2.3	1.8
Thailand	1.7	1.2	3.6	4.6	4.7	5.7	5.7	5.9	6.0
Uzbekistan	0.0	0.0	2.9	4.3	5.7	6.7	5.8	3.1	2.3
Viet Nam	1.3	3.2	8.3	8.6	10.0	11.0	12.0	13.0	13.4
Total Asia	**36.5**	**91.3**	**192.6**	**223.7**	**238.2**	**249.9**	**263.3**	**264.7**	**254.3**

PRC= People's Republic of China, e = estimate, Lao PDR = Lao People's Democratic Republic.

Source: World Bank Migration and Remittances Data.

From 2014 to 2015, dollar remittances from the Russian Federation fell 41%, while ruble remittances fell only 7%. The dollar value of remittances from the Russian Federation fell from $8.8 billion in 2015 to $8.3 billion in 2016 (5%), while the ruble fell 10% against the dollar, suggesting that ruble remittances actually increased in that period. Exchange rate fluctuations also affected the dollar value of remittances from other origin countries. From 2013 to 2015, remittances from Eurozone countries such as the Netherlands, France, Spain, and Italy increased more than remittances from other OECD countries, in part due to the rising dollar value of the euro.

Figure 1.12: Share of Remittances, 2016



PRC = People's Republic of China, OECD = Organisation for Economic Co-operation and Development, UAE = United Arab Emirates, UK = United Kingdom, US = United States.

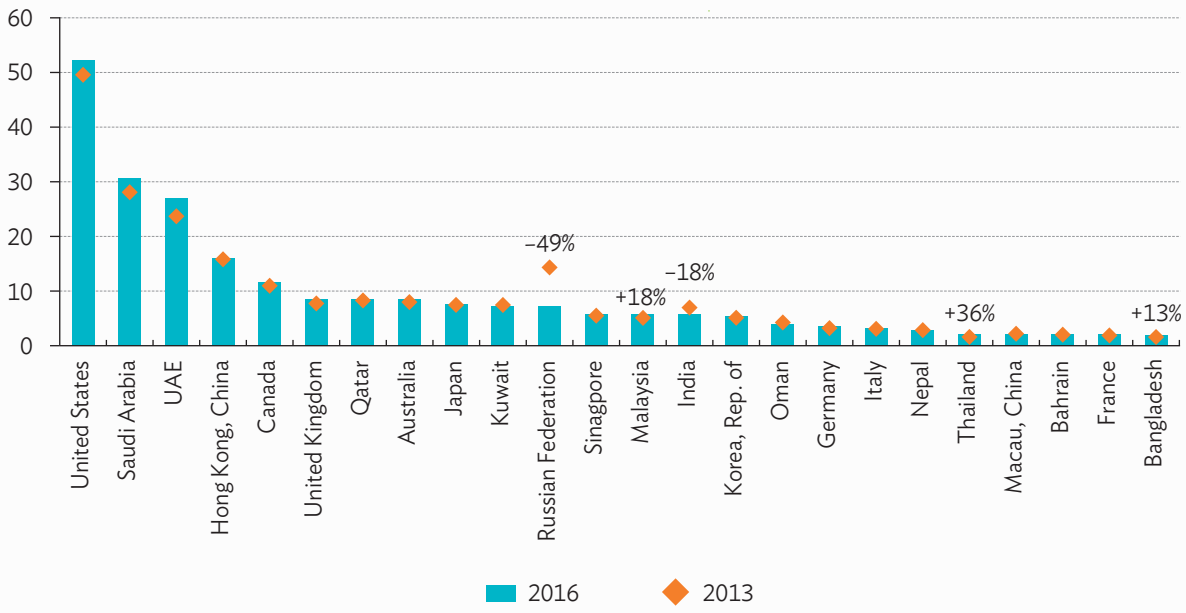
Source: World Bank Migration and Remittances Data.

OECD countries are the main source of remittances in many countries in the world and this holds true for some Asian countries. Of the $264 billion of remittances that Asian countries received in 2015, $115 billion (44%) was sent from the OECD area. For some Asian countries, the OECD is the main source: 95% of the remittances in Viet Nam are sent by those who reside in OECD countries. Similarly, 87% of remittances in Hong Kong, China, and the Republic of Korea are sent from the OECD area. Other countries that receive significant share of their remittances from OECD countries are Thailand (73%), Japan (62%), Mongolia (61%), the PRC (60%), and the Philippines (57%).

The largest source of Asian remittances is the US, which alone provided $52 billion to the continent in 2015 (Figure 1.13). This represents one-fifth of all Asian remittances (Figure 1.12a). Other important OECD sources are Canada which remitted $12 billion to Asia in 2016, and Australia, which remitted $8 billion. Besides these three major sources, European countries, mainly the UK, matter in terms of the remittances that India, Pakistan, Bangladesh, Sri Lanka, Malaysia, Thailand, and the PRC receive. Italy, Spain, and Germany are other important sources of remittances for these Asian countries. Asian OECD countries, Japan, and the Republic of Korea together produced remittances of about $13 billion and matter in terms of remittances in Mongolia, the PRC, Indonesia, and Thailand. From the perspective of providers, Asian remittances make up roughly 20% of those sent from Australia, Canada, the UK, and the US, but 40% of those sent from Japan and the Republic of Korea.

A little less than a quarter of all remittances going to Asian countries are sent from non-OECD Asian countries. Hong Kong, China stands out among non-OECD Asian sources of remittances: in 2016 about $16 billion were remitted from Hong Kong, China to Asian countries, 90% of which went to the PRC. India, Singapore, and Malaysia are other important sources of Asian remittances, each providing about $6 billion to other countries in the continent. For instance, 94% of Nepal remittances came from workers in India in 2015. Remittances sent from India represent 30% of all remittances received by Bangladesh.

Figure 1.13: 25 Main Sources of Remittances to Asia, 2013 and 2016 ($ billion)



PRC = People's Republic of China, UAE = United Arab Emirates.

Note: Figures for 2016 are estimates.

Source: World Bank Migration and Remittances Data.

Singapore accounts for almost two-thirds of the remittances in Malaysia, which are also important for Indonesia and the Philippines. Thailand is the major source of remittances in the Lao PDR, Cambodia, and Myanmar. Similarly, most of the remittances in Bhutan are sent by those residing in Nepal. Indonesia, Bhutan, the Lao PDR, Myanmar, and Cambodia receive significant amounts of remittances sent by low-skilled, low-wage migrant workers in other Asian countries.

Central and West Asian countries receive remittances mostly from migrant workers in the Russian Federation, which accounted for more than $7 billion of all Asian remittances in 2016. More than half of all remittances in Kazakhstan, the Kyrgyz Republic, Tajikistan, Azerbaijan, and Georgia, and almost all of the remittances in Turkmenistan and Uzbekistan, are sent from workers in the Russian Federation.

About one-third of all remittances flowing to Asia originated from GCC countries, such as Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (Table 1.8). Saudi Arabia and the United Arab Emirates are the second and third major sources of Asian remittances (after the US). Remittances of about $31 billion from Saudi Arabia and $27 billion from the United Arab Emirates were sent to Asia in 2016. About 70% of remittances in Nepal and Pakistan and 56% of remittances in India are sent from GCC countries. These countries are also major sources of remittances in Bangladesh, Indonesia, and Sri Lanka, providing more than half of all local remittances.

Remittances from GCC countries have increased remarkably in the last years. Between 2010 and 2016, the total amount of remittances sent from Saudi Arabia to Indonesia and Bangladesh more than tripled.

Table 1.8: Sources of Remittances Received by Asian Countries, 2016 (%)

Country	Remittances 2016 ($ billion)	OECD	Non-OECD Asia	GCC	Russian Federation
Afghanistan	0.4	13.0	30.7	15.4	0.1
Azerbaijan	0.6	8.6	7.6	0.0	58.1
Bangladesh	13.6	10.3	33.9	54.0	0.0
Bhutan	0.0	5.2	94.6	0.0	0.0
Cambodia	0.4	37.2	62.7	0.0	0.0
People's Republic of China	61.0	59.9	33.0	0.0	0.5
Georgia	1.5	19.6	4.7	0.0	58.7
Hong Kong, China	0.4	87.3	4.2	0.0	0.0
India	62.7	33.8	8.1	55.6	0.0
Indonesia	9.0	11.4	31.9	51.3	0.0
Japan	3.8	61.7	20.8	0.0	0.1
Kazakhstan	0.3	23.8	4.1	0.0	63.5
Korea, Rep. of	6.4	86.8	11.4	0.0	0.1
Kyrgyz Republic	2.0	15.0	4.3	0.0	76.6
Lao PDR	0.1	26.4	73.5	0.0	0.0
Macau, China	0.1	16.0	69.3	0.0	0.0
Malaysia	1.6	19.6	15.2	0.0	0.1
Maldives	0.0	65.9	15.4	0.0	3.4
Mongolia	0.3	61.2	6.5	0.0	26.4
Myanmar	0.7	7.7	65.1	27.1	0.0
Nepal	6.6	10.2	19.3	70.4	0.0
Pakistan	19.8	25.1	1.6	69.7	0.0
Philippines	31.1	56.6	10.2	31.5	0.0
Sri Lanka	7.3	38.5	8.5	50.6	0.0
Tajikistan	1.9	5.6	12.8	0.0	76.0
Thailand	6.3	72.3	18.4	4.1	0.0
Turkmenistan	0.0	0.0	0.0	0.0	100.0
Uzbekistan	2.5	0.0	0.0	0.0	100.0
Viet Nam	11.9	94.3	5.0	0.0	0.4

GCC = Gulf Cooperation Council, Lao PDR = Lao People's Democratic Republic, OECD = Organisation for Economic Co-operation and Development.
Source: World Bank Migration and Remittances Data. Bilateral Remittance Matrix (version April 2017).

Saudi Arabia has increased its share in remittances in Pakistan, India, and Afghanistan as well. Remittances from Gulf countries to the Philippines more than doubled in the same period, with remittances from the United Arab Emirates in particular more than tripling in the last 5 years. Despite their increasing importance for Asian workers and their home countries, remittances to Asia still make up a relatively small share of those sent from GCC countries.

Table 1.9: Share of Remittances in Gross Domestic Product by Country, 2000–2016 (%)

Country	2000	2010	2011	2012	2013	2014	2015	2016
Afghanistan		2.1	1.0	1.2	1.6	1.3	1.5	1.6
Azerbaijan	1.1	2.7	2.9	2.9	2.3	2.5	2.4	1.7
Bangladesh	3.7	9.4	9.4	10.6	9.2	8.7	7.9	6.2
Bhutan		0.5	0.6	1.0	0.7	0.7	1.0	1.5
Cambodia	2.8	1.4	1.3	1.2	1.1	2.2	2.2	1.6
PRC	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.3
Georgia	6.7	10.2	10.7	11.2	12.1	12.0	10.4	10.4
Hong Kong, China	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
India	2.8	3.2	3.4	3.8	3.8	3.5	3.3	2.8
Indonesia	0.7	0.9	0.8	0.8	0.8	1.0	1.1	1.0
Japan	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Kazakhstan	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2
Korea, Rep. of	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Kyrgyz Republic	0.2	26.4	27.6	30.8	31.1	30.0	25.3	30.5
Lao PDR	0.0	0.6	1.3	0.6	0.5	0.3	0.6	0.6
Macau, China		0.2	0.1	0.1	0.1	0.1	0.1	0.1
Malaysia	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5
Maldives	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Myanmar	1.1	0.2	0.2	0.5	2.7	0.4	0.6	4.9
Nepal	2.0	21.6	22.3	25.4	29.0	29.4	31.6	29.7
Philippines	8.5	10.8	10.3	9.8	9.8	10.1	10.2	10.2
Sri Lanka	7.1	7.3	7.9	8.8	8.6	8.9	8.7	8.9
Tajikistan		35.8	41.7	42.2	43.5	36.6	28.8	26.9
Thailand	1.3	1.3	1.4	1.4	1.6	1.6	1.5	1.5
Turkmenistan		0.2	0.1	0.1	0.1	0.1	0.0	0.0
Uzbekistan		7.3	9.3	11.0	11.6	9.2	4.6	3.4
Viet Nam	4.0	7.1	6.3	6.4	6.4	6.4	6.7	6.6

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic.

Source: World Bank data from database: World Development Indicators.

Remittances are usually an important source of income in developing countries. Some Asian countries rely heavily on remittances. Central Asian countries, such as the Kyrgyz Republic and Tajikistan, have remittance-to-GDP ratios of 31% and 27%, respectively, in 2016. Similarly, remittances accounted for 30% of Nepal's national income in the same year. This share was only 2% in 2000 and increased rapidly over time (Table 1.9). Asian countries with fairly stable remittance-GDP ratios, on the other hand, are the Philippines (10%) and Sri Lanka (9%). The drops in the share of remittances in Central Asian economies' national income following its 2013 peak are related to changes in the ruble/dollar exchange rate mentioned above.

Hong Kong, China; Japan; Kazakhstan; Macau, China; and Turkmenistan have the lowest remittance-to-GDP ratios, around 0.1% each; in addition, 3% of India's national income comes from remittances. Due to the enormous size of the PRC economy, even very high levels of remittances make up less than 0.5% of PRC GDP. As a general idea, the ratio of remittances to GDP is, on average, less than 1% in the world, and much less than half of that in advanced economies.

1.8 Conclusion

Migration to GCC countries, which rose in recent years, has declined, but remains rather high. Economic factors, primarily the price of oil, and policy factors have played a role. Important shifts in policy regarding foreign workers in Saudi Arabia have changed the labor migration climate in that country. Some channels have been affected by these new circumstances, although Bangladesh quickly restored its migration corridor after a 6-year ban. Migration within Asia declined, too, with the notable exception of recorded intra-ASEAN migration. A restrictive change in recruitment policy in Malaysia in 2016, one of the major Asian destination countries for labor migrants, affected the magnitude of flows overall. Migration from Asia to OECD countries is still on an upward structural trend and not affected to the same extent by economic cycles. The global picture of migration from and within Asia shows a deceleration. The rising educational attainment in many Asian countries means a large pool of talented workers which OECD countries are competing to attract. More Asians are studying in OECD countries, with some countries seeing sharp increases. The labor market outcomes of Asian migrants in OECD countries tend to be favorable. At the overall level in Asia, remittances have plateaued and even declined, despite rising remittances from GCC countries.

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CHAPTER 2

Leveraging Remittance Technologies for Financial Inclusion in Asia

Aladdin D. Rillo
Senior Economist, Asian Development Bank Institute (ADBI)

Judah J. Levine
Chief Executive Officer, Mondato

Remittances are one of the driving factors behind labor migration, especially within Asia. Of the $593 billion of global remittances projected in 2017, around 75% or $443 billion came from developing countries, particularly in the East Asia and Pacific and South Asia regions. It is expected that remittances sent home by international migrants from developing countries will continue to grow by 3.5% to $459 billion by 2018 (World Bank 2017a). Such inflows are significant not only because of their size, but also because of their development impact. Remittances increase household income that can be spent for social services such as education and health. They can also contribute to expansion in financial services and inclusive finance. According to the United Nations Conference on Trade and Development, a 10% rise in remittances may lead to a 3.5% reduction in the share of people living in poverty.

Unfortunately, the development impact of remittances is undermined by high costs. Costly remittances not only reduce migrants' earnings substantially, but also prevent their efficient flow. Although remittance costs have decreased in all developing regions, they still remain substantial at 14%–20%. In Asia, remittance costs have gone down to 8%, but are still above the global average (7.4%) and the targets set by the United Nations' Sustainable Development Goals (3% by 2030).

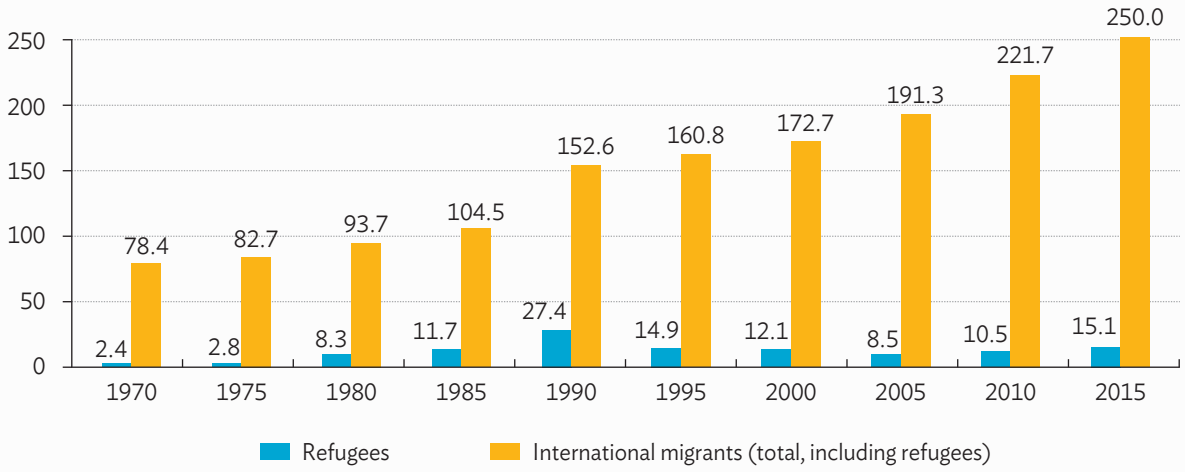
Reducing remittance costs is central to development. Evidence shows that a 5% decline in remittance costs will generate $15 billion in savings. While migrants own their remittances and they decide, with their families, how to spend them, there is ample scope to promote solutions that meet migrant needs and support the country of origin. One possible solution is to use information and communication technology to make labor channels and remittances more accessible to migrants. Though remittances are traditionally sent via banks, money transfer operators, and informal channels, mobile and financial technology companies now provide attractive alternatives (Mondato 2017).

2.1 Migration and Remittances in Asia: Recent Developments

2.1.1 Migration Trends and Drivers

International migrants, that is, people residing in a country other than their own, have increased significantly over the last two decades. Out of the 247 million migrants in the world estimated in 2015, around 30% or 75 million lived in Asia (Figure 2.1). This represents a 39% increase from 48 million migrants based in Asia in 1990. The majority of international migrants in the region are found in South Asia and Western Asia, accounting for 19% and 51% of the region's total migrant stock, respectively.

Figure 2.1: International Migrant Stocks (million)



UNCHR = United Nations High Commissioner for Refugees, UNPD = United Nations Population Division.

Sources: UNPD 2015, World Bank 2015, World Development Indicators, UNHCR. Refugee data are as of June 2015; they exclude Palestinian refugees numbering 5.1 million.

Among the top 10 migrant origin countries, 7 are from Asia, led by Bangladesh, the People's Republic of China (PRC), and India. These countries represent around 30% or 7 million of the total migrant population in the world. The magnitude of migration trends is also evident when assessed against the local population, as in the case of some Pacific countries. In Samoa, Tonga, and Tuvalu, the emigrant population is at 60%, 53%, and 39%, respectively (Ozaki 2017).

In terms of destination, the United States (US) and the Gulf Cooperation Council (GCC) countries still attract strong migration flows for Asian migrants, although the magnitude of flows varies across regions. Migrants from the East and Southeast Asia and the Pacific regions are mostly found in the US partly because of historical ties with the country. The majority of South Asian migrants live in GCC countries, particularly those from India. Intra-regional migrants have also become evident over the years such as those going from Cambodia to Thailand, Indonesia to Malaysia, Myanmar to Thailand, and Bangladesh to India.[1]

Regardless of their destinations, the majority of Asian migrants move to improve their income potential, particularly to "earn more income"[2] (Belanger et al. 2010), or to "attain financial solvency"[3] (Asia Foundation 2013). Non-economic factors also influence migration decisions, such as the need to provide for a better future for their family (as in the Philippines' case), better working conditions abroad (Nepal), and chain migration (Kazakhstan).[4]

[1] Traditionally Asian migrants go to Europe, the Middle East, and North America, but this has changed over the years, as shown in flows to Asian industrialized countries such as Hong Kong, China; Japan; the Republic of Korea; Singapore; and Taipei,China in recent years. India, Malaysia, and Thailand have also absorbed many Asian migrants who work in agricultural areas (ADB 2012).

[2] As in the case of Vietnamese migrants who moved to other Asian countries (Belanger et al. 2010).

[3] As in the case of migrants from Bangladesh and Nepal (Asia Foundation 2013).

[4] For example, in a pre-migration survey for Filipino migrants, more than 50% of respondents indicated providing for their family's future as a major reason for migrating. Other reasons cited include low salary at home (21%), inability to find a job at home (20%), and others, including exposure to foreign culture (5%). For more details, see Asis (2005).

2.1.2 Magnitude and Development Impact of Remittances

Reflecting the huge migration flows, remittances in the East and Southeast Asia and the Pacific region grew significantly from $98 billion in 2006 to $241 billion in 2017, or approximately 12% average growth per year over the last 12 years (2006–2017). In 2017, remittances from Asia are expected to account for 41% of total global flows and 54% of those from developing countries (Table 2.1), a trend that has increased over the last decade. Thus, it is not surprising that Asian countries are among the top remittance recipients in the world, led by India ($63 billion), the PRC ($61 billion), and the Philippines ($29 billion). As a share of gross domestic product, the Kyrgyz Republic, Nepal, and Tajikistan top the list of countries (Figure 2.2).

Table 2.1: Estimates and Projections for Remittance Flows to Developing Countries

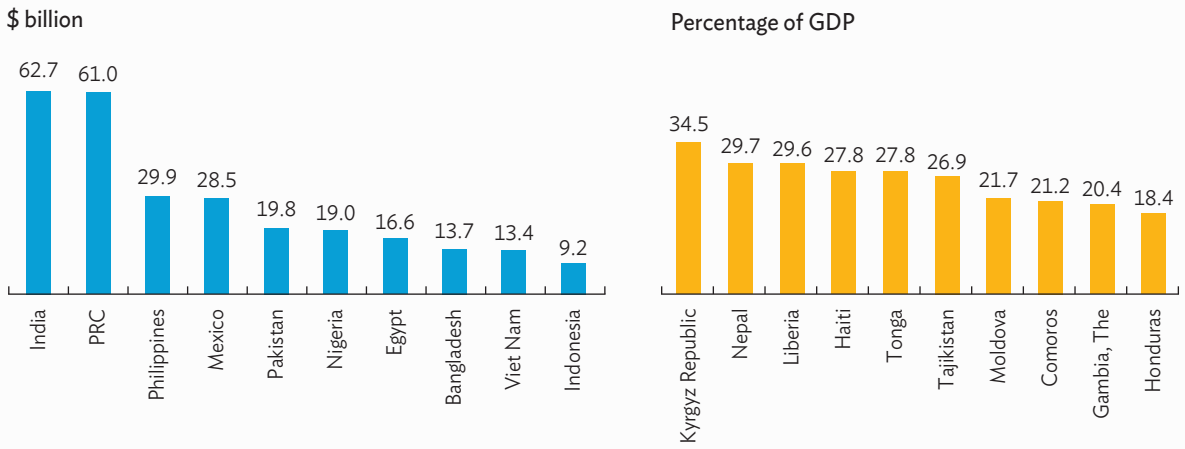
Region	2010	2013	2014	2015	2016e	2017f	2018f
	($ billion)						
Developing countries	340.3	426.4	444.3	439.8	429.3	443.6	459.1
East Asia and Pacific	94.9	114.3	122.7	127.3	125.8	129.0	132.7
Europe and Central Asia	37.8	54.6	51.7	40.3	38.4	41.0	43.6
Latin America and the Caribbean	56.5	61.5	64.5	68.3	73.1	75.5	78.2
Middle East and North Africa	39.0	50.5	54.4	51.1	48.8	51.8	53.5
South Asia	82.0	110.8	115.8	117.6	110.1	112.3	115.3
Sub-Saharan Africa	30.1	34.7	35.3	35.1	33.0	34.1	35.7
World	466.7	574.8	598.3	582.4	575.2	593.8	615.9
Low- and middle-income countries	334.2	419.0	435.9	432.3	422.5	436.3	451.1
	(Growth rate, percent)						
Developing countries	11.2	5.2	4.2	–1.0	–2.4	3.3	3.5
East Asia and Pacific	19.5	6.7	7.4	3.8	–1.2	2.5	2.9
Europe and Central Asia	4.8	17.1	–5.3	–22.1	–4.6	6.6	6.4
Latin America and the Caribbean	2.6	2.1	4.8	6.0	6.9	3.3	3.6
Middle East and North Africa	18.2	3.4	7.8	–6.1	–4.4	6.1	3.3
South Asia	9.4	2.6	4.5	1.6	–6.4	2.0	2.7
Sub-Saharan Africa	9.6	1.0	1.7	–0.4	–6.1	3.3	4.9
World	8.3	5.3	4.1	–2.7	–1.2	3.2	3.7

e = estimate, f = forecast.

Source: World Bank. 2017a. Migration and Remittances Brief 2017. April.

In theory, remittances are driven by different motives (De 2017), which can also explain their behavior during business cycle fluctuations. For example, if the motive is largely altruistic, remittances are likely to be countercyclical, i.e., they increase when a recipient economy is in a downturn. A different view looks at remittances as an investment by migrants in their home country, encouraging them to send more money to reap higher future returns. In these cases, remittances can be procyclical.

Figure 2.2: Top Remittance Receivers in 2016

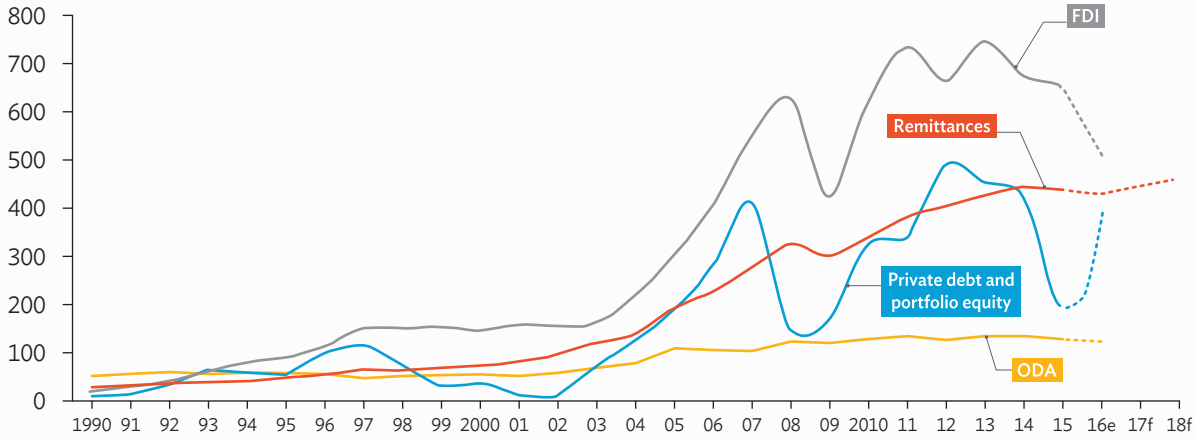


PRC = People's Republic of China, GDP = gross domestic product.

Source: World Bank. 2017a. Migration and Remittances Brief 2017. April.

While the cyclicality of remittances with respect to the receiving country is less conclusive, evidence still suggests their potential to stabilize an economy when capital inflows decline (De 2017). As shown in Figure 2.3, remittances are reliable sources of external funds for developing countries. Although they are second only to foreign direct investment inflows in terms of scale, they are more than three times official development aid and eight times private capital. Remittances are also more stable than all other external flows, and are more resilient against global headwinds and macroeconomic volatility. For example, a year after the global financial crisis in 2008, remittance inflows to emerging markets continued to grow by 6% while capital flows declined by 14% (De 2017).

Figure 2.3: Remittances and Other Capital Flows in Developing Countries ($ billion)



e = estimate, f = forecast, FDI = foreign direct investment, ODA = official development assistance.

Source: World Bank. 2017a. Migration and Remittances Brief. April.

In addition to smoothing consumption over time, remittances have an equalizing effect on income distribution, poverty alleviation, and individual welfare.[5] While this evidence is not fully conclusive, large remittances are still likely to exhibit less volatility in managing consumption and output during the business cycle, thus enhancing general economic welfare.

Aside from their direct impact on foreign exchange earnings,[6] remittances can be leveraged to achieve higher levels of investment, productivity, and economic growth. One way is by channeling remittances to investment-linked products that target migrant workers and can benefit both individual households and the economy, such as diaspora bonds, which are debt instruments issued by the governments of remittance-receiving countries and by private entities. These bonds are usually tied up in specific projects that require long-term financing such as infrastructure and public investments. In Asia, the Government of India made the most successful diaspora bond issuance, with $32 billion raised between 1991 and 2000.

Intermediating remittances through other financial assets is another way to enhance their development potential. Unfortunately, only a fraction are invested in financial assets in developing countries, as most are sent through informal channels, with households usually preferring to keep the funds as cash rather than as bank deposits. Thus, a key challenge is how to develop financial products to attract investments by receiving households (Ozaki 2017). For example, in Bangladesh and Sri Lanka, foreign and local currency savings accounts, with preferential interest rates or tax incentives, have been offered to overseas workers. In Kazakhstan and Pakistan, securitized instruments on future remittances have been developed where banks issue remittance-backed bonds. The money raised is then invested to create multiplier effects on output and employment.

Although remittances play a major role in Asian economic development and are likely to become more important in the coming decades, one negative effect is the increasing dependence on them by households in receiving countries (ADB 2012). Indeed, there is evidence that remittances are used mainly to finance consumption in receiving countries instead of being channeled to increase productive capacity. Some economists also argue that unfettered migration can have adverse impact on long-term growth and human development due to departure of highly educated workers, and the tendency of sending countries to value education less.[7]

2.2 Addressing the Issue of High Remittance Costs

Along with migrant workers' poor job conditions and low earnings, the high costs of sending remittances are also a major factor limiting their development potential. In general, migrant transfer channels range from informal ones such as hand delivery by migrants themselves or third parties, to formal mechanisms such as banks, credit unions, postal services, and international money transfer operators (IMTOs). While the remittance costs vary, evidence suggests that migrants are not only concerned with costs, but also with the security of their remitted money (ADB 2012).

[5] For example, Adams (2006) and Adams and Page (2005) estimated that a 10% increase in per capita remittances leads to a 3.5% decline in poverty head count. In another study by the World Bank (2006), it was shown that a decline in moderate poverty and extreme poverty by 0.4% and 0.3%, respectively, was associated with a 1 percentage point increase in remittance-to-GDP ratios.

[6] As an important source of foreign exchange, remittances help stabilize balance of payments, particularly to finance trade deficits and bolster reserves, as in small Pacific islands and even large countries such as the Philippines and Viet Nam (Ahsan 2014).

[7] These negative effects are examined in detail by Chami et al. (2005), and De Bruyn and Wets (2006).

Banks tend to charge the highest among the various service providers. The average cost of bank transfer worldwide is 11%, a slight decline from its 2008 level of 14.6%. In contrast, IMTOs' total average costs are around 6%, with post offices' being 7%.

South Asia, Latin America and the Caribbean, and Europe and Central Asia are the cheapest receiving regions, with costs remaining below the global average. Meanwhile, despite the significant decline in costs in sub-Saharan Africa, the Middle East, and the East Asia and the Pacific region since 2000, their average costs remain above the global average.

Addressing high remittance costs is an important policy issue in Asia given its large share of migrant workers who regularly remit money. These workers also have generally low salaries. Thus, even with a $200 remittance, an 8% average cost of sending money can be substantial. Further, migrant workers do not have easy access to other formal remittance channels due to the tendency of some banks to discourage "low ticket" transfers (Plaza and Ratha 2017).

Among the different ways to address the issue are regulations that serve the needs of low-earning migrant workers. For example, there is a need for regulators in each country to adopt a more flexible approach to customer due diligence (CDD) and know-your-customer (KYC) checks by banks, like having different CDD and KYC norms for small and large remittances. This is the case in the Philippines, where registered remittance agents are allowed to conduct KYC checks on e-money and mobile transactions in rural areas (Ozaki 2017). Another way is through the linkages of all institutions involved in remittances such as banks, IMTOs, exchange houses, non-bank financial institutions, and agents.

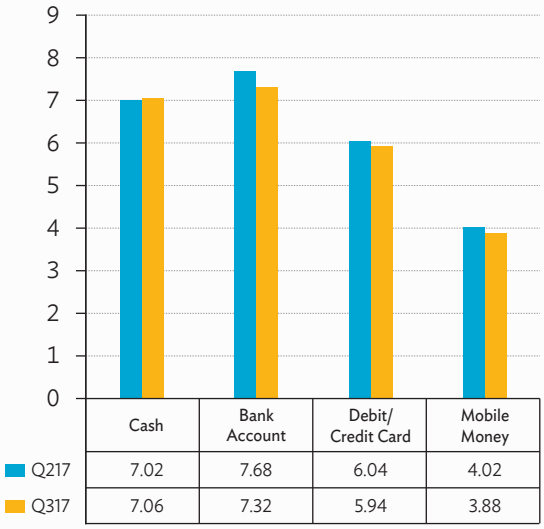
The most innovative approach is to leverage mobile phones, ATMs, and points of sale to reduce costs and expand formal remittance outreach (Ozaki 2017). As shown in Figure 2.4, mobile money is the cheapest method to fund a remittance transaction (3.8%) compared to using bank accounts (7.3%), cash (7.1%), and debit/credit cards (5.9%). On average, sending remittances through mobile money also turns out the cheapest (5.2%), as against the costs charged by banks (7.8%) and cash disbursements (6.5%; Figure 2.5).

2.3 Role of Remittance Technologies

These remittance products are normally being developed by IMTOs and by payment service providers (PSPs) for domestic transactions (this latter category generally offering a wider set of services than the former, but focused on intra-market services). For example, in the Philippines, the IMTO Western Union has partnered with local PSP Smart Communications since 2008 to develop the use case of cross-border remittance services for Smart Money. With Smart Money, remittance recipients can then use their mobile phones to receive funds into their mobile money accounts to be cashed out at any partnering commercial banks or Smart Money agents in the country. A similar scheme called bKash has been developed by BRAC Bank in Bangladesh, Master Card, and Western Union since 2016 to enable remittance recipients to receive cash and make other services, e.g., transfer funds, pay bills, or even shop in-store (Ozaki 2017).

Technology also plays an important role in expanding or combining existing payment infrastructure and instruments. One example is dual cards that can be used by migrants' families to withdraw remittances and make payments. New companies have also emerged that fill the gaps in remittances markets through existing banking and payment infrastructures.

Figure 2.4: Average Cost by Instrument Used to Fund a Remittance Transaction (%)

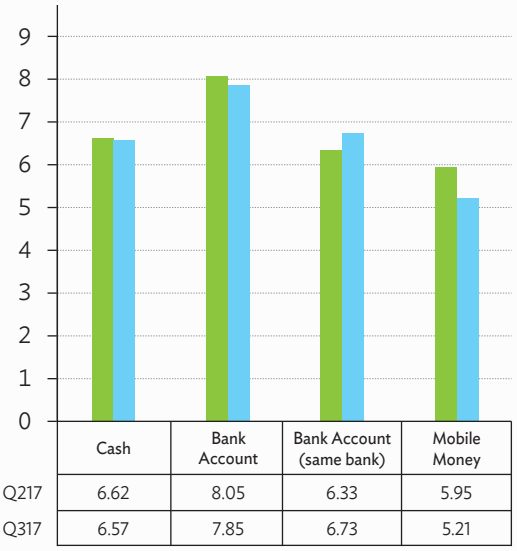


	Cash	Bank Account	Debit/ Credit Card	Mobile Money
Q217	7.02	7.68	6.04	4.02
Q317	7.06	7.32	5.94	3.88

Q = quarter.

Source: World Bank 2017b.

Figure 2.5: Average Cost by Means of Disbursing the Funds for Remittance Transaction (%)



	Cash	Bank Account	Bank Account (same bank)	Mobile Money
Q217	6.62	8.05	6.33	5.95
Q317	6.57	7.85	6.73	5.21

Q = quarter.

Source: World Bank 2017b.

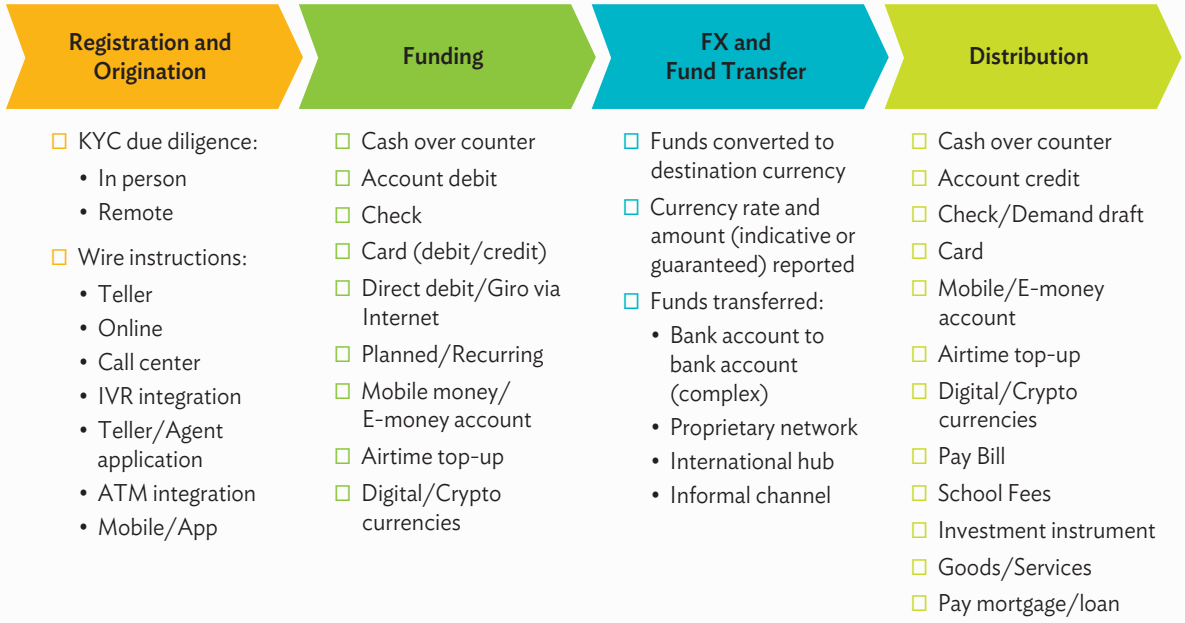
Remittance Processes

It should be noted that cross-border remittances are still transacted much as they were decades ago, with recent innovation focused on repackaging efficiencies within the international financial infrastructure (Figure 2.6). Banking architecture relies on back-end clearing and settlement entities that add a degree of opacity to remittance cost structures. Fluctuating foreign exchange rates obscure this further, and the disclosure or estimation of such rates varies substantially across remittance service providers (RSPs).

A cross-border transfer, as a single wire, travels a fairly straightforward journey through Society for Worldwide Interbank Financial Telecommunications (SWIFT) messaging services. As the communications component occurs simultaneously with the settlement process, the receipt of funds and counterpart deduction of funds experiences a time lag depending on the sophistication of a corridor's infrastructure. Banks pocket the flat transfer fee in addition to the foreign exchange spread and float (Denecker et al. 2016). SWIFT, too, propels correspondent banking, or "the provision of a current account (called a nostro account) by a bank to another bank, which uses this nostro account to facilitate cross-border payments and trade finance transactions of its customers" (Grolleman and Justra 2017). Correspondent banking relationships remain the skeletal backbone of international financial flows, including remittances.

De-risking, or the phenomenon where parties withdraw from or terminate a correspondent banking relationship, has weakened the core international remittance infrastructure. The uptick in de-risking is the consequence of a set of factors: the global financial crisis, intensifying regulation around KYC requirements, anti-money laundering, and Combating the Finance of Terrorism compliance and deteriorating trust in partner institutions (IMF 2017).

Figure 2.6: Key Activities in the Remittances Process



ATM = automated teller machine, FX = foreign exchange, IVR = interactive voice response, KYC = know your customer.

Source: Mondato (2017).

This has resulted in consolidated corridors, with the funneling of flows by both value and volume into fewer pathways. According to data by the Committee on Payments and Market Infrastructure, states that are either saddled with sanctions or destabilized by civil unrest have witnessed the most concentration in correspondent banking (IMF 2017).

These back-end trends may be problematic given that banks' most competitive challengers, that is, IMTOs, are also tethered to correspondent banking relationships. Both brick-and-mortar and digital IMTOs leverage pre-funded nostro accounts in a foreign currency to simplify immediate or next-day availability of funds.

For more established incumbent players, such as Western Union or MoneyGram, obtaining large credit lines at destination banks is usually manageable as long as certain thresholds of daily or monthly value turnover are met. For newer players, the barrier of entry in the form of banking fees can be debilitating.

Pain Points and Recent Evolution

Many, if not all, of these functions in developing markets depend on branch and agent infrastructure. This origination layer of a remittance consists of customer registration, KYC verification, pricing acknowledgments, generating transaction tracking details, and electronically digitizing cash if necessary. The "first evolution" of the remittance market, then, was the price reduction per transaction when a transfer was originated by an agent versus a branch.

Figure 2.7: Indicative Pain Points by Key Activity

FX = foreign exchange, ID = identification, KYC = know your customer.

Source: Mondato (2017).

Currently, most first mile innovation that boasts a purely digital cash-in solution caters to high-income sending to middle- and low-income country corridors. The savings can be substantial, as illustrated by TransferWise advertising a flat 1% fee, though these favorable costs are still mostly limited to those able to deposit by local bank transfer, debit or credit card (in select currencies), or SWIFT international transfer. Savings with other providers are often similarly confined to that sub-segment. These business models, however, are tenable due to the high levels of banking penetration in developed markets, from which most remittances emanate, complemented by a regulatory climate that sanctions digital KYC authentication. Access to digitized cash-in remittance channels, though, has yet to fully translate to usage.

As for traditional cash-out, it is unlikely to disappear completely given that even the most advanced economies will not be fully digitized any time soon. Physical currencies will likely remain the fallback for situations where electronic acceptance is not available, either because one party lacks the proper means, or they find it uneconomical, inconvenient, or both.

Many obstacles remain, in part due to inadequate value propositions for merchants, weak stakeholder economics for card networks, insufficient aggregate customer demand, inconsistent infrastructure and regulatory frameworks, ineffective distribution models, and reluctance to pay full taxes on previously unreported revenues.[8] As a result, a significant share of remittance recipients will likely continue to withdraw those funds, especially since acceptance by informal small- to medium-sized enterprises is unlikely to accelerate significantly in the near term.

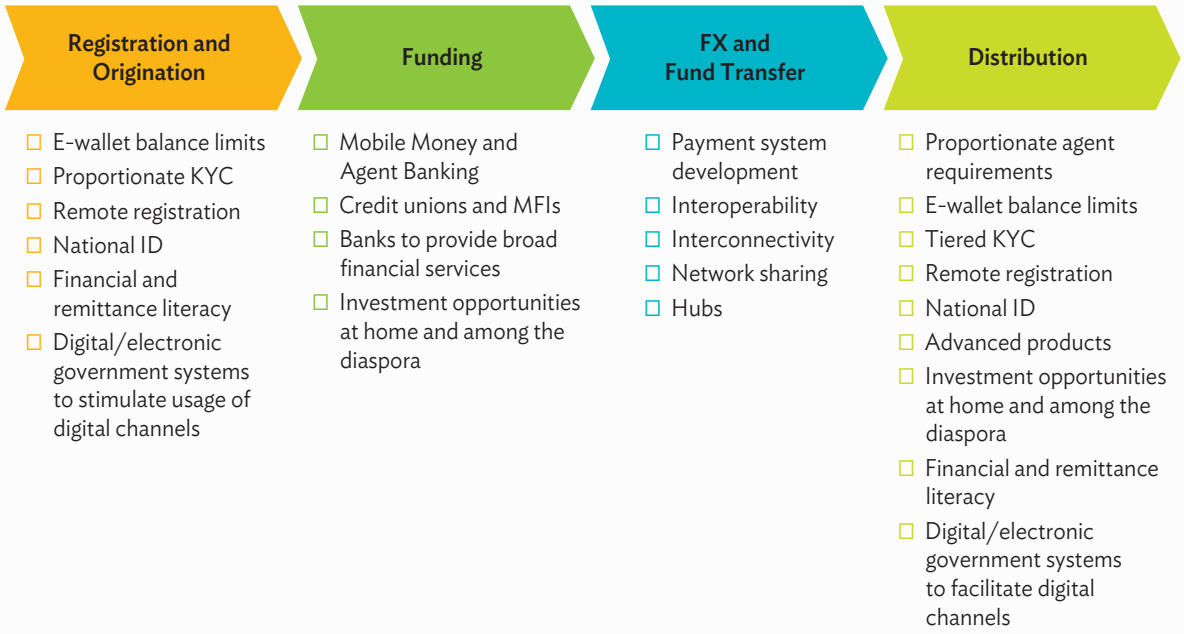
[8] Innovation in Electronic Payment Adoption: The Case of Small Retailers, World Economic Forum, June 2016.

Opportunities for Fintech in Remittances

Fintech players have been looking to consolidate and/or replace parts of the legacy remittance value chain, while others are seeking to reconfigure it in a more fundamental fashion. And while application programming interfaces (APIs), cryptocurrencies, and distributed ledgers will chip away at back-end monopolies over the long term, in the interim, IMTOs have mostly differentiated themselves with first mile cash-in channels and last mile distribution networks.

Technological advances in digital money, along with its increasing ubiquity, have unleashed a whole assortment of collaborations hoping to halve remittance prices. That, coupled with emerging digital identification programs, might render the regulatory burdens of remittances more bearable to nimbler but cash-strapped disruptors (Figure 2.8).

Figure 2.8: Illustrative Considerations to Facilitate More Efficient Remittances



FX = foreign exchange, ID = identification, KYC = know your customer, MFI = multinational finance institution.

Source: Mondato (2017).

While there are hundreds, if not thousands, of would-be remittance innovators eager to make their mark and capture market share across remittance corridors big and small, it is useful to consider how propositions might be grouped based on scale and scope of impact:

(i) **Status Quo Plus:** Well-established infrastructure of intermediary banks and bilateral agreements along with SWIFT; traditional IMTOs mostly play on top of these rails, with focus on optimizing cash-in, cash-out; digital services may bring efficiencies, but are reliant on existing core financial infrastructure.

(ii) **Improved Fundamentals:** Massive scale brings fixed cost efficiencies, such as with international IMTOs; aggregation is an alternative model with hubs managing the corridors; multinational "borderless accounts" with providers doing net transfers across their international accounts.

(iii) **New Paradigm:** The objective is to move toward far lower, even zero-fee services; new revenue sources, such as user insights and targeted advertising; potentially leverage cryptocurrencies for disintermediation and open APIs to make for more democratic access.

This third cluster of innovative technologies and business models in particular could prove especially disruptive as subsidized or even free services to end users, something that may require a complete reworking of the existing competitive environment. Interim steps may include banks playing less direct roles in this financial service, perhaps shifting resources to other services they find more profitable.

Such back-end mechanics of cross-border flows, and its associated costs, may be less discernable to consumers, however. These can be significant, and on average foreign exchange fees can amount to 20% of a remittance's price (Niforous et al. 2017). To diminish the amount to be settled across borders, some IMTOs active in two-way remittance corridors practice netting. Transfer-wise, a London Fintech unicorn, will (when possible) avoid currency exchanges by rerouting money domestically. A euro (€) out-bound remittance will fund a euro (€) in-bound remittance. IMTOs of all sizes, however, strategize to at least minimize the flat interbank transfer fees through batching. By aggregating a succession of smaller remittances, the marginal cost of each foreign exchange and settlement expense drops.

Decentralized cryptocurrencies and distributed ledger applications are two potential avenues to not only address the opacity of the back end, but to introduce a healthy dose of competition. Cryptocurrencies could theoretically render intermediary banking infrastructure unnecessary. Digital assets might then be transferred between two parties without external permissions, which is then moved over a cryptocurrency's secure network to the receiver (Srinivasan 2017). A challenge, however, might be perceived illiquidity and volatility of cryptocurrencies, especially for poorer segments most likely to depend upon remittance services.

Aware of consumers' skepticism regarding cryptocurrencies, Abra is vying to harness the power of Bitcoin to cut down remittance prices discreetly. Even though Bitcoin is the back-end medium, many users are oblivious to its central role since Abra's mobile wallet is financed through fiat currency. The invisibility of Bitcoin, too, is compounded by Abra's reliance on roving agents who upon request will facilitate the whole transaction.

Cryptocurrencies spawned in the private sector are also providing increasing inspiration to central banks. Central bank digital currencies (CBDCs) could produce a peer-to-peer (P2P) transfer network whose value would be anchored by its 1:1 exchangeability with the other liabilities of a central bank, cash, and reserves. CBDCs, too, might help to universalize a technological standard for electronic payments if the space was choked by coordination failure. The continued disposal of monetary policy is also an important consideration of CBDCs' relevancy. The proliferation of cryptocurrencies could undermine the demand for central bank money, thereby leaving little room for central banks to affect inflation or interest rates (He 2017). The Monetary Authority of Singapore is one pioneer that is experimenting with a state-controlled cryptocurrency. Project Ubin has placed the tokenized form of the Singapore dollar on a distributed ledger, the first of its kind in Asia (Dalal et al. 2017).

Interbank distributed ledger technology applications, more widely, could bypass correspondent banking and promote direct settlement between financial institutions. One sophisticated operationalization of this approach is actually the product of a private company, Ripple. In fact, Ripple recently announced that over 100 financial institutions are now active on its enterprise blockchain network RippleNet, wherein in-network banks can initiate and settle wholesale payments through cryptotokens. Ripple is not alone in this endeavor. IBM, Mastercard, JPMorgan, SWIFT, the Gates Foundation, R3CEV, and more are all competing to establish the next distributed ledger that will revolutionize cross-border international payments (De Meijer 2017). It is important to note, though, that these initiatives only represent a tiny sliver of cross-border flows. Until a consensus by all stakeholders over the utility of either cryptocurrencies or distributed ledgers crystallizes, the large-scale structural impact of the technology will remain muted.

2.4 How Can Digitalization Help?

Examples of How Technology Alleviates Selected Pain Points

With little chance of regulation around money transfers loosening, technology might be one of the better hopes for curtailing the piling of accrued costs onto the consumer. Blockchain-based solutions are one proposed answer due to both the granularity of transaction history captured and the visibility of cross-institutional data by numerous parties in real time, along with cash-out opportunities through strategic partnerships. The distributed nature of access, and the multi-party system of data alteration or addition, complicates any attempts to falsify records to camouflage illegal behavior (Ramachandran and Rehermann 2017).

And while the potential of this technology pertains most obviously to cross-border settlements, its coupling with digital, biometric identification could significantly ease the long-term costs of KYC protocols for RSPs. If a consumer uploaded encrypted KYC documents and biometric data onto a blockchain, which was then used alongside a PIN to authenticate an individual's transactions, a financial institution could turn to that blockchain-generated record as one form of identity verification. AID:Tech is one vendor refining the use of blockchain to issue digital identities, and has partnered with both charities and government aid agencies alike to validate end users, often refugees, who receive remittances and welfare distributions.

State entities are waking up to the multifaceted economic externalities of government-sponsored digital ID programs, remittances being but one variable in that equation. As of 2017, nearly 17.7% of the global adult population (more than 1 billion people) still lack the necessary documentation to fulfill basic KYC standards.[9] And although the Aadhaar ID in India is perhaps the most recognized case, there are 38 active government-issued national IDs across Latin America, South and Southeast Asia, and sub-Saharan Africa. Of those, 28 have an electronic component while 37 store some derivative of biometrics, whether an iris scan, fingerprint, facial recognition, or a combination. The sophistication of these IDs, however, as it relates to financial services, and thus, remittances, remains nascent. Only 22 of the 38 programs have incorporated KYC functionality. Other use cases have been introduced together with KYC integration for financial services, but at a lesser frequency; 5 programs are linked to digital banking, 4 to mobile money applications, and 13 to government assistant programs (Focus Group Digital Financial Services 2016).

[9] World Bank Group's Identification for Development (ID4D) Data Set.

Figure 2.9: Illustrative Send/Receive Propositions

Send: Blockchain Remittance Payments

Service: Ripple's xCurrent international real-time payments

Launched: Evolution from enterprise solution

Proposition: Real-time payments either settle or fail within milliseconds based on standardized Rulebook developed by RippleNet Advisory Board

Reduces transaction costs by estimated 60%, and allows lower value payments, recent customers now using this blockchain technology to allow retail customers to receive immediate international payments on select corridors

Receive: Cash-out for the Unbanked

Service: Singtel Dash app

Launched: 2017

Proposition: Indonesian diaspora in Singapore (estimated at around 200,000 workers) are now able to make instant transfers to the unbanked back home. After KYC at SingCash outlets, senders can then remit funds from bank accounts, 7-Eleven, or AXS self-service terminals.

Recipients then either receive funds into their Telkomsel mobile wallets TCash, or from almost 5,000 post office sites.

Sources: Mondato (2017), and drawing on company press releases.

Digital Services Reshaping Formal Channels

The ascent of the mobile phone has galvanized innovation that skirts the back-end banking rails of cross-border payments. One example is TransferTo, an airtime remittance company that interlinks mobile operators' prepaid systems to power top-up services between participating RSPs. Small value transfers of mobile minutes (usually under $20) can then bounce between international, interoperable prepaid accounts. In 2015, TransferTo launched a hub to equip mobile network operators (MNOs), mobile virtual network operators, IMTOs, and financial institutions with the means to move larger mobile-based remittances worth anywhere from $20 to $100 (Handford 2015).

The concept of an international remittance hub has steadily solidified in the industry, and refers to a switch that facilitates mobile payments between two or more RSPs. Irrespective of the legal and commercial agreements that inform the full suite of a hub's service provisioning, the baseline value-add is the clearing and settlement of balances between originating and paying RSPs, in addition to another round of sanction-screening. The hub's involvement might manifest as an intermediary in a bilateral agreement, as is the case with HomeSend in the MTN Côte d'Ivoire and Airtel Burkina Faso mutually interoperable partnership (Scharwatt and Williamson 2015).

In many instances, however, protective regulatory measures will only authorize the expansion of country in-bound remittance routes. And while it is more challenging to secure regulatory approval for mobile funds exiting African or Southeast Asian countries, two-way collaboration is mounting. In a recent deal

struck between TerraPay and Wari, not only can TerraPay's global partners now inject money into Wari's digital payments ecosystem, but users of Wari, too, can remit to TerraPay's network of mobile wallets in Africa and bank accounts in India.

Wholesale providers, too, are pitching themselves as viable alternatives to traditional correspondent banking for IMTOs. One such provider, Earthport, is unique in that it is building a cross-border payment utility by coordinating directly with the local clearing systems in countries of operation. IMTOs, banks, e-commerce platforms, or multinational corporations that plug in to Earthport sidestep bank-to-bank relationships, and instead are fast-tracked through its proprietary international infrastructure directly to the destination.[10] One contract with Earthport delivers cross-border capabilities in over 190 countries, with local automated clearing house options available in 65.

The result is a service with real-time, end-to-end tracking of flows and set pricing that affords IMTOs a high degree of confidence when packaging their own products. Industry heavyweights such as TransferWise, WorldRemit, Azimo, and Xoom have tapped into Earthport to further diversify corridor access. While Earthport boasts the biggest footprint in terms of reach, there are some other regional wholesale providers. Connection to the BBVA Transfer Services platform enables processing, monitoring, settlement, and regulatory compliance across 16 corridors in Latin America and Eastern Europe.

2.5 Policy Implications and Conclusion

While front-end regulation is upending agent networks and encouraging digital, traceable on-boarding, the revised Payment Services Directive, Basel III, and Dodd-Frank are accentuating some of the inherent inadequacies of correspondent banking. In a post-global financial crisis climate, the outcry for both strengthened consumer protections and a transparent financial system at large has catalyzed regulators. In the context of remittances, it will become progressively more difficult for correspondent banking structures to meet hardening expectations around liquidity positions, clarity concerning settlement times, and predictability of foreign exchange fees.

In corridors where flows travel from middle- or low-income to low-income countries, which often mirror intra-African, Asian, Central and South American migration patterns, the origination layer is seldom primed for complete digitization. Local conditions, from digital adoption rates, mobile phone penetration, regulation, prevalence of identity verification documents, and more, all impact a market's "readiness" for a solely digital cash-in.

In lieu of an agent-free value chain, other business models are surfacing. When incentivized to on-board customers to the digital ecosystem, either the provider or agent partners may subsidize either cash-in costs or transaction fees. BillMo, an RSP specialized in the US-to-Mexico corridor, provides discounted remittance services by plugging in the fund receiver to a variety of alternatives other than cash-out, from bill pay to e-commerce.

[10] Zafar (2017), interview with CEO of Earthport, Edgar, Dunn & Company, 4 April.

While the cash-in is still digital, MNOs have replicated this model to drive domestic mobile money adoption and induce critical mass through free agent cash-in or P2P transfer promotions (Tseng et al. 2017). With some imagination and creative collaboration, the relevance of these schemes could apply cross-border.

Ingenuity, too, could extend to agent networks as both mobile gaming and gambling gain momentum across Africa and Asia. Tencent, a PRC internet value-added services firm, netted CNY18.17 billion of its CNY40.39 billion in revenue from online and mobile games alone in quarter 3 of last year (Perez 2017). That kind of profit could justify nullifying cash-in or transfer fees to entice users on the platforms, especially as mobile wallet providers agitate to expand their portfolio of financial services offerings.

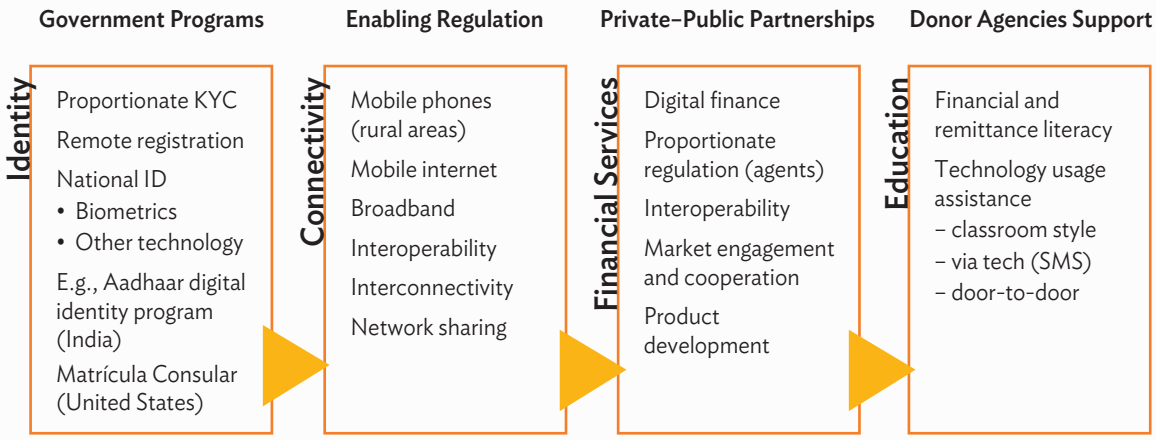
More broadly, fintech innovation is generally taking two tracks currently, focusing on either developing the platforms upon which other players can then build and offer innovative propositions, or, alternatively, targeting select inefficiencies where money is being left on the table. The former may at some point lead to a distributed ledger approach to financial identities, fraud, and disintermediation for inexpensive small-value transfers (the original objective of Bitcoin).

Entrenched incumbents are mindful of the benefits as well, and realize they can benefit also by avoiding some of their greatest cost centers. But these often coincide with their fundamental roles of compliance and financial stability of savings, loans, and reserve management. Completely wishing away the third-party middle person may not be desirable either for dispute settlement or quality of service issues. Irreversible transactions can be quite problematic if they end up in the wrong place in a shadow-banking world.

It is therefore worthwhile considering the key pillars to enhance digital transformation (Figure 2.10):

- **Identity:** Government programs play an important role, and tiered KYC is a starting point for ease of onboarding and registrations, especially if to be remote, with national IDs an important requirement (potentially including biometrics or other technologies), with examples including the Aadhaar digital identity program in India or the Mexican Matrícula Consular in the US.
- **Connectivity:** Enabling regulation provides the foundation for more widespread access, including universal coverage programs for rural mobile broadband, and allowing for interconnectivity and network sharing.
- **Distribution Channels:** Agents should be regulated on a risk-proportionate basis, with heavy licensing and compliance requirements tending to greatly limit their footprints and exclude the local merchants that have been typical of mobile money, while interoperability can help establish critical mass (the point at which that occurs not being universally agreed upon).
- **Education:** Potentially an area for donor agency support, or public–private partnerships, with the focus being on national awareness campaigns, financial and remittance literacy, and technology usage assistance (e.g., classroom-style sessions, via SMS, or even door-to-door).

Figure 2.10: Measures to Promote Remittance Technologies



ID = identification, SMS = short messaging service.

Source: Mondato (2017).

While the landscape is clearly changing, such initiatives can help accelerate evolution beyond the traditional model of intermediary banks and IMTOs. The opportunity is clearly significant with 85% of all remittances, including domestic, estimated to still be conducted in cash, while the cost of cross-border transfers remains a serious issue for many in developing markets, including Asia. Governments and international organizations can therefore play a central role in creating an enabling environment in digital finance to improve the remittance process and also have positive externalities such as financial inclusion. In Asia, for example, while the potential for digital finance to promote financial inclusion is high, the need to address issues affecting payment systems and agent banking remains a priority (Box 2.1). Allowing for increased use of technology and enabling proportionate requirements would stimulate the use of digital finance and productive use of remittances.

Box 2.1: Promoting Financial Inclusion in Asia through Digital Finance

Digital payments and broader digital financial services are an evolving and complex domain that do not always have clearly delineated boundaries or universal terminology. In a study conducted by the Asian Development Bank and Mondato (2017), the potential of digital finance to enhance payment systems and e-money services was examined in Bangladesh, Nepal, and Sri Lanka. Despite the bank account penetration differences across these countries, regulations across all three markets are converging on a more conducive environment for money market agents. Regulators are looking to digitalized economic activity as a driver of growth. Nonetheless, given the complex nature of digitalization, more measures are still needed. These include, among others, the need to implement a National Real-Time Payment System, develop more instruments and infrastructure for e-payments and agent banking, and create a transparent legal framework and regulations for digital finance.

	Bangladesh	Nepal	Sri Lanka
Payment Systems	• Facilitate the implementation of a National Real-Time Payments platform • Develop universal transaction interoperability • Expand internet and cloud services to support next-generation platforms/services • Support enabling policy and investment into the newly emerging fintech ecosystem	• Develop initiatives to modernize payment systems • Facilitate the implementation of a National Real-Time payments platform • Expand internet and cloud services to support next-generation platforms/services • Support enabling policy and investment into local fintech ecosystem	• Expand internet and cloud infrastructure comprehensively to improve access and QoS across the entire country • Support more enabling policy and investment into developing a domestic fintech ecosystem
Mobile Money and Agent Banking Ecosystem	• Develop a shared platform and/or agent aggregation to help smaller players in markets with dominant providers • Decrease reliance on OTC, potentially through consumer education initiatives around end-user touchpoints • Increase adoption beyond basic services, perhaps by funding accounts with disbursements or benefits • Consider collaborative product road maps (e.g., PSPs and banks) for a customer journey to more advanced services	• Monitor new player market entry and any discriminatory actions, especially by telcos limiting network access • Assist players with business case and model development, e.g., targeted VAS rather than just more national P2P • Provide incentives and support to players to reach remote locations, potentially shared-cost rural agents • Continue to support a strong role for banks, potentially by facilitating customer progression from MM to FI accounts	• Encourage traditional instruments such as payment cards as a first step in leveraging high account penetration • Target greater PSP profitability through new services, partially by decreasing OTC, which increases fees incurred • Expand distribution networks in rural areas, perhaps through coordination of the two eZCash MNOs • Support ecosystem development and industry collaboration, potentially through partners

FI = financial institution, MM = mobile money, MNO = mobile network operator, OTC = over the counter, P2P = peer-to-peer, PSP = payment service provider, QoS = quality of service, VAS = value-added service.

Source: ADB and Mondato. 2017. Financial Disruption and Inclusion: Digital Payments Systems, Mobile Money Services, and Agent Banking,

Glossary

Agent and Branchless Banking

Providing limited scale banking and financial services through engaged agents under a valid agency agreement. Agent banking is a type of branchless banking. Branchless banking includes the delivery of financial services outside conventional channels, often using agents and relying on information and communication technologies to transmit transaction details—typically card-reading point-of-sale (POS) terminals or mobile phones.

Automated Clearing House (ACH)

A payment clearing network that provides clearing and settlement services for DDA transactions. Many countries today have at least one ACH in operation to service their domestic payments industry. An ACH handles either (or both) Credit Push or Debit Pull (also called Direct Debit) payments. Most banks in the country will typically belong to the ACH, either directly or through intermediary banks. The ACH Switch moves transactions from one bank to another, and either provides, or interfaces with, a Net Settlement system.

Counter Terrorist Financing (CTF)

The rules and business processes required of financial institutions (typically via their country's banking regulator), which aim to disrupt the financing of terrorist activities. Typically referred to together with AML (as in AML/CTF), as the business processes needed to carry them are the same or similar.

Electronic Money (E-Money)

Often referred to as "E-Money". Stored value held in the accounts of users, agents, and the provider of the mobile money service. Typically, the total value of E-Money is mirrored in (i) bank account(s), such that even if the provider of the Mobile Money service were to fail, users could recover 100% of the value stored in their accounts. That said, bank deposits can earn interest, while E-Money traditionally cannot.

Interoperability

The ability of an end user dealing with one bank or PSP to exchange a transaction with an end user who is dealing with a different bank or PSP. Interoperability may be achieved either through participants all using the same system, or through inter-system networking agreements.

Know-Your-Customer (KYC)

The process of identifying and authenticating a customer, for purposes of risk management and regulatory compliance.

Mobile Money

Monetary value that is:

- available to a user to conduct transactions through a mobile device;
- accepted as a means of payment by parties other than the issue;
- issued on receipt of funds in an amount equal to the available monetary value;
- electronically recorded;
- mirrored by the value stored in an account(s) usually open in one (or more) bank(s); and
- redeemable for cash.[a]

Over-the-Counter (OTC)

Mobile Money agent performs the transactions on behalf of the customer, who does not need to have a Mobile Money account to use the service.

Real-Time Payments

A payment system in which the processing and clearing of transactions occurs in real time. This system may be an ACH, or may be independent of the ACH. Real-time transactions are usually push transactions. Participant or inter-bank settlement may occur at the same time (as in an RTGS system) or later, on a net basis. Real-time payment systems are typically used to clear lower value retail transactions. (Real-time gross settlement being for larger amounts).

Switch

A processing entity in a payments system that routes a transaction from one participant to another. A system may operate its own Switch, or this function may be done by one or more third parties.

Electronic Wallet (eWallet)

A software application that functions as a secure repository for (i) storing and managing a payer's payment credentials, and (ii) initiating payment transactions. Additional features and functions may be included, such as coupons, loyalty account management, and management of non-payment forms of ID such as digital drivers' licenses and passports. A Wallet application may reside in hardware or software on a PC or PC peripheral, a mobile device, or in the cloud. There are multiple ways to initiate payment from a Wallet, depending on the payment system in use, and the available payee interface. Common methods include: (i) the payer physically holding a Smart mobile device to a reader (as with NFC and barcode payments), (ii) the payer opening the Wallet application directly and setting up a payment transaction (as with PayPal), and (iii) invoking the Wallet from another application via API. Wallets are one of three common UIs for mobile payment initiation, the other two being Wallets and Carts.

[a] Simone di Castri. 2013. *GSMA Mobile Money for the Unbanked: Enabling Regulatory Solutions*. p. 6.

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CHAPTER 3

Engaging the Diaspora and Migrant Workers for Home Country Development: Diaspora Finance and Remittances[1]

Piyasiri Wickramasekara, Evalyn Tennant, and Patrick Taran
Global Migration Policy Associates

3.1 Introduction

With the growing emphasis on migration and development linkages since the 1990s, there is considerable interest in remittances and diaspora populations at the international level. In a context where remittances to developing countries are about three times higher than official development assistance (IFAD 2017; World Bank 2003, 2017), attention has increasingly shifted to remittances as a source of development finance. This chapter contributes to the growing empirical literature on the diverse contributions of migrants and diasporas to home country development (Boyle and Kitchin 2013; Kapur 2010; Kuznetsov 2013; Sahoo and Pattanaik 2014; Wickramasekara 2010, 2016), by focusing on financial remittances and diaspora finance.

Asia, with 104 million migrants, a substantial number of whom remain within the region, is said to be the origin for the greatest number of migrants (UN DESA 2015a). In addition to intra-Asia migration, there is a marked flow to the Gulf region, especially from South Asia. There is also migration, mostly of skilled persons, to Western destinations, the United States (US) and Europe, and to Australasia. These movements have given rise to a large Asian diaspora. The People's Republic of China (PRC) and India have the largest global diaspora. At the same time, Asia accounted for four of the top five remittance receivers in the world in 2016—namely the PRC, India, Pakistan, and the Philippines. The International Fund for Agricultural Development (IFAD) has described Asia as the world's largest remittance marketplace (IFAD and World Bank 2013). Thus, the potential of diasporas and remittances for development of Asian countries is high, and policy makers have devoted increasing attention to engaging with their diaspora communities for home country development.

This chapter reviews key issues involved in diaspora engagement, focusing on finance and remittances in the Asian region. It first covers definitional issues, followed by available estimates of the Asian diaspora. The chapter then focuses on engaging the diaspora to leverage development finance, followed in the final two sections by a discussion of remittance policies and remittance-backed financial products tailored to diaspora communities, migrants, or their family members.

[1] The authors would like to thank Nilim Baruah for useful comments for improving the paper, and Ilora Hossain and Leo Bernardo Villar for research assistance.

3.2 Definitions and Methodology

There are several definitions and connotations associated with the terms "migrant workers" and "diaspora," which also pertain to the relationship between the two categories.

3.2.1 Definitions

Migrant workers

The International Labour Organization Convention on Migration for Employment, 1949 (No. 97) defines a migrant worker as "a person who migrates from one country to another with a view to being employed otherwise than on his own account and includes any person regularly admitted as a migrant for employment" (Article 11). The 1990 International Convention for the Protection of the Rights of All Migrant Workers and Members of Their Families provides a broader definition in its Article 2(1): "The term 'migrant worker' refers to a person who is to be engaged, is engaged or has been engaged in a remunerated activity in a State of which he or she is not a national." This definition does not specify a minimum of time abroad, and thus explicitly includes migrants in short-term, temporary, and seasonal employment (current, intending, or past), as well as self-employed persons.

Diaspora

Diaspora is a term increasingly used to refer to persons, communities, and populations outside of their country of origin or identity. It has historically been associated with the notion of dispersion of an ethnic population outside its traditional homeland (Cohen 2008).

Diaspora is not a legally or statistically precise term, and has been used with a variety of connotations. It refers to persons and communities of persons who originated/emigrated from a particular country or region. It is applied not only to settled and long-term migrants, but also to their children and even successive generations—sometimes many generations. In many contexts, including in development discourse, the term emphasizes continued ties with the "homeland" and related obligations toward supporting its development. The diversity of the diaspora in terms of ethnicity and community of origin, gender, migratory status (temporary, permanent, and irregular), skill profiles (low-skilled and high-skilled), generations, and capacity has to be recognized in any type of diaspora engagement policy (Wickramasekara 2009b).

For this discussion, we shall use the definition of diaspora provided by Van Hear, Pieke, and Vertovec: "populations of migrant origin who are scattered among two or more destinations, between which there develop multifarious links involving flows and exchanges of people and resources: between the homeland and destination countries and among destination countries" (Van Hear, Pieke, and Vertovec 2004: 3).

Remittances

Remittances are commonly defined as personal transfers of money by persons working abroad to their home country, usually to family members in local communities of origin. Remittances can also be in kind. According to the International Monetary Fund definition, remittances consist of both personal transfers and compensation of employees paid into/transferred to the origin country (IMF 2009).

Apart from financial remittances, some use the term "social remittances" to capture the many additional ways migrants and diaspora contribute to their countries of origin including through skills and knowledge, ideas and practices, and human and social capital (Levitt and Lamba-Nieves 2011).

Development

Since the late 1990s, development has become a catchword for contemporary discussions of migration. Because gross domestic product does not measure well-being, development cannot be equated with simple growth (Taran 2015; Wickramasekara 2009a). The Global Migration Group summarizes this broader conception as follows: "Development is more than an economic parameter and encompasses human rights. Development goes beyond economic growth to embrace notions linked to human development, which focuses on the individual, his/her family and community, and seeks to expand individual capabilities and choices through health, education, a decent standard of living, and political freedom" (GMG 2008: 106).

This definition reflects a human development approach, focused on increasing well-being and opportunities of human beings. Migrants/diasporas are not simply sources of cash, but mutual partners and stakeholders in the development of home countries. As such, not only the resources they bring, but also their rights and protection and integration in both origin and destination countries, must be given serious consideration.

3.2.2 Methodology and Data

Over the past 2 decades, thanks to the International Monetary Fund and the World Bank, considerable progress has been made on data collection methods for understanding remittance flows. There has not yet been similar progress toward gathering adequate data on diaspora populations due to conceptual and methodological challenges. Wickramasekara describes the problem as follows:

> First and foremost is the fact that there is no standard and consistent definition of a diaspora population. Second, it is difficult for countries of origin to keep track of migrant communities abroad over long periods of time. The transition to citizenship in host countries and the emergence of the second and third generations make tracking the diaspora quite a tricky exercise. Third, while some countries or agencies have started electronic databases of the diaspora population, registration is often voluntary and there is substantial underestimation. One can only provide a range of estimates from low to high (Wickramasekara 2009b: 4).

Countries of origin must also understand the characteristics and profiles of their diaspora populations in terms of migratory status, skills, age, gender, occupations, and incomes to engage them in development efforts. Further, social and cultural norms in countries of origin and residence make women less visible as part of a diaspora. Undocumented workers may also not often be counted in diaspora estimates. Targeted surveys are needed to provide better profiles of migrant and diaspora populations, but this is both time consuming and costly. The Organisation for Economic Co-operation and Development (OECD) series "Connecting with Emigrants: A Global Profile of Diasporas" (now in its second edition in 2015), is an innovative exercise in mapping diasporas, although the focus is on diaspora populations within OECD countries (OECD 2015).

Although diaspora typically connotes settled communities and long-term residents, it is important to extend the diaspora concept to include temporary migrant workers since they send a substantial proportion of remittances to home countries. It is not generally possible to distinguish the respective remittance contributions of settled diaspora populations and temporary migrant workers from available estimates.

The paper draws mainly on secondary sources to assess remittance trends and diaspora engagement including papers presented at the 7th ADB-ADBI-OECD-ILO Roundtable on Labor Migration.[2] The analysis has been constrained by the lack of up-to-date information on some key aspects of diaspora populations and remittances at regional and country levels. For instance, updated information on financial products and their use in countries of concern is not available without primary data collection. This should be done in the future to assess the adoption and impact of financial products tailored to remittance senders and receivers.

3.3 Mapping the Asian Diaspora

Table 3.1 presents data drawn from several sources on the diaspora in selected Asian origin countries. The UN Population Division 2015 defines an international migrant as a person who is living in a country other than his or her country of birth (equated either with the foreign-born or with foreign citizens).

By UN estimates, there were 244 million international migrants living outside their countries of birth or citizenship in 2015 (UN DESA 2015b). A significant portion of this global migrant population, 43% or 104 million, were born in Asia and a large portion is found in other Asian countries (UN DESA 2015a). During 2000–2015, the number of migrants originating in Asia grew at a faster annual rate than those from any other world region, by an average of 2.8% per year.

The 2015 UN report, "International Migration Report: Highlights" has estimated diaspora populations of different countries by simply counting the population living outside the country of birth or citizenship as the diaspora (UN DESA 2015b). According to this estimate, 16 million Indians living outside of their country of birth in 2015 comprised the largest diaspora in the world (UN DESA 2015b). This seems to be an underestimate, especially considering that the same source estimated the PRC diaspora as being only approximately 10 million (Table 3.1). These estimates do not count the second or third generations of diaspora parents as captured in the concepts of "Overseas Chinese" or "Person of Indian Origin". Country data discussed later in this section show a large deviation between UN figures and national estimates. Column 5 of Table 3.1 shows that while the PRC and India have large diasporas, they represent only a small share of their total populations. The Lao People's Democratic Republic and Afghanistan have the highest shares of the population overseas, followed by Sri Lanka and Cambodia.

[2] The full title of the meeting is: 7th ADB-ADBI-OECD-ILO Roundtable on Labor Migration: Finance and Technology to Increase the Positive Impact of Migration on Home Countries, 18–19 January 2017, Manila. http://k-learn.adb.org/learning-events/7th-adb-adbi-oecd-ilo-roundtable-labor-migration-finance-and-technology-increase-0 (accessed 23 November 2017).

Table 3.1: Some Estimates of Asian Diaspora Populations

Country	Population in mid-2015 ('000s)	Diaspora 2015 ('000s)	Emigrants in OECD Countries 15+ years, 2010–11 ('000s)	Diaspora as % of Population (3/2)	Stock of Emigrants 2013 ('000s)	2nd-Generation Diaspora 2013 ('000s)[a]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Afghanistan	32,527	4,843	394	14.9%	5,632	60
Bangladesh	160,996	7,205	533	4.5%	7,572	117
Cambodia	15,578	1,187	277	7.6%	1,119	120
PRC	1,376,049	9,546	3,632	0.7%	9,651	662
India	1,311,051	15,576	3,615	1.2%	13,885	1,024
Indonesia	257,564	3,877	355	1.5%	4,117	325
Lao PDR	6,802	1,345	263	19.8%	1,294	204
Myanmar	53,897	2,881	125	5.3%	3,140	42
Nepal	28,514	1,629	153	5.7%	1,986	6
Pakistan	188,925	5,935	1,184	3.1%	6,170	411
Philippines	100,699	5,316	3,014	5.3%	6,002	946
Sri Lanka	20,715	1,637	579	7.9%	1,780	41
Thailand	67,959	854	523	1.3%	1,007	106
Viet Nam	93,448	2,559	1,939	2.7%	2,592	624

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic, OECD = Organisation for Economic Co-operation and Development.

[a] Second generation in Australia, Europe, and the US as estimated by World Bank Factbook 2016.

Sources: Column 1: World Bank World Development Indicators 2017; Columns 2 and 3: UN Migration Stock 2015 Rev; Column 4: OECD, Connecting with Emigrants 2015; Columns 6 and 7: World Bank Factbook 2016.

The figures in Column 4 (Table 3.1), representing the emigrant population (15 years old and above) in OECD countries in 2010–2011, are well below the UN figures because they cover only OECD destinations and only those aged 15 and above. The biggest sources of emigrants are from the PRC, India, and the Philippines, respectively, with Viet Nam and Pakistan forming the second tier.

Column 7 (Table 3.1) shows second-generation diaspora communities from each country in Australia, Europe, and the US based on the World Bank data (World Bank 2015a). It follows the same pattern, with India, the PRC, and the Philippines providing the largest numbers of second-generation diasporas.

3.3.1 Chinese Diaspora

Estimates of the Chinese diaspora range from 30 million–55 million worldwide. PRC government sources estimated about 50 million nationals and diaspora members worldwide in 2008, with 73% in Southeast Asia, 12% in North America, and 5% in Europe (Xiang 2016). About 70% of the Chinese diaspora population form "near-diaspora" located in Southeast and East Asia, while the "far-diaspora" refers to those in Europe and the Americas, mostly as a result of new migration waves following globalization trends (Wickramasekara 2017).

3.3.2 Indian Diaspora

In the first systematic effort of its kind, the High Level Committee on the Indian Diaspora estimated a global diaspora population of over 20 million in 2001 (Government of India 2001). In December 2016, the Indian Ministry of External Affairs estimated the global Indian diaspora, or Overseas Indians, at 30.8 million.[3] The category includes Non-Resident Indians (NRIs), who are Indian citizens resident outside of India for more than 6 months, as well as Persons of Indian Origin, who are foreign citizens of Indian origin or descent including second and subsequent generations, and Overseas Citizens of India, extending to the second generation only (Wickramasekara 2017). The Overseas Citizen of India and the Person of Indian Origin cards have now been merged to create a level playing field for both categories like the status of NRIs.

For India, the near-diaspora would be those working and staying in the Gulf Cooperation Council (GCC) countries, and South and Southeast Asia. The High Level Committee of the Indian Diaspora estimated that 30% of those in the GCC countries belong to the skilled and professional category, and may be renewing visas and living for longer periods than temporary migrant workers (Government of India 2001).

3.3.3 Philippine Diaspora

The Philippines has generated a large diaspora through successive waves of migration to other countries (Lawless 2005). The Commission on Filipinos Overseas (CFO) has estimated the total diaspora at about 10 million (Table 3.2). An interesting feature is their breakdown by migration status. Temporary migrants constitute 41% of the total, while irregular status migrants are 11%. The US is the top destination with 3.5 million, followed by Saudi Arabia (1 million), the United Arab Emirates, Malaysia, and Canada. The UN DESA estimate of the stock of Filipino migrants was about half of this, at 5.3 million.

Table 3.2: Stock Estimate of Overseas Filipinos (end of December 2013)

Global	Permanent	Temporary	Irregular	Total
Total	4,869,766	4,207,018	1,161,830	10,238,614
Percentage (%)	47.6	41.1	11.3	100.0

Source: Commission on Filipinos Overseas. http://www.cfo.gov.ph/program-and-services/yearly-stock-estimation-of-overseas-filipinos.html (accessed 15 August 2017).

3.3.4 South Asian Diaspora

India is the major source of South Asian diaspora. Yong and Raman (2014) estimate the total South Asian diaspora to be close to 50 million: "It is roughly estimated that there might be around 25 million–30 million Indian diaspora, 7 million–9 million Bangladeshi diaspora, 5 million–7 million Pakistani diaspora, 2 million–3 million Sri Lankan diaspora, 4 million–5 million Afghan diaspora, and around 2 million Nepali diaspora living around the world. In total, the global South Asian diaspora thus might be over 50 million strong and continues to grow" (Yong and Rahman 2013: 3).

[3] The website of the Ministry of External Affairs. http://mea.gov.in/images/attach/NRIs-and-PIOs_1.pdf (accessed 15 August 2017).

3.4 Engaging the Diaspora

3.4.1 Diaspora Roles and Engagement Policies

Policies for engaging the diaspora are becoming a significant component of development strategies of origin countries in all regions similar to the earlier focus on remittances (Boyle and Kitchin 2013; Gamlen 2006; Pellerin and Mullings 2013). There is a high degree of consensus on diaspora roles in recent literature (Boyle and Kitchin 2013; Kuznetsov 2013; Sahoo and Pattanaik 2014; Wickramasekara 2009b). Boyle and Kitchin (2013) identified the following diaspora roles: advocacy, direct investment, knowledge networks, philanthropy, return migration, tourism, and human capital efforts. While all the above roles are possibilities, information on the relative impact of different diaspora contributions is still inadequate (Wickramasekara 2010). As highlighted above, policy makers must recognize the diversity within the diaspora in their interactions in order to make their engagement policies effective.

Table 3.3 provides a summary of different diaspora roles. It stands to reason that states must tailor their strategies to these actors' particular profiles. For example, both skilled and low-skilled diaspora populations can contribute to home country development, although there is tendency to focus on the skilled and intellectual populations in some strategies (Wickramasekara 2009b, 2010).

Table 3.3: Different Roles of the Diaspora

Positive
☐ Diaspora finance
– Direct investments by overseas diaspora and diaspora returnees
– Diaspora savings transfer through diaspora bonds, foreign currency accounts
– Financial remittances
– Financial capital brought in by returnee diaspora
– Philanthropic contributions (financial)
☐ Skills, human capital, and technology transfers through permanent and temporary returns, and diaspora knowledge networks
☐ Diaspora tourism, and exports related to home country goods
☐ Promotion of political and economic reforms at home through advocacy and reducing reputation barriers at international and regional levels
☐ Social remittances and cultural interactions
Negative
☐ Sustaining conflict and fueling insurgent movements in home countries

Source: Adapted from Box 6 in Wickramasekara (2009b).

Most of the early approaches to diaspora involvement focused on using or mobilizing its members for origin country benefits, implying in essence a one-way flow. The terms adopted indicate this approach: "harnessing, mobilising, tapping, exploiting, leveraging, eliciting, embracing, governing, or controlling" (Boyle and Kitchin 2013; Plaza and Ratha 2011; Ratha et al. 2011). Later, the term "engagement" came into use with the recognition that consulting with the diaspora on their perceptions and priorities, and obtaining

their support, leads to better outcomes (Wickramasekara 2016). It is important to stress that diaspora populations do not represent a "golden goose" to be exploited at will by countries of origin. They need to be treated as mutual partners and stakeholders in home country development. The following statement by the then Indian Prime Minister Atal Bihari Vajpayee at the first Indian diaspora conference in January 2003 sums up this broader vision of engagement:

> We invite you not only to share our vision of India in the new millennium, but also to help us shape its contours. We do not want only your investment. We also want your ideas. We do not want your riches, we want the richness of your experience. We can gain from the breadth of vision that your global exposure has given you.[4]

In the past 2 decades, with the growing recognition of the breadth of potential diaspora contributions, home country policy makers as well as host countries and multilateral agencies have been seeking ways to attract diaspora involvement. Origin states have formed various initiatives to interface with their diaspora. Gamlen classified them into three types based on a review of 70 countries and their diasporas: capacity-building policies; extending rights to the diaspora; and extracting obligations from the diaspora (Gamlen 2006). At the same time, Gamlen identified three categories of states based on the rights they provide: exploitative (obligations without rights); generous (rights without obligations); and engaged (both rights and obligations).

3.4.2 Diaspora Finance to Home Countries

Potential of diaspora finance and remittances

The World Bank, in its Migration and Development Brief 24 (World Bank 2015b), and a blog by Dilip Ratha (Ratha 2014) advanced a rough idea of the potential of diaspora finance and remittances. It is claimed that action on four fronts can mobilize $100 billion annually for the benefit of developing countries:

- Mobilizing diaspora savings: $50 billion
- Reducing remittance costs: $20 billion
- Reducing recruitment costs: $20 billion
- Mobilizing diaspora giving: $10 billion

Diaspora bonds are bonds sold by the home country to its own diaspora as an alternative to borrowing from the capital markets. The potential of the diaspora bonds can be seen in the context of the annual savings of developing country diasporas, which have been estimated at $500 billion in 2013 (World Bank 2015b). A large part of these savings is in bank deposits in Western countries, earning very low interest. Even one-tenth of these deposits mobilized by source countries through diaspora bonds at higher interest could generate about $50 billion for financing development projects.

[4] http://timesofindia.indiatimes.com/india/We-dont-just-want-your-money-Vajpayee-to-NRIs/articleshow/33858569.cms (accessed 23 November 2017).

The Government of India has successfully issued diaspora bonds exclusively to NRIs and raised a total of $32 billion in three issues in 1991, 1998, and 2000 (Ozaki 2016). Ketkar and Ratha (2010) identified five Asian countries—the PRC, India, Pakistan, the Philippines, and Viet Nam—as potential sources for diaspora bond financing, given the potential market represented by their highly skilled emigrant stock in developed countries. Guichard has highlighted the potential for diaspora bonds and leveraging remittances in Bangladesh and Sri Lanka (Guichard 2016a, 2016b). The Addis Ababa Action Agenda of the Third International Conference on Financing for Development recommended lowering of remittance transfer costs to 3% by 2030, which is now adopted as a Sustainable Development Goal target (United Nations 2015). Reductions in remittance and recruitment costs require actions beyond that of the diaspora. Governments and other stakeholders can influence diaspora decisions on the volume of philanthropic contributions (individual or collective).

Foreign direct investment inflows

There are no reliable data to track direct investments by diasporas. Table 3.4 highlights the following:[5]

- The PRC and India dominate both foreign direct investment (FDI) and personal remittance inflows in Asia.
- Indonesia and Viet Nam have attracted large FDI flows.
- For all South Asian countries except Afghanistan, personal remittances are much higher than both FDI and official development assistance (ODA).
- Except for a few countries, ODA is insignificant in relation to personal remittances and FDI.

Both the PRC and India have seen a large inflow of FDI following liberalization of their economies (Wickramasekara 2017). What is of interest for the present discussion is the role of the diaspora in these flows. It is well documented that overseas Chinese are behind the large FDI inflows to the PRC. For instance, in the 1990s, two-thirds of FDI into the PRC accrued from four economies (Hong Kong, China; Taipei,China; Macau, China; and Singapore). As of mid-2009, 54% of FDI came from these four economies (Tsai 2010).

According to Kapur (2010), although NRIs accounted for less than 7% of FDI to India during 1991–2004, professional diaspora holding high positions in multinational companies overseas may have been able to steer FDI and outsourcing investments to the country. India has been a pioneer in promoting diaspora investments, issuing diaspora bonds in 1991, 1998, and 2000 that offered a higher return for NRIs than was available in their countries of residence. The Government of India has taken a recent decision to treat investments by overseas Indians as domestic investment, and not as FDI. The objective is to promote diaspora investments without subjecting them to FDI restrictions. The Indian Prime Minister's statement that FDI means "First Develop India" also highlights the spirit of new policies to embrace the diaspora (Jose 2015).

[5] Recorded FDI figures may overstate actual inflows because of the practice known as round-tripping whereby capital (usually black money) that leaves the country reenters as FDI.

Table 3.4: Foreign Direct Investment, Official Development Assistance Received, and Personal Remittances

Selected Asian Origin Countries (in $ million for 2015)				
Country	FDI Net Inflows	FDI Net Inflows[a]	ODA Received (net)	Remittances
(1)	(2)	(3)	(4)	(5)
Afghanistan	163	58	4,239	301
Bangladesh	3,380	2,235	2,570	15,388
Cambodia	1,701	1,701	677	395
PRC	242,489	135,610	–332	63,938
India	44,009	44,208	3,163	68,910
Indonesia	19,779	15,508	43	9,659
Lao PDR	1,079	1,220	471	93
Myanmar	4,084	2,824	1,169	3,236
Nepal	52	51	1,216	6,730
Pakistan	979	865	3,790	19,306
Philippines	5,639	5,234	515	28,483
Sri Lanka	681	681	427	6,980
Thailand	9,004	10,845	59	5,895
Viet Nam	11,800	11,800	3,157	13,000

PRC = People's Republic of China, FDI = foreign direct investment, Lao PDR = Lao People's Democratic Republic, ODA = official development assistance.

[a] UNCTAD FDI data differ from World Bank data, especially for Afghanistan and the PRC. The main author (Wickramasekara) contacted both agencies for a clarification, but did not receive the courtesy of a reply.

Sources: Columns 2 and 4: World Development Indicators 2017 (World Bank); Column 3: United Nations Conference on Trade and Development (UNCTAD); Column 5: World Bank remittance inflow data set, April 2017.

Remittances

Since there is considerable literature on remittances and migration, we chose not to deal with this issue in detail in this chapter. Apart from individual remittances, diaspora communities also send collective or group remittances, as shown in the case of hometown associations of Mexico (Orozco and Rouse 2007). However, not all remittances are sent by traditional diaspora groups. Temporary and circular migrants may transfer a substantial share of their earnings, especially those in the Middle East.

Remittances represent the most tangible benefit of labor migration. According to IFAD, Asia is "the most dynamic region for both remittance flows and migration growth" (IFAD 2017: 1). Asia is also the main remittance-receiving region, with the largest migrant population abroad. Asia contained 7 of the top 10 remittance-receiving countries in 2016. Table 3.5 provides remittance data for selected origin countries in Asia in 2015. India has been the largest recipient of remittances, with close to $70 million in recent years. Annex Table 3.A1 shows time series data on remittances for the same countries from 2005 to 2016.

Table 3.5: Remittance Data for Selected Asian Origin Countries, 2015

Country	Remittances in $ million, 2015	Remittances as a share of GDP in 2015 (%)	Per capita remittances $ (Col. 2/Population)
(1)	(2)	(3)	(4)
Afghanistan	301	1.6	9
Bangladesh	15,388	7.9	95
Cambodia	395	2.2	25
PRC	63,938	0.6	47
India	68,910	3.3	53
Indonesia	9,659	1.1	37
Korea, Republic of	6,454	0.5	127
Lao PDR	93	0.8	14
Myanmar	3,236	5.0	62
Nepal	6,730	32.2	235
Pakistan	19,306	7.2	102
Philippines	28,483	9.8	280
Sri Lanka	6,980	8.5	333
Thailand	5,895	1.5	86
Viet Nam	13,000	6.7	142

PRC = People's Republic of China, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic.

Source: Compiled from World Bank Inflow of Remittances data set, April 2017.

As noted above, it is not possible to separate remittances sent by the settled and long-term diasporas and temporary migrant workers. Since the bulk of low-skilled workers migrate to GCC countries, a crude indicator would be the share of Gulf countries as a source of remittances. Using the World Bank bilateral remittance matrix for 2012 and remittance data of 2013, Wickramasekara (2015) estimated the remittance shares of GCC countries for some South Asian economies: Bangladesh = 35.4%; India = 4.7%; Nepal = 42.2%; Pakistan = 48.6%; and, Sri Lanka = 51.2%. These figures are obviously underestimated due to gaps in bilateral matrix data. For example, the Reserve Bank of India estimated the GCC share of total remittances to India at 37% in 2012–2013.

According to the World Bank, the South Asia region had the lowest average regional remittance costs in Q1 2017, at 5.4%. The cost to remit $200 to East Asia and the Pacific region averaged 8.2% in Q1 2017 (World Bank 2017)—far higher than the Sustainable Development Goals' 3.0% global target.

Philanthropic contributions

Johnson (2007: 6) defines philanthropy as, "the private, voluntary transfer of resources for the benefit of the public." There are difficulties in distinguishing diaspora philanthropy contributions from other financial flows, including remittances and financial investments. Philanthropic financial contributions can be individual or collective. It is, however, difficult to obtain reliable estimates of their magnitudes.

The best-known examples are the home town associations of Latin America, especially Mexico's, where diasporas send funds to their communities (Orozco and Rouse 2007). The 2004 Asian tsunami disaster also showed how the diaspora community can be mobilized at short notice to respond to sudden disasters faced by home countries (Wickramasekara 2011; World Bank 2016). Organizations surveyed by the World Bank on the issue reported an increase in the frequency and amount (almost a doubling) of remittances following a disaster (World Bank 2016).

Diaspora philanthropy to enhance local community development has been a practice of Filipinos worldwide. In the Philippines, out of about 12,000 associations of overseas Filipino workers (OFWs), 4,000 were recorded as engaged in diaspora philanthropy (Alayon undated). Licuanan et al. (2015) concluded that diaspora donations to the Philippines have been a welcome addition to the limited resources available, and that the Filipino diaspora is responsive to natural disasters in its home country. The CFO's Lingkod sa Kapwa Pilipino Programme (LINKAPIL) is a migrant giving program, in operation since 1989, which matches the donations of OFWs with the needs identified by communities or sectors in the Philippines. Between 1990 and 2012, LINKAPIL received over $50 million, which went toward supporting various programs, including disaster relief and scholarships, among others (Scalabrini Migration Center and IOM 2013). Besides financial assistance, the CFO has expanded the scope of migrant giving and participation to 10 areas, including transfer of knowledge schemes, volunteering, and investments (Scalabrini Migration Center and IOM 2013).

An earlier study, *Diaspora Philanthropy and Equitable Development in China and India,* attempted to analyze how philanthropy may contribute to equity in development by focusing on the dimension of diaspora giving and its relationship to development in the PRC and India (Geithner et al. 2004). The focus was on the philanthropic role of the PRC and Indian communities in the US toward their countries of origin. One study in the volume reported that between 18% and 28% of total funding for poverty alleviation in the PRC during the second half of the 1990s was nongovernmental. The authors observed that governance issues in India act as a constraint on both the capacity of diaspora giving and reducing social inequality. The imbalance in some of the philanthropy flows to regions and groups may exacerbate social inequities (Geithner et al. 2004).

Overall, there is some doubt on the degree of accountability, scale, sustainability, and predictability of philanthropic contributions to home countries. There is not much evidence of their impact at the macro level or their ability to reduce poverty as donations are often targeted to more prosperous communities (Geithner et al. 2004; Licuanan et al. 2015).

3.5 Policies on Remittances

Remittance policies have usually been directed at two objectives: (i) increasing the inflow of remittances, and (ii) increasing the effective utilization of remittances. Countries are increasingly developing explicit policies with respect to remittances. These focus on increasing remittance flows, increasing movement through formal rather than informal channels, and, through securitization, leveraging the remittance flows to decrease borrowing costs and increase capital available for development projects (Ozaki 2012). For remittance recipients, receiving funds through formal channels enables them to establish credit and facilitates the use of other financial services. Many countries, including the Philippines as discussed below, are emphasizing financial inclusion and education for remittance recipients for these reasons.

At the same time, attention has focused on leveraging the flow of remittances to increase development finance in ways that both meet migrant/diaspora aspirations and support home country development. Although most migrant remittances are used to meet immediate needs such as food, education, and healthcare, studies have found that some funds are saved. According to the Consumer Expectations Survey 2016 (Q4) of the Philippines, 47% of sampled households reported using remittances for savings (Tayag 2017). The 2016 Bangladesh survey on investment from remittance estimated that 8.4% of total remittances were allocated to savings. An International Labour Organization (ILO) study in Tajikistan (ILO 2010a) found that 11% of remittances ($286 million) are saved for more than 6 months.

3.5.1 Pakistan Remittance Initiative

In 2009, Pakistan launched the Pakistan Remittance Initiative (PRI), a joint initiative of the State Bank of Pakistan, Ministry of Overseas Pakistanis, and Ministry of Finance (Assad 2016; SBI 2015). Its two specific objectives were as follows:

(a) facilitate and support convenient and efficient flow of remittances through formal channels, and

(b) cater to the other financial services needs of overseas Pakistanis and their families back home, including investment opportunities.

To meet these objectives, the PRI analyzed the existing national remittance system with a view to formulating a comprehensive strategy for remittances (SBI 2015). The analysis led to a strategy of "greater commitment of financial sector toward remittance services and resultant inculcation of remittance facilitation culture, transparency of remittance market with adequate consumer protection, and efficiency of payment system infrastructure" (SBI 2015: 1).

The PRI adopted a number of measures as part of this strategy: enhanced outreach based on linking with foreign financial institutions; increased distribution channels, resulting in 10,000 additional physical locations in Pakistan for receiving remittances; improved payment system infrastructure, e.g., cash over-the-counter and inter-bank settlements; innovative remittance products, e.g., cards and internet-based payments; pre-departure briefings; and training and capacity-building programs for participating institutions.

The PRI is seen as a success story, and quoted as a good practice in terms of increasing the efficiency and coverage of formal remittance channels. The volume of remittances coming through formal channels has increased substantially, as reflected in the figures in Table 3.6 below.

Remittance transfer times have decreased and the range of remittances services and their outreach to rural areas have vastly increased. Increased competition has also reduced costs.

Table 3.6: Inflow of Personal Remittances into Pakistan, in $ million, 2005–2016

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
4,280	5,121	5,998	7,039	8,717	9,690	12,263	14,007	14,629	17,244	19,306	19,847

Source: The World Bank.

As Qureshi observed, "PRI is associated with a significant increase in the formal remittances sent to Pakistan as well as a strong shift in the channels used for remittance transfer. Estimates suggest that while the PRI led to a significant reallocation of remittances away from the informal channel to the formal channel, it is not clear that it has increased the total amount of remittances received" (Qureshi 2016: iii).

3.5.2 Financial Inclusion and Remittance Policies in the Philippines

The Philippines has focused its remittance policies on improving the institutional and policy framework, lowering transfer costs, increasing the use of official channels, ensuring secure and fast delivery to the households, and promoting financial inclusion and more productive utilization of remittances. The Philippine Development Plan, 2017–2022, targets a reduction in remittance transfer costs from the Q4 2016 average of 4.7% to less than 3.0% by 2022.

The CFO and the National Economic Development Authority have co-organized the Remittances and Development Council, which is a multi-stakeholder policy advisory body aimed at creating a safe and efficient remittance environment in the country. Under the UN Joint Migration and Development Initiative (JMDI), the CFO has promoted local government capacity building in selected regions to integrate migration into local development plans.[6] It has also promoted financial literacy programs for OFWs.

Financial inclusion and financial education are important aspects of remittance policies in many developing countries, and they are a central focus in the Philippines. The Bangko Sentral ng Pilipinas (BSP), the central bank of the Philippines, defines financial inclusion as "a state wherein there is effective access to a wide range of financial services for all Filipinos" (Llanto 2015). Expansion of access to low-cost formal financial services (financial access), education about the availability and benefits of those services, and use of services can bring direct benefits to migrants and their families as well as others to whom service is extended by facilitating saving, providing access to credit (at least microcredit), and insurance.

In 2010, the BSP launched the Economic and Financial Learning Program to bring together its key education initiatives for migrant workers abroad and their families in the Philippines. The program stresses the importance of building savings and directing those savings into productive investments, including businesses and financial instruments.[7]

Technology appears to increase access to financial products and services in the Philippines. Apart from improving accessibility, payment products and services, particularly ATM/debit cards, electronic transfers, and mobile banking technology, have also helped make remittance transfers more cost-effective (Bagasao 2013).

A recent study (OECD and Scalabrini Migration Center 2017: 176) found that "migrant households are more inclined to invest in more traditional and potentially safer undertakings such as property, rather than in business," the main reason probably being the difficulty of doing business in the country. Another finding of

[6] Philippines—Mainstreaming migration and development in the governance of local authorities in Bicol Region (JMDI Bicol): http://www.migration4development.org/en/projects/philippines-mainstreaming-migration-and-development-governance-local-authorities-bicol (accessed 23 November 2017).

[7] http://www.bsp.gov.ph/about/advocacies_eflp.asp (accessed 15 August 2017).

the study is that only 4% of the surveyed households receiving remittances had participated in a financial training program in the previous 5 years, implying that opportunities to encourage the productive use of remittances are being missed.

3.6 Remittance-Backed Financial Products and Financial Products Tailored to Migrants or Family Members

Financial institutions in a number of origin countries in the Asian region have introduced a range of financial products to mobilize remittances. These take several forms:

(a) Savings products: savings, current, and time/fixed deposits; certificates of deposit; accumulative deposits; foreign currency accounts

(b) Loan products: microloans; business, educational, agricultural, housing, car loans, business/enterprise loans for returning/reintegrating migrants; mortgage loans—local or transnational loans that allow diasporas to purchase real estate and housing in their countries of origin

(c) Investment instruments: investment accounts; bonds and stocks; diaspora bonds allowing governments to borrow long-term funds from diaspora; diaspora mutual funds

(d) Insurance products to enable migrants to mitigate financial vulnerability; life and non-life products (health, property, agriculture); micro-insurance; retirement funds

What is important is to have a range of products tailored to suit the financial profile of migrants. IFAD (2017) has identified three types of target households: households with incomes below the poverty line; vulnerable households above the poverty line, but at risk of falling into poverty if affected by shocks; and resilient households above the poverty line and with financial and productive assets.

3.6.1 The Philippines

The products promoted in BSP's financial education series, launched in 2013, include savings, credit, payments, and insurance.[8] Investment products were also introduced as one of the uses for remittances in the subsequent issues of the primer. The First Semester 2016 issue focuses on remittances and inclusion (BSP 2016).

Savings products include micro-deposit accounts, foreign currency accounts, and savings accounts specifically for OFWs. Credit products include educational, housing, property, agricultural loans, and loans for microenterprise. According to the Consumer Expectations Survey,[9] OFW households are increasingly using their remittances for savings: 46.8% of OFW households allocated part of their remittances for savings

[8] http://www.bsp.gov.ph/downloads/Publications/2013/FIP_1Qtr2013.pdf (accessed 23 November 2017).

[9] The Consumer Expectations Survey is a quarterly BSP publication to capture the economic outlook of consumers; it has non-migrant and migrant households as respondents and records remittance uses on a quarterly basis. Available at http://www.bsp.gov.ph/publications/regular_consumer.asp (accessed 23 November 2017).

during the fourth quarter of 2016. The same survey shows that 42.8% of the households apportioned their remittances for debt payments. Further investigation is needed into the extent to which such savings and repayments are through banks and microfinance institutions.

Insurance products include life and non-life insurance, as well as micro-insurance schemes. Although remittance-backed insurance products have long been available to OFWs, the Philippines is noted for having the lowest insurance penetration rate (1.04% of the total population) among ASEAN nations (ADB 2013). This is despite the availability of various government-based insurance products tailored to OFWs, particularly on social security, health, and housing.

Investment products are also not popular in the Philippines among OFW households. Although many banks and other financial institutions provide investment instruments, the BSP's Consumer Expectations Survey for the third quarter of 2017 notes that only 8.5% of OFW households allocated part of their remittances to investments. Of the 482 households that received OFW remittances during the quarter, the usage shares are as follows: purchase of food and other household needs (98%); education (70%); medical expenses (52.5%); savings (42%); debt payments (40%); purchase of consumer durables (24.5%); purchase of house (14.5%); and investment (8.5%) (BSP 2017: 6).[10]

Based on anecdotal references, low adoption of insurance and investment instruments in the Philippines can be attributed to many factors such as lack of financial literacy, misconceptions about insurance and investment, and consumerism promoted by the media. A culture of instant gratification seems to be a major factor in how Filipinos view insurance and investment.[11] This indicates that Filipinos may be averse or disinclined to use funds for future gains. Therefore, while the share of households directing remittances toward savings is fairly significant, it is low for financial investments.

3.6.2 Bangladesh

Guichard (2016) has highlighted the potential of Bangladesh in terms of remittances:

> Bangladesh has over 10 million migrants who work in low- to mid-level jobs, earning wages and remitting between $300 and $600 per month on average. However, Bangladesh also has a wealthy contingent in the United States, Canada, and the United Kingdom who, by all accounts, remit significantly back to Bangladesh (Guichard 2016).

The objectives of Bangladeshi policy makers with regard to remittances are similar to those of the Philippines: financial inclusion, reducing informal transfers, increasing remittance outlets, and expanding outreach by involving a variety of institutions in outreach programs, such as authorized mobile banking units, NGOs, Singer outlets, and post offices. Bangladesh also has a specialized bank for migrants and diaspora—the Probashi Kallyan Bank, a scheduled bank from June 2017—which grants subsidized loans for migration and also has a range of migrant services. In general, the speed and reliability of formal channels have increased and rival the informal *hundi* (*hawala*) system (Siddiqui 2013). Private banks control over 60% of remittance flows. Mobile banking penetration is found to be low compared to countries like Kenya (Guichard 2017: 4).

[10] The figures within brackets refer to the percentage of households, based on a multiple response question.

[11] http://business.inquirer.net/230072/filipinos-not-invest (accessed 23 November 2017).

The availability and use of formal channels for receiving remittances increased substantially over the period 2003–2012 (Siddiqui 2013). Much like the Philippines, Bangladesh also offers savings, credit, insurance, payments, and investment products to migrant workers and their families, and the diaspora settled abroad. Unlike the Philippines, however, the Bangladeshi government and Bangladesh Bank (Central Bank) more actively encourage migrant workers to use their remittances for investment at home. Different government agencies and microfinance institutions also provide incentives for migrant workers to invest remittances or set up enterprises. There are a range of instruments listed below, but it is difficult to gauge their popularity or amounts invested in them.

- Wage Earner Development Bond

This is denominated in local currency, and is available from Tk1,000 to Tk50,000, which is accessible to low-wage migrant workers. It is tax free, carries an attractive interest rate, and enables borrowing up to 90% against the value bond.

- Non-Resident Foreign Currency Deposit
- The US Dollar Premium Bond is aimed at non-resident Bangladeshis with foreign currency accounts, and is available in $500, $1,000, $5,000, and $50,000 denominations.
- The US Dollar Investment Bond is issued in the same denominations and under the same provisions, but with a 6.5% interest rate.
- Non-Resident Investor's Taka Account: Provided to non-resident individuals/institutions including non-resident Bangladeshi nationals who are interested in trading Bangladeshi securities against foreign exchange remitted from abroad.
- Variety of financial instruments offered by the banking system, microfinance institutions and NGOs, which are available to domestic savers as well as to migrant workers (deposit pension schemes, fixed deposits, and EBL Shonchoy, which is a daily interest-bearing and monthly interest-paying savings account (Siddiqui 2013).

Rahman et al. (2016) pointed out that the level of purchase of these instruments has been relatively low, probably due to a lack of awareness among migrant workers. They found that yields from Wage Earner Development Bonds (WEDBs), the US Dollar Premium Bond, and the US Dollar Investment Bond have witnessed a decline as a proportion of remittance earnings over the past 10 years (Rahman et al. 2016: 17). From 1981 to 2014, Tk6.66 billion were mobilized through WEDBs, whereas cumulative investments for US Dollar Investment Bonds were only around Tk2 billion and Tk510 million for US Dollar Premium Bonds since 2003, when these two instruments were introduced (Rahman et al. 2016: 18).

Several issues have been noted in regard to these financial instruments and products:

- Guichard (2016) observed that while the banks and microfinance institutions provide a broad range of financial products directed at the families of migrant workers, migrant workers themselves have limited access to financial products. The study noted: "The emphasis has been less on the migrant worker and more on their families that have remained in Bangladesh" (Guichard 2016: 4). This is true particularly with respect to blue-collar migrant workers.

- Despite the number of investment schemes offered by public and private banks, these instruments remain largely unavailable to migrant workers. This is largely due to instruments targeting investors with large capital rather than catering to the needs of ordinary migrant workers. Except for the taka-denominated WEDBs, which migrants or family members can purchase in Bangladesh, the bonds and foreign currency deposits have to be purchased in destination countries; in addition, they require foreign currency accounts, which most short-term migrants cannot obtain (Siddiqui 2013).
- In contrast to the Philippines, Bangladesh has a low penetration of technology-based payment products to unbanked populations. Nevertheless, banks are increasingly investing in payment infrastructure to improve fund transfer systems as well as reduce costs (Ozaki 2012).
- Among average migrant households, there is a lack of awareness or interest in the financial products mentioned above. Among the remittance beneficiaries in Siddiqui's 2013 study, none were aware of the existence of the US Dollar Premium and US Dollar Investment Bonds, and the relatives of only a few had deposit accounts.
- Typical migrant families considered remittances primarily as income, and described primary uses in terms of household consumption (including for food, healthcare and education expenses), loan repayment, and purchase of land or buildings as top priorities. Purchase of land rather than purchase of securities was considered a main priority for investment (Siddiqui 2013). The Bangladesh Bureau of Statistics (BBS) survey of investment from remittances showed that 75% is invested in construction or reconstruction of houses/buildings/flats, while investments in all other sectors were minor, varying from 1% to 7% (BBS 2016: 20).

3.7 Conclusions and Recommendations

3.7.1 Conclusions

The above analysis highlights that most Asian origin countries of origin are keen on engaging with their diaspora populations and mobilizing remittances for national development and alleviation of poverty. A number have had success in increasing the volume of remittances and promoting remittance transfers through formal channels. There is notable emphasis on strategies for financial inclusion and widening the range of financial services.

Mobilizing diaspora finance for investment, however, varies across countries. Smaller economies may not be able to emulate the success of the PRC and India in this respect. There is a gap between promise and reality regarding diaspora contributions to home country development.

Asian countries have had some success in expanding financial inclusion and diversifying portfolios to meet the needs and expectations of the diaspora and migrant workers and their families, including savings. However, there have been limitations in the uptake of investment instruments among migrant workers or their households. For low-income migrant households, the priorities are often spending on education and health, repaying loans, and purchasing property and housing, rather than investing in productive enterprises or financial instruments like shares, bonds, or fixed deposits. Diaspora populations abroad are largely motivated by a conducive environment for doing business at home and investment-friendly

policies. While there has been emphasis on financial literacy and financial education, and mobile banking, penetration of such programs is still low in relation to the needs. The Pakistan Remittance Initiative is a successful initiative for increasing the coverage and efficiency of formal remittance channels with lessons for other countries in the region.

3.7.2 Way Forward

Given that most countries do not have reliable estimates or profiles of their diaspora populations, efforts must be made to generate better information on these, with a focus on gender differentials and skills. The analysis here also highlighted serious data gaps in relation to remittance-backed financial products and diaspora investment products such as diaspora bonds. ADB and the ILO can address these information gaps through support to countries in data collection, analysis, and dissemination.

Countries of origin need to prepare a strategic plan for engagement with the diaspora, learning from countries such as the PRC and India. Confidence-building measures in the form of designated focal ministries, interactive web portals for information provision and dialogue with the diaspora, regular consultations with the diaspora through periodic conferences, support to diaspora associations, and possibly dual citizenship procedures are important steps (ILO 2010b).

The diversity of the diaspora populations is a critical factor in planning interventions. For instance, temporary migrant workers are important remitters, but do not generally have large funds for investing. Therefore, it is important to offer differentiated options to distinct segments of the diaspora. Many returnee migrants cannot be entrepreneurs, and they should be provided with wider investment options. A good strategy is to develop products linked to migrant motivations in sending remittances for better success (e.g., education, housing, health insurance). The development of products has to be accompanied by awareness creation and popularization by financial institutions.

A conducive economic, political, social, and legal environment is crucial for investment of remittances and channeling of diaspora finance. This would be more effective than special programs as the experiences of the PRC and India show.

Origin countries also need to build the capacity of government institutions and agencies to effectively interact with the diaspora communities and organizations.

It is also important to promote active cooperation between home and host countries to ensure access to diaspora communities, and protection of their rights and integration in host countries. Circulation-friendly visa regimes allowing for right of return on the part of destination countries will enable the diaspora to play a more active role in their home countries.

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ANNEX

Annex Table 3.A1: Migrant Remittance Inflows ($ million), 2000, and 2005–2016

Country	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% of GDP (2015)
Afghanistan	...	...	...	...	106	152	342	185	252	314	268	301	431	1.6
Bangladesh	1,969	4,642	5,428	6,562	8,941	10,521	10,850	12,071	14,120	13,867	14,988	15,388	13,559	7.9
Cambodia	121	164	184	186	188	142	153	160	172	176	377	394.80	371	2.2
PRC	758	23,626	27,565	38,395	47,743	41,600	52,460	61,576	57,987	59,491	62,332	63,938	61,000	0.6
India	12,845	22,125	28,334	37,217	49,977	49,204	53,480	62,499	68,821	69,970	70,389	68,910	62,744	3.3
Indonesia	1,190	5,420	5,722	6,174	6,794	6,793	6,916	6,924	7,212	7,614	8,551	9,659	8.977	1.1
Lao PDR	1	1	4	6	18	38	42	110	59	60	40	93	116	0.8
Mongolia	12	180	181	178	225	200	266	279	320	256	255	261	260	2.2
Myanmar	102	129	115	81	55	54	115	127	275	1,644	279	387	682	0.6
Nepal	112	1,212	1,453	1,734	2,727	2,983	3,464	4,217	4,793	5,589	5,889	6,730	6,607	32.2
Pakistan	1,080	4,280	5,121	5,998	7,039	8,717	9,690	12,263	14,007	14,629	17,244	19,306	19,761	7.2
Philippines	6,957	13,733	14,988	15,853	18,064	19,078	20,563	21,922	23,352	25,369	27,273	28,483	31,145	9.8
Sri Lanka	1,163	1,976	2,167	2,507	2,925	3,337	4,123	5,153	6,000	6,422	7,036	6,980	7,257	8.5
Thailand	1,700	1,187	1,333	1,635	1,898	2,776	3,580	4,554	4,713	5,690	5,655	5,895	6,273	1.5
Viet Nam	1,340	3,150	3,800	6,180	6,805	6,020	8,260	8,600	10,000	11,000	12,000	13,000	13,781	6.7

PRC = People's Republic of China, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic.

Source: World Bank Remittance Inflows Data Set: October 2017. http://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data (accessed 23 November 2017).

CHAPTER 4

Mobility of Indian IT Professionals in the World Economy: Patterns and Future Possibilities

Anthony P. D'Costa
Chair and Professor, Contemporary Indian Studies
Director, Development Studies Program, University of Melbourne

4.1 Introduction

The international movement of technology workers or professionals is now familiar and commonplace. However, the flows of such professionals in the world economy are highly uneven. Much like the mobility of capital seeking higher returns, skilled workers and professionals migrate to where earnings are higher, career prospects better, and household well-being superior. Institutionally, economies that are experiencing relative scarcity in specific technical occupations encourage foreign technology worker inflows, albeit with conditions attached to avoid abusing the system at the expense of local talent. Sending countries that either have a relative abundance of technology workers or have responded favorably to growing global demand for such talent have witnessed considerable emigration of skilled workers. Structures, policies, and institutions have created a global skilled worker supply and demand imbalance, even as the volume of movement of such people has risen. Changing economic structures, particularly toward advanced producer services in global cities, greater leveraging of information technology (IT), and the ubiquity of the internet in promoting tradable services such as finance, insurance, and business services, including software services have all contributed to the growing demand for technology workers.

India is a major global supplier of technical professionals, especially to Organisation for Economic Co-operation and Development (OECD) economies, with the United States (US) as the preeminent market, followed by the United Kingdom (UK) and Western Europe. Even Japan, which has been politically slower to embrace foreign nationals, is accepting international technical talent, including Indian professionals. For obvious reasons, the demand is greatest in the OECD economies, although many larger, increasingly wealthier Asian countries, especially the People's Republic of China (PRC) and the Republic of Korea are important receiving countries for foreign talent, while smaller Singapore, because of its specialization in high-value producer services, is a major hub for foreign professionals in finance, insurance, real estate, and business services, including software.

Major sending countries such as India and the PRC have also experienced massive domestic demand for technical professionals as India expands its outsourcing arrangements for global firms and for the home market. The flows of professionals are not strictly from poorer to richer economies. On the contrary, there are also considerable flows of such technical talent within the OECD, such as between the US and Canada and intra-Europe, and increasingly intra-Asia, from non-OECD to OECD. Nevertheless, large,

populous, relatively low-income countries with adequate selective technical education systems remain important sending countries, especially in the absence of robust demand at home, with salaries and wages trailing OECD norms. Furthermore, while intra-OECD talent flows have been often accompanied by intra-OECD capital flows (represented by intra-firm movement of workers across national boundaries), there is also a growing movement of such professionals that is independent of capital movement for IT and related services. For example, intra-company talent flows between India and the US could be due to both augmenting labor supply within the Indian firm but operating in the US, or the US firm requiring workers in their American operations. These movements may or may not be linked to capital flows.

Based on this very compressed account of international mobility, I analyze the movement of Indian professionals to the OECD and other destinations. The objective is to illustrate the leading role Indian professionals play and to identify some of the reasons for their visibility in the global IT services industry. At the same time, areas of friction constrain what appears to be the easy international mobility of technical professionals. These are both policy-driven and institutionally derived. The chapter is divided into four main parts. In the second section, I profile the Indian IT industry. The third section discusses the changing Indian economy regarding the international mobility of professionals. The fourth discusses the mobility of Indian technical professionals to the US and other OECD destinations. Section five presents some of the institutional challenges Indian (foreign) professionals face in specific markets such as Japan, and concludes with an overview of the new environment of narrow economic nationalism poised to discourage international mobility.

4.2 A Profile of the Indian IT Industry

The Indian IT industry comprising services, business process management (BPM), and software products and engineering, has been rapidly expanding.[1] Much of this growth has been driven by export demand (Table 4.1).

It is clear that the Indian IT industry has performed well in the international market irrespective of cyclical world economy swings. While growth rates did fall following the onset of the 2008 Global Financial Crisis, the expansion of the sector thus far remains healthy. In fact, the share of exports to total output has remained steady at around two-thirds of total volume. Although the Indian economy has been growing at a healthy clip, the share of IT in India's GDP has been growing even faster, suggesting that the global outsourcing market has come to rely on India's technical capabilities and cost advantages. Table 4.2 presents a disaggregation as well as a view of the changing composition of India's IT exports.

By volume, all subsectors of India's IT exports have increased. The cumulative annual growth rate for exports from fiscal year 2009 to fiscal year 2016 has been estimated at 61.68% (India Brand Equity Fund [IBEF] 2017). However, the share of software products and engineering services in total exports has remained almost unchanged. Software products represent difficult submarkets due to the high cost of

[1] BPM is analogous to business process outsourcing (BPO). However, BPM may just be a slightly higher order of BPO since there is an element of "management", while "outsourcing" was merely an extension of carrying out tasks of the organization by a second party.

marketing, while engineering services are technically more demanding. An earlier paper (D'Costa 2002) pointed out that the Indian IT industry's path-dependent development locked the sector into low-value services. Although since the early 2000s India has moved up the IT services value chain, it has not been easy, as the data clearly indicate. Suffice it to say, the lack of a mature IT-using home market combined with an absence of a hardware sector and thus the availability of highly trained technical personnel have structured the Indian sector to stay within the confines of extensively leveraging labor arbitrage.

Table 4.1: India's Changing Market Size in Information Technology

Fiscal Year	Domestic Market ($ billion)	Export Market ($ billion)	Percent Change of Total Market from Previous Year	Share of Exports to Total Market (%)	Share of GDP (%)
2007	16	32.0	–	66.67	5.2
2008	22	41.0	31.25	65.08	5.8
2009	22	48.0	11.11	68.57	6.1
2010	24	50.0	5.71	67.57	6.4
2011	29	59.0	18.91	67.05	7.5
2012	32	69.0	14.77	68.32	8.0
2013	32	76.0	6.48	70.37	8.1
2014	32	86.0	9.25	72.88	9.5
2015	48	98.5	24.15	67.24	9.3
2016 (estimate)	52	108.0	9.21	67.50	

GDP = gross domestic product.

Sources: IBEF. 2017. IT & ITeS. https://www.ibef.org/download/IT-and-ITeS-July1-20172.pdf (accessed 22 September 2017); Statistica.com. https://www.statista.com/statistics/320776/contribution-of-indian-it-industry-to-india-s-gdp/.

Table 4.2: Growth and Changing Composition of India's Information Technology Exports ($ billion)

Fiscal Year	IT Services (1)	Business Process Management (2)	Software Products and Engineering Services (3)	Share of (3) to Total Exports (%)
2009	25.8	9.9	8.8	19.34
2010	25.8	11.7	10.0	21.05
2011	33.5	14.1	11.4	19.32
2012	39.9	15.9	13.0	18.90
2013	43.9	17.8	14.1	18.60
2014	52.0	20.0	14.0	16.28
2015	56.5	23.0	20.0	20.10
2016	61.0	24.4	22.4	20.78

IT = information technology.

Sources: IBEF. 2017. IT & ITeS. https://www.ibef.org/download/IT-and-ITeS-July1-20172.pdf (accessed 22 September 2017).

India has about 55% of the $146 billion global software outsourcing market due to a large and relatively inexpensive talent pool. Between 2011–12 and 2015–16, the US was the largest market for Indian software exports with about $65 billion, while the UK was a distant second with $5 billion in 2011–12 and nearly doubling to $9.2 billion by 2015–16 (VC Circle 2016). They were followed by Canada, Germany, Singapore, and the Netherlands with their share of India's exports between 2.5% to 3.3%. Japan's share is similarly low (D'Costa 2016: 10), but, as shown later in the study, it is poised to capture a larger share of India's future exports.

4.2.1 A Structural Explanation of the India's IT Strengths

Post-independent India has made significant progress in economic and social development, but not enough for everyone. Inheriting a colonial structure of trade and industrial production, the Indian state, like other late-industrializing countries, launched its import substitution industrialization program, with results that were, at best, mixed. However, an industrial infrastructure along with the necessary technical education infrastructure was established. On the other hand, a large share of low-productivity agriculture, poor state of education, and high-cost, public- and private-sector industries contributed to a sluggish economy and highly unequal society. The undue emphasis on tertiary, especially technical, education in a context of job scarcity created a systemic imbalance by pulling the middle classes into university education, while the rest endured poor education and training with few prospects for employment. Engineering and medicine have been the preferred professions, with only a fraction of applicants admitted. The poor performance of the Indian economy due to unnecessary regulations, slowing public investment, and internal political turmoil since the mid-1960s encouraged many professionals, especially doctors, to emigrate to the UK or the US, where new demand had arisen due to the public health system and the Vietnam War, respectively. Many engineers also sought employment opportunities abroad.

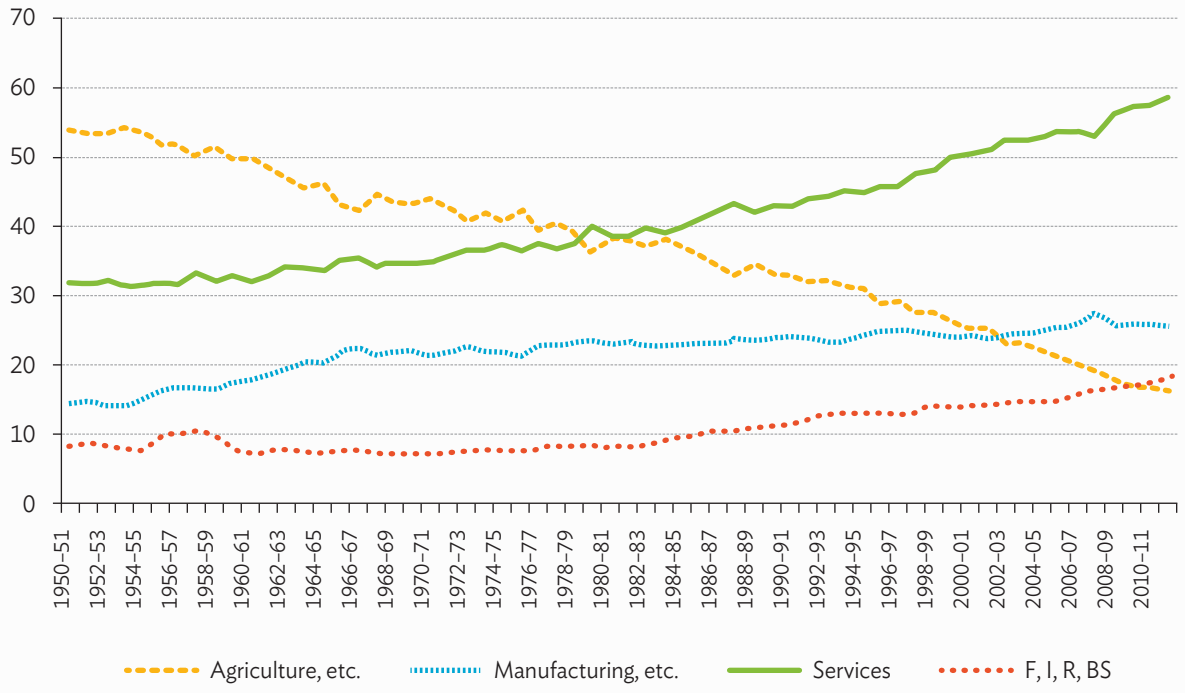
The departure of IBM in 1978 from India led to the creation of the state-owned Computer Maintenance Corporation to "maintain" IBM systems in the country. The government also pursued a computer hardware sector in line with the import substitution strategy. However, with the advent of mini-computers in the 1980s and gradual deregulation of business, Indian firms with considerable technical personnel moved toward software services. Already, American firms, beginning with Texas Instruments, had found Indian technical talent to be highly capable, inexpensive, and relatively abundant. This set the stage for increased offshoring of software services to India. Due to the unprecedented growth of this sector, the technical educational establishments, already quite nimble in the southern states of Andhra Pradesh, Tamil Nadu, and Karnataka, flexibly adjusted to the new international demand. As a result, many private, deregulated educational institutions catering specifically to the IT industry were set up in these states. One result of this development has been to generate an excess of IT workers. On the other hand, elite public institutions such as the Indian Institute of Technology and Indian Institute of Science, and the private Birla Institute of Technology and Science, which were regulated and governed by best academic/industry practices, catered to a small number of students, thereby placing a skill premium on their employment.

Recent figures show that, at the undergraduate level, science and technology degrees have growing enrollments, but are roughly 50% of arts enrollments (Government of India, Ministry of Human Resource Development, Department of Higher Education 2016: 48). Growth in computer applications degrees is flat because of their non-academic nature. The decline in enrollments in the bachelor of technology and

engineering degrees could be due to rising cost or excess supply; alternatively, since other non-computer science and engineering degrees are increasingly crowded out by computer science degrees, there is a market correction in overall enrollment in engineering degrees. Interestingly, at the master's level, technology and science degrees are still popular, and unlike the bachelor's level where arts degrees attract most students, at the master's level they do not. This may be driven by job prospects, which are significantly driven by the IT sector.

Structurally, the Indian economy has transitioned to a service economy, with a growing share of tradable services such as IT (Figure 4.1). However, its inability to increase the share of manufacturing has led to stagnating employment for un- and semi-skilled labor. Although the share of agriculture has fallen as predicted, employment (or, more correctly, underemployment) in the sector remains high, thereby contributing to low productivity and an impoverished agrarian sector.

Figure 4.1: The Changing Structure of the Indian Economy (% share of GDP)



GDP = gross domestic product.

Note: F = finance, I = insurance, R = real estate, and BS = business services are a subset "services" category. For definitions of the different categories, see Economic Survey.

Source: Ministry of Finance, Government of India, Economic Survey, various years, http://indiabudget.nic.in/survey.asp.

The successful tradable service sector is unable to absorb even a fraction of the new entrants to the workforce, which is estimated to be one million *each month*. The entire IT industry is estimated to employ directly 2.5 to 3 million people, with another 10 million or so indirectly in low-wage services (NASSCOM–Deloitte 2008). The imbalance is profound, with 800,000 engineering graduates a year (Gohain 2017), only 40% of whom are employable. There are many reasons for this, but the paradox of the upward mobility of highly educated, technically trained professionals being more than matched by the economic and

international immobility of the majority remains. In this context, going abroad is one of the few attractive options for upward mobility; due to restrictive immigration policies, this is not always feasible. The typical avenue for mobility for Indian IT professionals has been through postgraduate education in the US, followed by employment through employer-sponsored visa. Alternatively, Indian professionals may be temporarily placed overseas to work on specific projects, some of whom seek to remain permanently in the country. In recent years, their mobility is further enhanced through return migration, whereby expatriate professionals return to India, with many acting as independent subcontractors to the firms they worked for in the US. Also, expatriates transfer their US business to India as economic and commercial opportunities at home become favorable. The market of course continues to remain largely external.

4.3 The International Movement of Indian IT Professionals to the OECD

Beyond the usual economistic "push" and "pull" factors, there are many reasons for international mobility of professionals (Solimano 2010; Castles and Miller 2003). Both intra-regional and unidirectional talent flows from poor to rich countries reflect income differentials and the shifting nature of demand for services brought about by changes in the capital accumulation model. As economies shift from manufacturing to advanced producer services, the demand for technical immaterial labor also increases. The international movement of professionals also includes reverse flows of expatriates back to their home countries or flows of professionals from rich to high-growth late industrializing economies, such as the PRC and India. Return migration occurs for the same reasons as the more dominant unidirectional flows, namely increasing opportunities at home and thus demand for technical professionals, albeit on a smaller scale, often complemented by non-economic factors such as familiarity of home country and family reunification.

The US is the leading OECD recipient of permanent residents, with an average of 1 million a year (OECD various in D'Costa 2016: 64). It is also host to the largest number of foreign technical professionals. This is in sharp contrast to Japan, which has a small number of foreign nationals as permanent residents, as well as a small number of foreign professionals (D'Costa 2016). Technical professionals are brought in either through work visas or student visas, with current students contributing to the future stock of professionals should the students remain in the receiving country. Because of rising demand, both Japan and the Republic of Korea, with few immigrants, have begun to see a rising share of foreign nationals as their knowledge-based economies have expanded (D'Costa 2015, 2016). Singapore, a non-OECD member enjoying OECD income levels, relies heavily on foreigners, who represent over 25% of its population.

Regionally, Asia is a major sending area to the OECD economies with the PRC, India, and the Philippines topping the list. Asia accounted for over 30% of the total inflows into OECD economies (OECD 2012: 161). India and the PRC, with a large student pool, and the Philippines, with an explicit "manpower" export policy (Tyner 2006), are major sending countries. Some small countries such as Romania and Poland have sent a disproportionate share of migrants, mostly to OECD countries, due to economic crisis at home. Mexico, due to its proximity to the US, is a major sender of people, but few technical professionals. Even rich economies such as the US, Germany, the UK, and Canada are important sending countries, though the direction of flows is likely to other OECD economies within Europe, North America, Asia, or Australia.

Large dynamic economies such as the PRC, India, and the Gulf region also attract OECD personnel by way of foreign direct investment, intra-firm transfer of professionals from headquarters to subsidiaries, and vice versa, and project/contract-based deployment of foreign professionals.

There are three pathways by which highly skilled inflows to the US take place: students who come to pursue tertiary education, adding to the future stock of talent; employers who sponsor foreign professionals for employment; and intra-company transfer of personnel by US multinationals or foreign companies based in the US. As the US is home to some of the best universities and research institutions, the number of matriculating foreign students is high. Between 1997 and 2006, about a quarter of a million F-1 student visas were delivered annually; since then, this number increased regularly and reached 644,000 in 2015.[2] Similarly, between 1997 and 2015, exchange students and researchers under the J-1 visa program increased significantly, from 180,000 to 340,000, although this increase took place in the first 10 years of the period.

Two US visa programs that facilitate the direct inflows of foreign professionals are the employer-sponsored H-1B visas for specialty occupations and L-1 visas for intra-company transferees. Specialty occupations have been defined as those, "that require theoretical areas or practical application of a body of highly specialized knowledge, including but not limited to: scientists, engineers, or computer programmers" (US Department of Labor, Bureau of Labor Statistics 2013, US Citizenship and Immigration Services 2014). Specialty occupations include computer-related, architecture and engineering, education, administrative specializations, medicine and health, life sciences, social and physical sciences, mathematics, and technical and managerial professionals. Table 4.3 shows that the number of H-1B visas has increased over time, but not faster than other temporary visa categories. H-1B visas are capped by the US Congress on an annual basis, generally at 65,000 per year. However, an additional 20,000 H-1Bs are reserved for foreign students who have obtained a relevant master's degree in the US. Due to the backlog of processing of applications, the annual number of H-1Bs granted each year is much higher than the 85,000 allocated each year. In 2016, 126,692 H-1Bs were given to Indians, as compared to the PRC's 21,657 visas.

Most H-1B visa applications were filed on behalf of professionals born in India (D'Costa 2016: 73). In fiscal year 2017, 247,927 applications for Indians were filed compared to the PRC's 36,362, or about 15% of India's share (see sources in Table 4.5). The Philippines is a distant third, with about 3,000 applications. The European share of H-1B visas gradually declined from 23% to about 6.5% of the total. Indians in effect filed for over 70% of the total applications compared to the PRC's 12%. Interestingly, although the PRC shares some of India's tertiary educational conditions, PRC professionals do not secure as many H-1B visas, even though overall PRC mobility is far greater than in India. Fluency in English and earlier deployment contribute to India's advantage over the PRC. The small number of H-1B visas secured by the Philippines, a country with good English-language skills, suggests that the pool of trained professionals is not as large as India's and there could be differences in the quality of technical education in the two countries.

Intra-company movement of professionals by way of L1 visas has witnessed a nine-fold increase since 1985. This reflects internationalization of production, incipient global labor markets, wage-cost differentials, and shortages of specific skills. In the late 1990s, Europe had the highest share of such visas with 45% compared to Asia's 38% (Chaloff and Lemaitre 2009: 27). Earlier internationalization of European firms

[2] Bureau of Consular Affairs, US Department of State. https://travel.state.gov/content/dam/visas/Statistics/AnnualReports/FY2016AnnualReport/FY16AnnualReport-TableXVIB.pdf (accessed 10 September 2017).

Table 4.3: Selected US Non-Immigrant Workers and Professionals (by visa category)

Year	H-1B	L-1	F-1	J-1
1997	80,547	36,589	266,483	179,598
1998	91,360	38,307	251,565	192,451
1999	116,513	41,739	262,542	211,349
2000	133,290	54,963	284,053	236,837
2001	161,643	59,384	293,357	261,769
2002	118,352	57,721	234,322	253,841
2003	107,196	57,245	215,695	253,866
2004	138,965	62,700	218,898	254,504
2005	124,099	65,458	237,890	275,161
2006	135,421	72,613	273,870	309,951
2007	154,053	84,532	298,393	343,946
2008	129,464	84,078	340,711	359,447
2009	110,367	64,696	331,208	313,597
2010	117,409	74,719	385,210	320,805
2011	129,134	70,728	447,410	324,294
2012	135,530	62,430	486,900	313,431
2013	153,223	66,700	534,320	312,522
2014	161,369	71,513	595,569	331,068
2015	172,748	78,537	644,233	332,540
2016	180,057	79,306	471,728	339,712

Notes: H-1B = employer sponsored visas, capped each year by US Congress; L-1 = intra-company transfers; F-1 = students; J-1 = for students and researchers not enrolled for study.

Source: Bureau of Consular Affairs, US Department of State. https://travel.state.gov/content/visas/en/law-and-policy/statistics/non-immigrant-visas.html (accessed 10 September 2017).

catering to the US market meant that more European professionals would visit the US. Similarly, the UK, with one of the leading global financial centers, had to be present in the US. However, over time, the share of Europeans for L1 visas declined, with the remainder being captured by Asians, with over 50% in fiscal 2016. India secured more than half of all L1 visas compared to a mere 6% share in 1998. One hypothesis for a relative decline in European and Japanese L1 visas could be the gradual transfer of production to the PRC, with a significant structural shift in the US economy toward advanced producer services such as software. Hence, greater inflows of foreign professionals were warranted, especially from India to US-based IT firms.

American protectionist policies of the 1980s and 1990s, such as the voluntary restraint agreements against Japanese steel and auto exports, compelled investments in US manufacturing industries (Howes 1993). Japanese personnel visited their US subsidiaries through the L1 visas. Given Japanese institutional stickiness (see next section), meaning, the Japanese prefer to replicate their home institutional environment and business practices abroad, it is not surprising to witness a high share of L1 visas at 18% in 2012.

On the other hand, Japan's inward foreign direct investment was a mere 3.8% of GDP in 2011, the lowest among the OECD countries (OECD 2013: 82). This suggests that there would be few foreigners visiting their subsidiaries in Japan in part because there would be few foreign subsidiaries to begin with.

The high share of both H-1B and L1 visas going to India is understandable. However, there have been allegations that Indian firms based in the US are sponsoring Indian professionals at a lower salary and are consequently displacing American workers (Thibodeau 2013). There are several Indian IT firms in the US that sponsor H-1B visas (Table 4.4). Of the top 25 firms filing for H-1B visas in 2016–17 fiscal year, eight were headquartered in India. Of the remaining 17, several were founded by Indian entrepreneurs in the US or rely largely on Indian professionals in both the US and India. A casual observation of the average salaries shows that Indian companies tend to pay at the lower margins of the salary range compared to their non-Indian counterparts, although there are non-Indian companies also with similar salary ranges.

Table 4.4: Top 25 H-1B Visa Sponsors in Fiscal Year 2016–17

Rank	H-1B Visa Sponsor	Number of LCA[a]	Average Salary ($)
1	Infosys (India)	24,405	81,705
2	Capgemini	17,479	93,213
3	Tata Consulting Services (India)	13,134	76,099
4	IBM	12,381	87,378
5	Wipro (India)	10,607	72,720
6	Accenture	9,479	81,585
7	Tech Mahindra (Americas) (India)	8,615	75,879
8	Deloitte Consulting	7,645	122,667
9	Cognizant Technology Solutions	5,370	74,628
10	Microsoft	5,029	129,610
11	HCL America (India)	4,930	84,040
12	Google	4,897	129,997
13	Ernst & Young	4,625	98,722
14	Ust Global	3,170	69,819
15	Larsen & Toubro Infotech (India)	3,092	76,755
16	Amazon	2,622	121,850
17	Igate Technologies	2,197	70,209
18	L&T Technology Services (India)	1,853	69,648
19	Syntel Consulting	1,847	71,338
20	JP Morgan Chase	1,765	111,283
21	Apple	1,660	141,294
22	Intel	1,647	107,428
23	Deloitte & Touche	1,646	75,705
24	Hexaware Technologies (India)	1,634	72,336
25	NTT Data	1,253	94,255

LCA = labor condition application.

[a] The number includes new, renewals, and transfer of LCAs.

Source: MyVisa Jobs.com. www.myvisajobs.com?Reports/2017-H1B-Visa-Sponsor.aspx.

The variation in L1 visas could be attributed to the degree and type of internationalization by non-US companies. For example, Mexico, due to its proximity and NAFTA (of which Canada and others are also members), has increased its share of L1 visas in recent years. Brazil, on the other hand, with a large economy and a large pool of technical professionals, has not been engaged with the US economy as much as India. The difference lies in the growth of the Indian IT industry in tandem with the US industry as a supplier of customized software services. In other words, the Indian industry is joined closely with the American one through a finely honed offshoring arrangement system. As Table 4.5 shows, most of the H-1B initial petition approvals were for computer-related occupations. In 2007, the share of H-1B visa petitions approved for the computer-related occupation category was 52% of the total. Almost a decade later in 2016, the share had increased to 61% of the total. Since the Indian IT sector is tightly linked to the US market in terms of exports of software services, Indian professionals enjoy a dominant position in the American IT industry. Extending this understanding of globalization, it also means that Indian firms have established beachheads to service US clients (see Table 4.4), thereby facilitating the movement of people from India to the US within companies that have subsidiaries in the US.

Table 4.5: Trends in United States H-1B Initial Petitions Approved, and in Australia 457 Visas Granted to Information Technology Workers

United States H-1B Initial Petitions Approved

	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
Computer-related occupations	61,515	74,163	77,360	78,936	59,168	59,141	83,303	83,444	79,870	80,877	70,902	69,846
India	57,349	59,612	66,504	61,739	33,961	34,617	55,972	86,477	81,992	82,263	71,263	70,737
Total	**116,927**	**109,614**	**120,540**	**109,335**	**86,300**	**76,627**	**106,445**	**136,890**	**128,291**	**124,326**	**113,603**	**114,503**

FY = fiscal year.

Source: USCIS, Department of Homeland Security. https://www.uscis.gov/sites/default/files/USCIS/Resources/Reports%20and%20Studies/Immigration%20Forms%20Data/BAHA/h-1b-2007-2017-trend-tables.pdf.

Australian 457 Visas Granted to Asian IT Workers sorted by Country of Citizenship and Fiscal Year

	2005–2006	2006–2007	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017 to 31 March 2017
India	65	120	116	137	353	1,652	2,399	2,800	2,412	2,823	3,066	2,328
Other Asia	43	33	69	46	69	298	373	372	286	338	341	251
Other	290	348	449	420	452	1,114	1,430	1,308	1,149	1,245	1,139	943
Total	**398**	**501**	**634**	**603**	**874**	**3,064**	**4,202**	**4,480**	**3,847**	**4,406**	**4,546**	**3,522**

FY = fiscal year, IT = information technology.

Note: Nominated Occupations (ANZSCO unit group) include: 1351 ICT Manager; 2232 ICT Trainer; 2611 ICT Business and Systems Analyst; 2631 Computer Networks Professional; 2632 ICT Support and Test Engineer; 3131 ICT Support Technician.

Source: Department of Immigration and Border Protection. https://data.gov.au/dataset/visa-temporary-work-skilled (accessed 22 September 2017).

Although the US remains India's largest IT market, Europe is becoming a close second. About a third of India's software exports enter the European market, though most are for the UK market. Germany and other smaller European countries such as Denmark, Sweden, and the Netherlands have targeted Indian professionals. The EU's blue card scheme (somewhat like the H-1B visas) still suffers from basic implementation problems. However, the UK, Denmark, and Ireland have opted out of this program. Germany has had the most success with more than 70% of the Blue Cards used, although with the total number of cards granted at 15,261 is rather low. Although Indian professionals prefer the US over the EU, the demand for skilled professionals in the EU is unlikely to soften any time soon. The presence of Indian IT and other skilled workers, and intracompany transfers is high in Germany and Norway, Denmark, Sweden, Netherlands, and Belgium compared to the PRC or other Asian economies (Asian Development Bank Institute [ADBI] 2014: 30).

Australia, like the UK, the US, and Canada, is also an immigrant country, and has become more so since the White Australia policy was completely abandoned in 1973. Today it is an important destination for migrants, with a formalized migration program. In 2015–16, it had around 190,000 places. India, the PRC, and the UK were the main source countries: India with 21.2% (previous year 18.4%), the PRC with 15.3% (previous year 14.7%); and the UK with 10% (previous year 11.1%) of the total. Of these, 67.7% were in the skilled stream, of which 64.8% were in the professional category and 17.7% in technology and trades category (Australian Government 2016: 3–4). The skilled stream has increased from 80,000 in 2004–05 to 128,550 in 2015–16. The top five occupations between 2010–11 and 2015–16 have been accounting, software engineering, cooks, nurses, and external auditors, in that order. In 2015–16, there were 3,409 software engineers under the skilled migration scheme, which represented 25% of the top five occupations (Australian Government 2016: 12). In terms of inflows, migrants from the OECD to Australia rank the highest, with India in 2014–15 being a close second with 34,874, 20,290 of whom are points-tested. The increasing number of migrants, students, and work permits based on the points system suggests that Australia, while small relative to the US and some European countries, is an important receiver for foreign talent. However, the share of computing/IT professionals was just 10% of the total number of 457 temporary visas in 2013–14, whereas permanent points-based computing/IT professionals represented 21% of a much smaller total (European Commission 2016: 79).

4.4 Institutional Challenges to IT Professionals: The Japanese Case

This section presents some of the institutional impediments that constrain professionals' international mobility. The Japanese government has been gradually relaxing its immigration policies and corporate businesses are embracing, albeit slowly, foreign high-skilled professionals (see D'Costa 2016 for a detailed investigation). Nevertheless, migration to Japan for study and work remains limited. Asian students, especially from the PRC, dominate the foreign student population in Japan (ADBI 2015: 13). However, few foreign students enter science and technology streams, even as domestic enrollments are flat. It is not always easy for foreigners to stay back after completion of study to work in Japan.

Japan, too, has moved toward a services economy. In this economic shift, the secondary sector remains at 25% of GDP, which is focused on technology and knowledge-intensive manufacturing, such as chemicals,

electrical and transport equipment, and precision instruments.[3] Excluding construction, three other broadly defined services sectors that included wholesale and retail trade; finance and insurance, and real estate; and information and communications services together constituted nearly 35% of all employment in 2012. In this transition, Japan's trade in tradable services has been in the red. In 2000, it had a negative services trade balance of nearly $46 billion, which had declined to –$16 billion. More pertinently, Japan also had a negative trade balance in computing/information services: $1.5 billion in 2000 to $3.2 billion in 2013 (D'Costa 2016: 56). For telecommunications, computer, and information services, the net balance was –$8.2 billion in 2015.[4] It may be pointed out that it is in tradable services that substantial movement of professionals takes place and thus Japan's deficit could offer a window to attracting foreign technology workers, especially in the context of a looming demographic crisis. Declining fertility rates are predicted to lead to absolute population decline by 2050 to about 92 million from 127 million. The percentage share of the elderly population 65+ is expected to exceed 40% from about 25% of the total, while the 0–14 age group is expected to fall below 10% of the population (National Institute of Population and Social Security Research 2012: 18). To offset the decline in population, both automation and robotization and increased participation of women in high-paying professional labor markets have been proposed. However, in the medium term, they are not feasible, reinforcing the need to increase the inflows of foreign professionals.

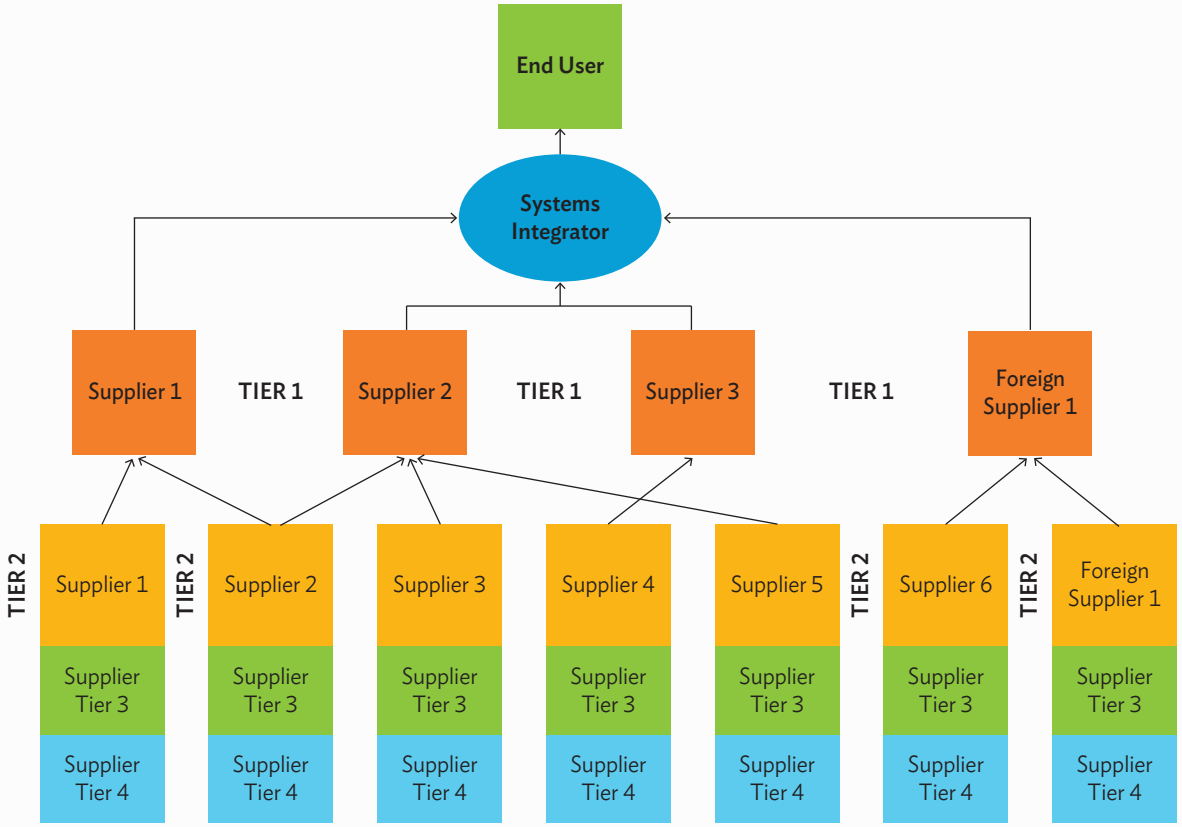
Asia remains the principal sending region to Japan, representing a share of 82% of total in 2014, while the PRC's share of migrants in Japan was 31% of total and 38% of Asians. By contrast, comparable shares for India, a major sending country to the world economy, were only 1.2% and 1.4%, respectively. A rough calculation shows that 154,000 highly skilled professionals entered Japan in 2013 (D'Costa 2016: 86). While India's share of this was only 2.2% compared to the PRC's 43.6%, the share of Indian high-skilled professionals as a share of all Indians in Japan was 27.1% compared to the PRC's 9.6%. This indicates that most Indians who go to Japan are high-skilled compared to most other nationalities; further, Japan may not be as attractive as the US for most Indians who move internationally, but it is a good professional destination for technology workers.

For the Japanese government, as well as its private sector, attracting Indian technical talent on a large scale would require lower barriers to entry. However, there are non-policy spheres that deserve some attention. Unlike its American counterpart, an independent Japanese software sector emerged quite late. The birth of "Wintelism" (Microsoft Windows and Intel) using IBM's open architecture for PCs sharpened the independence of the software developers from the hardware producers. This separation in Japan is not as sharp as the global industry. The big Japanese firms such as NEC, Hitachi, Toshiba, Fujitsu, and NTT have customarily sold large mainframes with free software and today act as systems integrators, in effect gatekeepers and coordinators for large software projects based on detailed, tiered subcontracting systems (Figure 4.2). The big firms have the necessary connections to the clients, a product of the loose but effectively networked *keiretsu* system where member firms forge important buyer–supplier relationships, often assisted by a group bank and group trading company (*sogo sosha*). Partnering with local long-term suppliers, a general Japanese business practice, limits the participation of foreign technology companies as key suppliers.

[3] Japan External Trade Organization (JETRO). 2014. International Economic Research Division. http://www.jetro.go.jp/en/reports/statistics/ (accessed 5 December 2014).

[4] JETRO. 2016. International Economic Research Division, Japanese Trade and Investment Statistics Japan's Balance of Payments Statistics (Services). https://www.jetro.go.jp/en/reports/statistics/ (accessed 22 December 2016).

Figure 4.2: Systems Integrator and the Japanese Supplier System



GDP = gross domestic product.

Note: F = finance, I = insurance, R = real estate, and BS = business services are a subset "services" category. For definitions of the different categories, see Economic Survey.

Source: Compiled by the author.

The inability of foreign nationals to speak Japanese also acts as a major barrier to mobility. Conversely, the weak ability of Japanese to speak English is also a deterrence to forging international IT partnerships. Face-to-face communication, especially at the design stage, is critical in the IT sector. Japanese firms prefer face-to-face meetings to develop familiarity and long-term trust. In fact, the penchant for frequent physical meetings by Japanese clients with their suppliers effectively requires more onsite foreign technology workers in Japan. This raises overall production costs for Indian vendors as technology workers in Japan must be paid more than in India. There is clearly a trade-off between international offshoring and working onsite or offsite near the client. Costs also tend to be higher as Japanese clients engage in frequent changes in specifications and have lower error tolerance. These are business practices that often fall outside the purview of the written contract, but well within Japanese expectations, which foreigners often find difficult to comprehend.

Permanent residency and Japanese citizenship in the past have been difficult to obtain, reducing the attractiveness of Japan for foreign professionals to remain long term. The visa regime is complex with 28 categories of visas and lengths of stay. Japanese "blood lineage" is an important determinant of citizenship, making many long-term Republic of Korea and PRC residents adopt "special permanent" status.

Their descendants born in Japan are also considered non-citizens and therefore must voluntarily naturalize. The rate of naturalization is low (Abe 2007) and non-Japanese persons born in Japan cannot become citizens automatically. Two of the conditions that must be met pertain to lineage through Japanese parentage, not location of birth (*jus sanguinis*), while the third condition is applicable when both parents are unknown or stateless. For unmarried non-Japanese women or women married to Japanese men with children born in Japan, citizenship is granted to the children on the condition that paternity by the Japanese father is registered 2 weeks before birth (Fitch 2005). The tests for naturalization in all cases can be arbitrary since the applicant's "behavior and conduct must be good" (Government of Japan Ministry of Justice 2006).

There are other impediments to foreign professionals entering Japan. One of them is the ability of Japanese officials to understand Indian academic degrees. An Indian IT degree does not look anything like a Japanese engineering degree (IT Club of Tokyo 2006), and there have been cases where Indian IT professionals' visa applications were rejected because they could not understand the qualifications. The Japanese see technical subjects through the lens of traditional engineering degrees, but contemporary IT degrees are not like typical engineering ones. The other challenge for both Indian professionals and Japanese corporations is retention of talent. For Indian professionals, entrenched in hierarchical systems at both the societal and organizational levels at home, where rank and status matter, there is a penchant for quick and continuous promotion. In organizations that are flat such practices are anathema. While in Japan organizations may not be flat, they are not as status-conscious as Indians are. Consequently, the inability to climb the organizational ladder could discourage Indian professionals seeking long-term careers in Japan. Some of these institutional wrinkles are being ironed out as the Japanese become more familiar with Indian IT degrees, work practices, and cultural mores, as well as the English language, and adjust their expectations, just as Indians are also beginning to appreciate the technical challenges of Japanese projects and the conveniences of living in Japan for the long haul.

Another major impediment for technology professionals in Japan is that their career path may be limited. Japanese companies have developed specific business systems and hence recruit staff locally. The big companies secure the best graduates from the leading universities after which they go through a rigorous and long process of training on the job that imparts very deep company-specific skills. In this environment, the entry of foreign IT workers is limited since not too many foreign students study at the undergraduate level in the leading universities, especially in science and technology. However, the demand for professionals with special skills is global in nature and Japan is necessarily compelled to deploy foreign professionals through outsourcing firms and foreign subsidiaries. Entry into the industry is of course not the same as moving up the career path in a Japanese corporation. Due to the language barrier, lack of social networks, and unfamiliarity with specific corporate culture, moving up the corporate ladder in Japan is difficult. These attributes are best cultivated over the long term. Today, many Japanese corporations, precisely because of their past insularity, have recruited top-level foreign managers to navigate the vicissitudes of the world economy. Unless this practice becomes a trend, it is doubtful that ambitious foreign technology professionals will see Japan as a career-enhancing destination.

This said, Japan is trying to recruit Indian IT professionals. Today the Japanese government has signed several initiatives, including not requiring Indian professionals working in Japan to pay social security taxes. Under a new plan, the Japanese government has also promised to issue green cards to foreign professionals and speed up the process of residency to requiring between 2 and 4 years compared to the US norm of 5 to 6 years. A recent estimate puts a shortage of IT professionals around 600,000 by 2030 (Japan Times 2017), offering employment and market opportunities for Indian IT firms.

There are other healthy developments between Indian professionals and the Japanese IT industry, especially with increased engagements between the two countries. Japanese companies are becoming familiar with foreign suppliers and with repeat business, developing greater business trust and technical confidence in their foreign vendors. Some Japanese companies and universities have introduced English as the medium of communication and academic programs taught in English, respectively; while intermediaries and bridge companies in India and Japan are sending Japanese engineers to India for IT training, English language learning, and understanding of Indian business culture. Many large Indian IT companies have their own in-house Japan Business Centers that train some of their best engineers in Japanese language and business culture. As Japanese technology firms internationalize, such as NTT Data's 2016 acquisition of Dell Services of the US, they now work with Indian engineers indirectly.

Other developments within Japan are also contributing to a more favorable ecosystem for Indian professionals. For example, the Indian community has worked hard with the government to allow family members to join their spouses and relatives in Japan. The community has established an international school with India's Central Board of Secondary Education curriculum, created places of worship, and carved a small area of greater Tokyo as their place of residence (D'Costa 2016). The significant boost to the relationship between India and Japan in the wider geopolitical realignments suggests greater engagement, including economic partnership. The Abe government of Japan has pursued an aggressive strategy to invest in major infrastructural projects in India, not only to boost bilateralism but also to lift the sagging Japanese economy. The Modi government has also reciprocated by encouraging overall investments to "Make in India," promote employment, and import key technologies from Japan; witness the recent announcement of a bullet train project in India. With the signing of the Indo–Japan Civil Nuclear deal (Agreement for Cooperation in the Peaceful Uses of Nuclear Energy), long time in the making, the bilateral relationship is more than economic and commercial, having now become a strategic partnership. It is too early to predict how this evolving relationship will impact the technology industry and the flows of professionals, but given Japan's demographic crisis, more business partnerships and economic engagements can only be a harbinger of increased flows of IT and other technology professionals.

4.5 Conclusion: Challenges to International Mobility?

In this chapter, the relationships between the Indian IT industry, we examine the changing economic structure, and international mobility of technical professionals through the movement of Indian technology workers to the OECD. Much of the discussion and analysis centered around India's presence in the US and other Anglophone countries. A non-Anglophone country (Japan) was also discussed briefly to illustrate some of the challenges faced by technical professionals for reasons that go beyond restrictive immigration policies. These were broadly labeled "institutional stickiness" that included specific industrial trajectories, business practices, career prospects, culture and language, and the absence of a critical mass of expatriates (D'Costa 2016). However, the Japanese government, businesses, and universities are increasingly adopting an outward-oriented approach to include foreign professionals in their growth plans. The demographic crisis and impending social security crisis for the elderly is a major stimulus for Japan's outward-looking responses. By contrast, several nations today that have been historically friendly to immigration are now clamping down on inflows of migrants, including technical professionals.

Cases in point are Britain, via Brexit, the US on H-1B and L1 visas, and Australia for the 457 visas for skilled workers, including computer programmers. The impact of Brexit is still unfolding. However, given the UK's separation from the EU, the movement of people into Britain will be restricted. Already, foreign students are beginning to shy away from the UK for other destinations since the government has reduced the number of months a student can work in the UK after completing their studies. The US under the Trump administration has been cracking down on immigration through its Reforming American Immigration for Strong Employment Act. The H-1B and L1 visa sponsors, especially the Indian companies, are being scrutinized to check whether they are paying their (Indian) employees less than the prevailing wages for local talent. Finally, Australia has scrapped its 457-visa program and replaced it with a two- and four-year (for specialized skills) visa program. Even Singapore has become cautious with immigration, although its stance toward skilled professionals is likely to remain the same. With these measures still unfolding, all three Anglophone countries are exercising a narrow form of economic nationalism whereby international migrants and foreign professionals are perceived to displace domestic professionals. In this atmosphere, the international mobility of talent will be dampened, imposing considerable costs on both sending and receiving countries.

If these populist nationalist measures are consolidated, the movement of technical professionals could be slowed down and redirected to other destinations. There are not many untapped markets left other than the Asian region, including Japan; the PRC; India; the Republic of Korea; and Taipei,China; and in Latin America, Brazil and Argentina. Perhaps these non-Anglophone countries could be the harbinger of redirected flows of technical professionals in the future, provided, of course, they also become receptive to foreigners and are not held back by their specific form of institutional stickiness and cultural xenophobia. New conditions may be attached to international mobility and the volume of inflows tightly regulated, but with businesses such as Microsoft, Amazon, Google, and Apple being heavily dependent on foreign professionals, it is almost guaranteed the migration door will be left ajar. In any case, the Indian IT industry needs to rethink its growth strategy by refocusing its energies on the domestic market, relying less on cheap labor strategy, and reducing its undue dependence on export markets, especially the US. At the same time, it needs to move away from Anglophone markets as part of its overall diversification strategy.

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ANNEX 1

ECONOMY-SPECIFIC NOTES

BANGLADESH

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	131.3	510	5.3	Employment–Population Ratio (age 15+ years), 2014	67.8
2015	161.0	973	6.6	Unemployment (% of labor force), 2014	4.3

Immigration in Bangladesh

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	988	0.75	14	27.1	71.3	n.a.	n.a.
2015	1,423	0.88	13	16.5	80.0		

Stocks of Foreign Workers by Sector, 2010	Total
Number of Foreign Workers ('000)	
% of Total Employment	

Stocks of International Students ('000)	2006	2007	2008	2009	2010	2011	2012	2013
	0.9	0.7	1.0	1.6				

Inflows of Foreign Workers ('000)	2006	2007	2008	2009	2010	2011	2012	2013

Emigration from Bangladesh to OECD Countries

	2000			2010/11		
Stocks of Persons Born in Bangladesh Living in OECD Countries	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	161.9	123.6	285.5	306.3	226.6	532.9
Recent Emigrants Age 15+ Years ('000)	33.0	24.4	57.4	75.1	50.6	125.7
Age 15–24 Years (% of population age 15+ years)	17.2	23.1	19.7	12.9	14.7	13.7
Age 25–64 Years (% of population age 15+ years)	78.2	73.3	76.1	82.8	80.1	81.6
Total Emigration Rates (%)	0.4	0.3	0.3	0.6	0.4	0.5
Emigration Rates of the Highly Educated (%)	2.7	2.0	2.4	3.6	3.6	3.6

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**40.7**	**50.6**	**49.4**	**49.3**	**41.7**	**43.5**	**48.8**	**50.8**
United States	11.8	16.7	14.8	16.7	14.7	12.1	14.6	13.6
Italy	9.3	8.9	9.7	10.3	10.1	10.5	12.7	12.4
Germany	0.5	0.5	0.7	1.0	1.5	2.4	2.0	4.3
Australia	2.8	2.2	2.1	2.3	2.5	2.9	2.7	3.4
Canada	2.9	2.1	4.7	2.7	2.6	3.8	2.2	3.3

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total	**11.4**	**12.0**	**13.8**	**15.3**	**16.6**	**16.8**	**17.9**	**20.3**
United Kingdom							4.2	4.9
United States							3.7	4.8
Australia							3.6	3.9

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2016
Total					**4,046.2**			
Saudi Arabia			1,000.0		1,315.6			
United Arab Emirates			500.0		1,176.5			
Malaysia				307.4	453.8			
Kuwait					214.9			
Oman					226.7			

Flows of Workers Deployed (5 main destinations, '000)	2009	2010	2011	2012	2013	2014	2015	2016
Total	**475.3**	**390.7**	**568.1**	**607.8**	**409.3**	**425.7**	**555.9**	**787.7**
Oman	41.7	42.6	135.3	170.3	134.0	105.7	129.9	188.2
Saudi Arabia	14.7	7.1	15.0	21.2	12.7	10.7	58.3	143.9
Qatar	11.7	12.1	13.1	28.8	57.6	87.6	124.0	120.4
Singapore	39.6	39.1	48.7	58.7	60.1	54.8	55.5	54.7
Malaysia	12.4	919.0	742.0	804.0	3.9	5.1	30.5	40.1

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	–0.435	–1.643	–1.199	–2.904	–4.854	–2.62	–1.94	–1.842

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	10,521	10,850	12,071	14,120	13,867	14,983	15,388	13,680

CHINA, PEOPLE'S REPUBLIC OF

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	1,262.6	1,761	8.4	Employment–Population Ratio (age 15+ years), 2014	68.0
2015	1,371.2	6,416	6.9	Unemployment (% of labor force), 2014	4.7

Immigration in the People's Republic of China

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	508	0.04	50	16.2	74.0	n.a.	n.a.
2015	978	0.07	39	17.2	72.4		

Stocks of Foreign Workers by Sector, 2012	**Total**
Number of Foreign Workers ('000)	246.4
% of Total Employment	

Stocks of International Students ('000)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
	141.1		195.5	223.5	238.2	265.1	292.6	328.3

Inflows of Foreign Workers ('000)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**

Emigration from the People's Republic of China to OECD Countries

Stocks of Persons Born in the People's Republic of China Living in OECD Countries	2000			2010/11		
	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	976.3	1,089.8	2,066.1	1,650.1	1,981.8	3,631.9
Recent Emigrants Age 15+ Years ('000)	217.0	250.7	467.7	352.3	439.2	791.5
Age 15–24 Years (% of population age 15+ years)	12.3	11.4	11.8	18.8	18.1	18.4
Age 25–64 Years (% of population age 15+ years)	73.1	73.4	73.3	68.7	69.7	69.3
Total Emigration Rates (%)	0.2	0.2	0.2	0.3	0.4	0.3
Emigration Rates of the Highly Educated (%)	1.5	2.3	1.8	1.4	2.2	1.7

Legal Migration Flows to OECD Countries (5 main destinations, '000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total	**523.7**	**455.9**	**503.8**	**525.7**	**503.7**	**547.3**	**555.9**	**542.5**
Korea, Republic of	161.7	117.6	155.3	149.2	127.3	178.6	192.9	177.0
Japan	134.2	121.2	107.9	100.4	107.0	93.0	98.6	100.6
United States	80.3	64.2	70.9	87.0	81.8	71.8	76.1	74.6
United Kingdom	18.0	22.0	28.0	45.0	41.0	46.0	39.0	43.0
Australia	20.7	22.9	25.0	29.0	25.6	28.1	27.3	27.9

Stocks of International Students (3 main destinations, '000)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total	**379.7**	**409.2**	**451.9**	**500.5**	**580.5**	**624.8**	**643.2**	**686.1**
United States							225.5	263.8
Australia							88.0	90.2
United Kingdom							81.8	86.2

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total	**778.0**	**847.0**	**812.0**	**850.0**	**853.0**	**1,006.0**	**1,027.0**	**969.0**
Singapore								
Algeria	35.0							
Macau, China								
Russian Federation								
Hong Kong, China								

Flows of Workers Deployed (5 main destinations, '000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total	**395.0**	**411.0**	**452.0**	**512.0**	**527.0**	**562.0**	**530.0**	**494.0**

Net Migration Rate (per '000)	**1985–1990**	**1990–1995**	**1995–2000**	**2000–2005**	**2005–2010**	**2010–2015**	**2015–2020**	**2020–2025**
	–0.042	–0.137	–0.096	–0.354	–0.281	–0.217	–0.212	–0.208

Remittance Inflows (current $ million)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016e**
	41,600	52,460	61,576	57,987	59,491	62,332	63,938	61,000

CAMBODIA

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	12.2	427	8.8	Employment–Population Ratio (age 15+ years), 2014	82.2
2015	15.6	1,021	7.0	Unemployment (% of labor force), 2014	0.4

Immigration in Cambodia

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	146	1.20	51	37.9	55.2		
2015	74	0.47	46	37.9	55.1		

Stocks of Foreign Workers by Sector, 2015	Total	Agriculture, Forestry, and Fishing	Manufacturing	Construction	Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	Accommodation and Food Service	Administrative and Support Service Activities	Other
Number of Foreign Workers ('000)	49.2	18.7	2.6	5.5	12.5	2.4	1.2	6.2
% of Total Employment	0.1							

Stocks of International Students ('000)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
		0.1						

Inflows of Foreign Workers ('000)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**

Emigration from Cambodia to OECD Countries

	2000				2010/11			
Stocks of Persons Born in Cambodia Living in OECD Countries	Men	Women	Total		Men	Women	Total	
Emigrant Population Age 15+ Years ('000)			239.1		127.3	150.0	277.3	
Recent Emigrants Age 15+ Years ('000)			15.2		6.4	11.9	18.4	
Age 15–24 Years (% of population age 15+ years)			11.8		5.2	5.3	5.3	
Age 25–64 Years (% of population age 15+ years)			81.1		84.2	82.7	83.3	
Total Emigration Rate (%)			3.2		2.6	2.9	2.8	
Emigration Rate of the Highly Educated (%)			52.7		13.0	17.5	14.7	

Legal Migration Flows to OECD Countries (5 main destinations, '000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total	**10.1**	**9.5**	**9.9**	**12.3**	**15.0**	**16.4**	**16.4**	**17.0**
Korea, Republic of	3.4	2.6	3.7	6.4	9.5	10.5	9.5	9.6
Japan	0.9	1.1	1.1	1.1	1.1	1.3	2.3	3.7
United States	3.7	3.8	3.0	2.7	2.5	2.6	2.5	1.9
Australia	0.7	0.7	0.9	0.8	0.8	0.8	0.8	0.8
France	0.4	0.6	0.5	0.4	0.4	0.4	0.5	0.4

Stocks of International Students (3 main destinations, '000)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total							**2.3**	**2.6**
Australia							0.6	
France							0.4	
United States							0.4	

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total			**133.3**					
United Arab Emirates								
Oman								
Singapore								
Qatar								
Bahrain								

Flows of Workers Deployed (5 main destinations, '000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total	**14.9**	**29.8**	**26.2**	**34.8**	**22.6**	**24.7**	**25.5**	**85.5**
Thailand	3.5	11.2	16.8	26.4	13.5	15.8	16.2	
Malaysia	9.7	16.4	4.4	0.2	0.1	0.5	0.8	
Korea, Republic of	1.7	2.1	5.0					
Japan	0.0	0.0	0.1					
Singapore	0.0	0.0	0.0	0.0	0.1	0.2	0.1	

Net Migration Rate (per '000)	**1985–1990**	**1990–1995**	**1995–2000**	**2000–2005**	**2005–2010**	**2010–2015**	**2015–2020**	**2020–2025**
	–1.90	8.30	n.a.	–0.60	–4.30	–2.00	–1.90	–1.70

Remittance Inflows (current $ million)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016e**
	142	153	160	172	176	377	395	323

INDIA

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	1,053.5	794	3.8	Employment–Population Ratio (age 15+ years), 2014	52.2
2015	1,311.1	1,806	7.6	Unemployment (% of labor force), 2014	3.6

Immigration in India

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	6,411	0.61	48	8.0	62.1	73.1	3.0
2015	5,241	0.40	49	7.2	61.9		

Stocks of Foreign Workers by Sector, 2015	Total	Agriculture, Forestry, and Fishing	Manufacturing	Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	Transport and Storage	Education	Public Administration and Defence, Compulsory Social Security	Construction	Other
Number of Foreign Workers ('000)									
% of Total Employment									

Stocks of International Students ('000)	2006	2007	2008	2009	2010	2011	2012	2013
	12.4					27.5	28.3	34.4

Inflows of Foreign Workers ('000)	2005	2006	2007	2008	2009	2010	2011	2012

Emigration from India to OECD Countries

	2000			2010/11		
Stocks of Persons Born in India Living in OECD Countries	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	1,027.6	943.0	1,970.6	1,914.3	1,700.5	3,614.8
Recent Emigrants Age 15+ Years ('000)	264.2	226.6	490.8	487.6	399.0	886.5
Age 15–24 Years (% of population age 15+ years)	10.2	11.0	10.6	10.4	9.2	9.8
Age 25–64 Years (% of population age 15+ years)	80.0	77.7	78.9	78.6	78.7	78.7
Total Emigration Rates (%)	0.3	0.3	0.3	0.4	0.4	0.4
Emigration Rates of the Highly Educated (%)	2.9	3.8	3.2	3.1	4.1	3.5

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**221.8**	**234.1**	**260.7**	**245.7**	**229.1**	**240.7**	**285.4**	**268.9**
United States	63.4	57.3	69.2	69.0	66.4	68.5	77.9	64.1
Canada	28.3	29.5	34.2	27.5	30.9	33.1	38.3	39.5
United Kingdom	48.0	64.0	68.0	61.0	36.0	30.0	46.0	36.0
Australia	22.7	25.3	23.5	21.9	27.9	38.2	39.7	34.7
Germany	11.4	12.0	13.2	15.4	18.1	19.5	22.4	26.1

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total	**145.1**	**162.7**	**181.1**	**186.3**	**181.6**	**168.3**	**163.3**	**186.4**
United States							92.6	102.4
Australia							16.2	25.6
United Kingdom							22.2	19.6

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2009	2010	2011	2012	2013	2014	2015	2016
Total								
Saudi Arabia	1,500.0							3,004.6
United Arab Emirates	1,300.0							2,803.8
Kuwait	491.0							923.3
Oman								796.0
Qatar								600.0

Flows of Workers Deployed (5 main destinations, '000)	2009	2010	2011	2012	2013	2014	2015	2016
Total	**610.3**	**641.4**	**626.6**	**747.0**	**817.0**	**805.0**	**781.0**	**520.9**
Saudi Arabia	281.1	275.2	289.3	357.5	354.2	329.9	306.0	165.4
United Arab Emirates	130.3	130.9	138.9	141.1	202.0	224.0	225.5	163.7
Kuwait	42.1	37.7	45.1	55.9	70.1	80.4	66.5	72.4
Oman	75.0	105.8	73.8	84.4	63.4	51.3	85.0	63.2
Qatar	46.3	45.8	41.7	63.1	78.4	76.0	59.0	30.6

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	0.01	–0.028	–0.089	–0.355	–0.511	–0.369	–0.293	–0.18

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	49,204	53,480	62,499	68,821	69,970	70,389	68,910	62,745

INDONESIA

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	211.5	2,143	4.9	Employment–Population Ratio (age 15+ years), 2014	63.5
2015	257.6	3,834	4.8	Unemployment (% of labor force), 2014	6.2

Immigration in Indonesia

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	292	0.14	48	29.2	65.2	33.0	46.0
2015	329	0.13	42	27.0	66.1		

Stocks of Foreign Workers by Sector, 2016	Total	Agriculture, Forestry, and Fishing	Industry	Services
Number of Foreign Workers ('000)	84.8	31.081	12	42
% of Total Employment	0.1			

Stocks of International Students ('000)	2005	2006	2007	2008	2009	2010	2011	2012
	2.0	4.7	5.3	5.3		6.4		7.2

Inflows of Foreign Workers ('000)	2007	2008	2009	2010	2011	2012	2013	2014
			58.1	65.2	77.3	72.4	69.0	68.8

Emigration from Indonesia to OECD Countries

	2000			2010/11		
Stocks of Persons Born in Indonesia Living in OECD Countries	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	162.3	177.3	339.6	158.6	196.5	355.0
Recent Emigrants Age 15+ Years ('000)	22.0	26.4	48.4	16.6	26.0	42.6
Age 15–24 Years (% of population age 15+ years)	13.7	11.3	12.4	13.0	8.7	10.6
Age 25–64 Years (% of population age 15+ years)	65.4	61.8	63.5	64.3	68.7	66.8
Total Emigration Rates (%)	0.2	0.2	0.2	0.2	0.2	0.2
Emigration Rates of the Highly Educated (%)	3.2	4.2	3.6	2.3	2.9	2.6

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**31.8**	**22.6**	**25.0**	**28.8**	**30.5**	**36.3**	**35.3**	**34.7**
Japan	10.1	7.5	8.3	8.4	9.3	9.6	11.8	14.3
Korea, Republic of	9.7	3.3	5.3	8.1	8.3	11.8	10.5	8.5
Germany	1.6	1.8	1.8	2.0	2.2	2.8	2.5	2.5
United States	3.6	3.7	3.0	2.9	2.6	2.7	2.1	2.1
Australia	3.2	2.9	2.4	2.9	2.5	2.5	2.4	2.1

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total	**24.1**	**24.4**	**24.5**	**24.6**	**24.5**	**25.4**	**27.5**	**27.8**
Australia							9.5	9.5
United States							7.3	7.2
Japan							2.2	2.4

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2006	2007	2008	2009	2010	2011	2015	2016
Total	**2,700.0**		**4,300.0**			**3,256.0**		
Saudi Arabia						1,500.0		
Malaysia	1,300.0					917.9		
Taipei,China						146.2		
Hong Kong, China						140.6		
Singapore						106.0		

Flows of Workers Deployed (5 main destinations, '000)	2009	2010	2011	2012	2013	2014	2015	2016
Total	**629.6**	**567.1**	**594.2**	**459.9**	**468.7**	**429.9**	**275.7**	**234.5**
Malaysia	123.9	116.1	134.1	134.0	150.2	127.8	97.7	87.6
Taipei,China	59.3	62.0	78.9	81.1	83.5	82.7	75.3	77.1
Saudi Arabia	276.6	228.9	137.6	40.7	45.4	44.3	23.0	13.5
Hong Kong, China	32.4	33.3	50.3	45.5	41.8	35.1	15.3	14.4
Singapore	33.1	39.6	47.8	41.6	34.7	31.7	20.9	17.7

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	–0.25	–0.37	–0.2	–0.49	–0.64	–0.564	–0.533	–0.508

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	6,793	6,916	6,924	7,212	7,614	8,551	9,659	9,234

LAO PEOPLE'S DEMOCRATIC REPUBLIC

Key Indicators

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	5.3	676	5.8	Employment–Population Ratio (age 15+ years), 2014	76.7
2015	6.8	1,538	7.0	Unemployment (% of labor force), 2014	1.4

Immigration in the Lao People's Democratic Republic

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% High Educated
2000	22	0.41	47	24.7	70.2	49.5	8.2
2015	22	0.33	46	14.4	80.8		

Stocks of Foreign Workers by Sector, 2006	Total	Agriculture, Forestry, and Fishing	Industry	Services
Number of Foreign Workers ('000)	38.3	14.9	11.3	12.1
% of Total Employment				

Stocks of International Students	2007	2008	2009	2010	2011	2012	2013	2014
	0.3	0.3	0.7	0.7	0.8	0.6	0.3	0.5

Inflows of Foreign Workers ('000)	2005	2006	2007	2008	2009	2010	2011	2012
							6.9	

Emigration from the Lao People's Democratic Republic to OECD Countries

Stocks of Persons Born in the Lao People's Democratic Republic Living in OECD Countries	2000			2010/11		
	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	132.8	131.4	264.1	127.9	134.8	262.7
Recent Emigrants Age 15+ Years (%)	4.4	5.8	10.2	2.4	4.9	7.3
Age 15–24 Years (% of population age 15+ years)	13.8	13.7	13.8	2.9	3.5	3.2
Age 25–64 Years (% of population age 15+ years)	81.2	79.0	80.1	88.0	86.4	87.2
Total Emigration Rate (%)	8.3	8.1	8.2	6.0	6.2	6.1
Emigration Rate of the Highly Educated (%)	23.8	29.2	25.9	13.8	16.6	15.0

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**3.5**	**3.0**	**2.5**	**2.5**	**2.5**	**2.5**	**2.2**	**2.7**
Japan	0.9	0.9	0.9	0.8	0.8	0.9	0.7	1.2
United States	2.2	1.7	1.2	1.0	0.9	0.9	0.8	0.9
Korea, Republic of	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2
France	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Australia	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total	**0.68**	**0.72**	**0.69**	**0.75**	**0.73**	**0.73**	**0.72**	**0.77**
Australia							0.19	0.22
Japan							0.22	0.20
Korea, Republic of							0.08	0.07

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total								

Flows of Workers Deployed (5 main destinations, '000)	2009	2010	2011	2012	2013	2014	2015	2016
Total	**4.0**	**18.6**	**33.6**	**7.4**	**22.5**	**8.3**	**50.7**	**58.3**
Thailand			8.4		13.6			

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	0.01	–1.983	–5.117	–6.172	–2.462	–2.236	–2.045	–1.886

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	38	42	110	59	60	60	93	95

MALAYSIA

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	23.4	6,939	8.9	Employment–Population Ratio (age 15+ years), 2014	58.4
2015	30.3	10,877	5.0	Unemployment (% of labor force), 2014	2.0

Immigration in Malaysia

	Stock of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	1,277	5.45	44	24.6	72.9	91.3	5.9
2015	2,514	8.29	39	17.5	80.8		

Stocks of Foreign Workers by Sector, 2016	Total	Agriculture, Forestry, and Fishing	Industry	Services
Number of Foreign Workers ('000)	2,205	600.4	800.1	804.8
% of Total Employment	0.1			

Stocks of International Students ('000)	2007	2008	2009	2010	2011	2012	2013	2014
	30.6	41.3	57.8	64.7	63.6	56.2	40.5	35.6

Inflows of Foreign Workers ('000)	2009	2010	2011	2012	2013	2014	2015	2016
	29.1	62.7	79.3	69.8	79.8	77.8	70.7	45.6

Emigration from Malaysia to OECD Countries

	2000			2010/11		
Stocks of Persons Born in Malaysia Living in OECD Countries	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	98.6	115.7	214.3	131.9	161.3	293.2
Recent Emigrants Age 15+ Years ('000)	16.9	18.8	35.7	28.0	32.9	60.9
Age 15–24 Years (% of population age 15+ years)	23.9	19.0	21.2	18.6	14.8	16.5
Age 25–64 Years (% of population age 15+ years)	71.2	75.3	73.5	72.8	76.4	74.8
Total Emigration Rates (%)	1.2	1.5	1.4	1.3	1.5	1.4
Emigration Rates of Highly Educated (%)	5.7	6.7	6.2	5.1	5.3	5.2

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**24.9**	**20.7**	**22.5**	**17.7**	**20.8**	**23.3**	**19.8**	**21.7**
United Kingdom	11.0	7.0	9.0	4.0	6.0	9.0	6.0	8.0
Australia	5.1	5.4	4.9	5.0	5.4	5.6	4.5	4.0
United States	1.9	2.0	1.7	2.3	2.6	2.5	2.6	2.7
Japan	2.6	2.3	2.3	2.2	2.5	2.1	2.2	2.3
Korea, Republic of	0.4	0.4	0.6	0.6	0.7	1.0	1.2	1.3

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total	**37.9**	**40.8**	**43.3**	**46.6**	**46.7**	**46.1**	**44.1**	**45.8**
United Kingdom							13.3	15.6
Australia							15.5	15.4
United States							6.5	6.2

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2005	2006	2007	2008	2009	2010	2011	2012
Total								

Flows of Workers Deployed (5 main destinations, '000)	2009	2010	2011	2012	2013	2014	2015	2016
Total								

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	5.13	3.07	3.60	3.99	4.79	3.06	1.58	1.48

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	1,131	1,103	1,211	1,294	1,423	1,573	1,643	1,586

MONGOLIA

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	2.4	1,600	1.1	Employment-Population Ratio (age 15+ years), 2014	60.3
2015	3.0	3,944	2.3	Unemployment (% of labor force), 2014	4.8

Immigration in Mongolia

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	8	0.34	44	15.7	80.8		
2015	18	0.60	27	12.1	84.4		

Stocks of Foreign Workers by Sector, 2015	Total	Agriculture and Fishing	Manufacturing	Construction	Services
Number of Foreign Workers ('000)	6.8		0.9	1.9	
% of Total Employment	0.6		1.2	2.1	

Stocks of International Students ('000)	2007	2008	2009	2010	2011	2012	2013	2014
	1.1	1.2	1.1	1.0	1.0	1.1	1.1	1.1

Inflows of Foreign Workers ('000)	2008	2009	2010	2011	2012	2013	2014	2015

Emigration from Mongolia to OECD Countries

	2000			2010/11		
Stocks of Persons Born in Mongolia Living in OECD Countries	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	1.8	2.6	4.4	8.5	14.1	22.6
Recent Emigrants Age 15+ Years ('000)						
Age 15–24 Years (% of population age 15+ years)			27.2			23.6
Age 25–64 Years (% of population age 15+ years)			70.3			75.3
Total Emigration Rates (%)		0.3	0.3		1.4	1.1
Emigration Rates of the Highly Educated (%)		1.5	1.3		3.9	2.9

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**15.4**	**9.8**	**9.9**	**8.8**	**10.5**	**8.9**	**9.3**	**14.8**
Korea, Republic of	8.1	5.3	5.4	4.3	5.7	4.3	4.0	8.3
Japan	1.3	1.2	1.2	1.3	1.5	1.5	2.0	2.3
Germany	0.4	0.4	0.5	0.5	0.5	0.6	1.0	1.3
United States	0.7	0.8	0.6	0.8	0.7	0.7	0.7	0.6
Sweden	0.1	0.2	0.4	0.6	0.5	0.4	0.4	0.3

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2012	2014
Total						**6.6**	**6.6**	**7.2**
Korea, Republic of							2.5	2.2
United States							1.3	1.3
Russian Federation							n.a.	1.1

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2005	2006	2007	2008	2009	2010	2011	2012
Total								

Flows of Workers Deployed (5 main destinations, '000)	2006	2007	2008	2009	2010	2011	2012	2013
Total								

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	0.00	–7.90	–4.50	–1.20	–1.10	–1.10	–1.00	–0.90

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	200	266	279	320	256	255	270	263

NEPAL

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	23.7	459	6.2	Employment–Population Ratio (age 15+ years), 2014	81.0
2015	28.5	690	3.4	Unemployment (% of labor force), 2014	2.7

Immigration in Nepal

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	718	3.02	66	25.0	69.2		
2015	518	1.82	69	23.0	69.9		

Stocks of Foreign Workers by Sector, 2011	Total	Agriculture and Fishing	Manufacturing	Construction	Services
Number of Foreign Workers ('000)					
% of Total Employment					

Stocks of International Students ('000)	2006	2007	2008	2009	2010	2011	2012	2013
				0.1		0.1		

Inflows of Foreign Workers ('000)	2006	2007	2008	2009	2010	2011	2012	2013

Emigration from Nepal to OECD Countries

	2000			2010/11		
Stocks of Persons Born in Nepal Living in OECD Countries	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)			23.9	86.0	66.6	152.5
Recent Emigrants Age 15+ Years ('000)			8.7	45.8	35.9	81.6
Age 15–24 Years (% of population age 15+ years)			24.0	25.4	26.6	25.9
Age 25–64 Years (% of population age 15+ years)			75.0	72.9	72.1	72.5
Total Emigration Rates (%)			0.2	1.0	0.8	0.9
Emigration Rates of the Highly Educated (%)			2.2	7.5	11.9	8.8

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**18.7**	**23.3**	**25.0**	**29.9**	**33.4**	**38.7**	**42.6**	**46.7**
United States	4.1	4.5	7.1	10.2	11.3	13.0	12.4	12.9
Japan	3.6	3.6	2.9	3.5	4.8	8.3	11.5	13.4
Korea, Republic of	2.4	2.6	2.7	4.3	6.9	6.0	6.8	6.5
Australia	0.9	1.0	1.3	2.1	2.5	4.1	4.4	4.2
United Kingdom	4.0	8.0	6.0	5.0	2.0	1.0	1.0	2.0

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total							**23.9**	**26.2**
Australia							7.2	9.2
United States							8.5	7.8
Japan							2.4	3.1

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2016
Total								

Flows of Workers Deployed (5 main destinations, '000)	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Total	**294.1**	**354.7**	**384.7**	**450.9**	**519.6**	**499.6**	**418.7**
Malaysia	111.4	106.0	96.3	158.7	210.0	196.5	61.0
Qatar	25.6	35.9	44.9	103.9	128.6	124.1	129.0
Saudi Arabia	59.5	62.5	68.1	96.9	86.6	96.9	138.5
United Arab Emirates	17.8	24.0	34.5	58.6	55.4	53.1	52.8
Kuwait	2.3	8.0	9.2	17.4	20.2	9.6	10.0

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	–2.40	0.80	–4.10	–7.50	–7.80	–2.70	–2.20	–2.10

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	2,983	3,464	4,217	4,793	5,589	5,770	6,730	6,276

PAKISTAN

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	138.3	850	4.3	Employment–Population Ratio (age 15+ years), 2014	51.7
2015	188.9	1,152	5.5	Unemployment (% of labor force), 2014	5.2

Immigration in Pakistan

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	4,182	3.02	46	18.3	60.5	n.a.	n.a.
2015	3,629	1.92	49	17.5	60.5		

Stocks of Foreign Workers by Sector, 2010	**Total**
Number of Foreign Workers ('000)	
% of Total Employment	

Stocks of International Students	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**

Inflows of Foreign Workers ('000)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**

Emigration from Pakistan to OECD Countries

	2000			2010/11			
Stocks of Persons Born in Pakistan Living in OECD Countries	Men	Women	Total	Men	Women	Total	
Emigrant Population Age 15+ Years ('000)	375.0	293.7	668.7	669.6	514.4	1,183.9	
Recent Emigrants Age 15+ Years ('000)	79.8	60.4	140.2	147.6	105.4	253.0	
Age 15–24 Years (% of population age 15+ years)	13.9	15.4	14.5	14.3	13.7	14.0	
Age 25–64 Years (% of population age 15+ years)	80.3	78.2	79.3	79.5	79.0	79.3	
Total Emigration Rates (%)	0.9	0.7	0.8	1.1	0.9	1.0	
Emigration Rates of the Highly Educated (%)	3.1	3.6	3.3	6.1	7.0	6.5	

Legal Migration Flows to OECD (5 main destinations, '000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total	**72.8**	**73.7**	**95.9**	**101.9**	**83.9**	**73.2**	**80.0**	**99.6**
Germany	2.2	2.8	3.3	5.4	6.5	8.0	9.5	24.5
United States	19.7	21.6	18.3	15.5	14.7	13.3	18.6	18.1
Italy	5.7	7.9	10.8	7.5	8.8	7.8	9.6	11.4
Canada	9.0	7.2	6.8	7.5	11.2	12.6	9.1	11.3
United Kingdom	17.0	17.0	30.0	43.0	19.0	10.0	11.0	8.0

Stocks of International Students (3 main destinations, '000)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total	**18.9**	**20.6**	**23.2**	**25.8**	**27.3**	**28.1**	**24.4**	**26.8**
United Kingdom							7.2	6.6
Australia							4.8	6.3
United States							4.6	4.7

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Total					**3,290.5**			
Saudi Arabia				1,200.0	1,500.0		1,700.0	
United Arab Emirates				738.0	1,014.1		1,200.0	
Oman				152.0	162.7		200.0	
Kuwait				150.0	149.1		150.0	
Qatar				83.0	85.0		n.a.	

Flows of Workers Deployed (5 main destinations, '000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total	**396.3**	**358.2**	**453.4**	**634.7**	**620.1**	**752.5**	**946.6**	**839.4**
United Arab Emirates	140.9	113.3	156.4	182.6	273.2	350.5	327.0	295.6
Saudi Arabia	201.8	189.9	222.3	358.6	270.5	312.5	522.8	462.6
Oman	34.1	37.9	53.5	69.4	47.8	39.8	47.8	45.1
Malaysia	2.4	3.3	2.1	1.3	2.0	20.6	20.2	10.6
Qatar	4.1	3.0	5.1	7.3	8.1	10.0	12.7	9.7

Net Migration Rate (per '000)	**1985–1990**	**1990–1995**	**1995–2000**	**2000–2005**	**2005–2010**	**2010–2015**	**2015–2020**	**2020–2025**
	0.27	–2.355	–0.277	–2.325	–2.231	–1.81	–1.152	–0.753

Remittance Inflows (current $ million)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016e**
	8,717	9,690	12,263	14,007	14,629	17,066	19,306	19,847

PHILIPPINES

Key Indicators

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	77.9	1,608	4.4	Employment–Population Ratio (age 15+ years), 2014	60.6
2015	100.7	2,635	5.8	Unemployment (% of labor force), 2014	7.1

Immigration in the Philippines

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	318	0.41	49	18.5	65.0	54.8	11.9
2015	212	0.21	48	19.9	65.0		

Stocks of Foreign Workers by Sector, 2014	**Total**
Number of Foreign Workers ('000)	91.4
% of Total Employment	0.1

Flows of International Students ('000)	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	
						4.3	3.3	

Inflows of Foreign Workers ('000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
	12.2	14.3	17.1	21.0	22.7	24.3	28.4	42.0

Emigration from the Philippines to OECD Countries

	2000			2010/11			
Stocks of Persons Born in the Philippines Living in OECD Countries	**Men**	**Women**	**Total**	**Men**	**Women**	**Total**	
Emigrant Population Age 15+ Years ('000)	745.8	1,192.1	1,938.0	1,141.4	1,872.3	3,013.7	
Recent Emigrants Age 15+ Years ('000)	107.5	168.8	276.4	170.4	275.4	445.8	
Age 15–24 Years (% of population age 15+ years)	13.9	9.6	11.3	12.6	8.0	9.7	
Age 25–64 Years (% of population age 15+ years)	75.7	80.5	78.6	75.9	80.0	78.4	
Total Emigration Rates (%)	3.1	4.8	3.9	3.6	5.8	4.8	
Emigration Rates of the Highly Educated (%)	5.3	8.1	6.8	6.2	9.6	8.1	

Legal Migration Flows to OECD Countries (5 main destinations, '000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total	**159.6**	**164.8**	**167.4**	**161.3**	**159.6**	**151.9**	**160.3**	**181.2**
United States	54.0	60.0	58.2	57.0	57.3	54.4	50.0	56.5
Canada	24.9	28.6	38.6	36.8	34.3	29.5	40.0	50.8
Japan	21.0	15.8	13.3	13.6	15.4	16.4	19.9	24.0
Australia	7.1	8.9	10.3	10.7	12.8	11.0	10.3	11.9
Korea, Republic of	9.1	8.9	9.1	9.6	9.9	12.0	10.7	9.9

Stocks of International Students (3 main destinations, '000)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total	**7.1**	**7.1**	**7.8**	**8.8**	**9.8**	**10.3**	**9.8**	**10.9**
Australia							2.8	4.2
United States							3.1	2.9
United Kingdom							0.8	0.7

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total	**1,912.0**	**2,043.0**	**2,158.0**	**2,220.0**	**2,285.0**	**2,320.0**	**2,447.0**	**2,240.0**
Saudi Arabia	413.0	451.5	487.7	457.3	505.0	575.4	604.4	533.1
United Arab Emirates	294.4	308.5	315.1	330.8	351.9	361.9	379.3	356.2
Kuwait	70.7	837.6	92.8	93.2	105.1	123.0	141.9	143.4
Qatar	116.6	128.7	148.9	144.3	134.8	123.0	134.6	138.9
Hong Kong, China	114.7	116.5	114.4	122.1	118.8	116.0	144.4	125.4

Flows of Workers Deployed (5 main destinations, '000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total	**870.4**	**991.1**	**1,123.7**	**1,318.7**	**1,435.2**	**1,469.2**	**1,430.9**	**1,437.9**
Saudi Arabia	275.9	291.4	293.0	316.7	330.0	382.6	402.8	406.1
United Arab Emirates	193.8	196.8	201.2	235.8	259.6	261.1	246.2	227.1
Singapore	41.7	54.4	70.3	146.6	172.7	173.7	140.2	141.5
Qatar	84.3	89.3	87.8	100.5	104.6	94.2	114.5	133.2
Hong Kong, China	78.3	100.1	101.3	129.6	131.7	130.7	105.7	85.7

Net Migration Rate (per '000)	**1985–1990**	**1990–1995**	**1995–2000**	**2000–2005**	**2005–2010**	**2010–2015**	**2015–2020**	**2020–2025**
	–1.028	–2.114	–2.108	–2.76	–2.752	–1.434	–1.131	–0.697

Remittance Inflows (current $ million)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016e**
	19,077.7	20,562.9	21,922.2	23,352.2	25,368.8	27,272.7	28,482.7	29,878.4

SINGAPORE

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	4.0	33,390	8.9	Employment–Population Ratio (age 15+ years), 2014	65.6
2015	5.5	51,855	2.0	Unemployment (% of labor force), 2014	3.0

Immigration in Singapore

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	1,352	34.50	55	15.0	73.4		
2015	2,544	45.39	56	12.5	78.3		

Stocks of Foreign Workers by Sector, 2015	Total	Agriculture, Forestry, and Fishing	Industry	Services
Number of Foreign Workers ('000)	1,393	4.8	618.3	769.9
% of Total Employment	0.5			

Stocks of International Students	2006	2007	2008	2009	2010	2011	2012	2013
				40.4	48.6	47.9	53.0	48.9

Inflows of Foreign Workers ('000)	2006	2007	2008	2009	2010	2011	2012	2013

Emigration from Singapore to OECD Countries

	2000			2010/11			
Stocks of Persons Born in Singapore Living in OECD Countries	Men	Women	Total	Men	Women	Total	
Emigrant Population Age 15+ Years ('000)	48.5	58.1	106.6	60.9	75.8	136.7	
Recent Emigrants Age 15+ Years ('000)	9.1	10.8	19.9	11.2	13.9	25.1	
Age 15–24 Years (% of population age 15+ years)	19.3	17.0	18.0	18.2	16.2	17.1	
Age 25–64 Years (% of population age 15+ years)	76.2	78.0	77.2	75.2	76.1	75.7	
Total Emigration Rates (%)	3.0	3.6	3.3	2.9	3.4	3.2	
Emigration Rates of the Highly Educated (%)	8.6	11.3	9.9	8.3	10.9	9.5	

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**6.1**	**5.1**	**5.9**	**8.8**	**9.4**	**7.8**	**8.7**	**7.2**
Australia	2.4	2.1	1.9	1.5	1.8	2.0	1.9	1.9
United Kingdom	0.0	0.0	0.0	4.0	4.0	2.0	3.0	1.0
United States	0.9	0.8	0.8	0.7	0.7	0.8	0.8	0.8
Korea, Republic of	0.2	0.2	0.4	0.4	0.6	0.6	0.6	0.6
Japan	0.6	0.4	0.5	0.4	0.5	0.5	0.5	0.6

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total	**17.9**	**17.5**	**17.7**	**18.8**	**19.2**	**20.0**	**21.3**	**21.8**
Australia							9.1	8.8
United Kingdom							5.9	6.8
United States							4.4	4.3

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**181.9**	**180.7**	**184.4**	**192.2**	**200.0**	**207.0**	**212.2**	**212.5**

Flows of Workers Deployed (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total								

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	8.37	15.32	13.80	20.71	18.77	14.96	10.28	4.84

Remittance Inflows (current $ million)	2008	2009	2010	2011	2012	2013	2014	2015e
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

SRI LANKA

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	18.7	1,837	6.0	Employment–Population Ratio (age 15+ years), 2014	52.4
2015	21.0	3,638	4.8	Unemployment (% of labor force), 2014	4.6

Immigration in Sri Lanka

	Stock of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	40	0.21	45	11.2	64.2	41.8	13.4
2015	39	0.19	48	27.1	55.1		

Stocks of Foreign Workers by Sector, 2016	Total	Professional	Middle Level	Clerical	Skilled Labor	Unskilled Labor	Housemaids	
Number of Foreign Workers ('000)	242.9	6.6	8.3	10.9	80.4	71.7	65.1	
% of Total Employment								

Stocks of International Students	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
	0.3	0.1			0.4	0.4	0.8	0.9

Inflows of Foreign Workers ('000)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	

Emigration from Sri Lanka to OECD Countries

	2000			2010/11			
Stocks of Persons Born in Sri Lanka Living in OECD Countries	Men	Women	Total	Men	Women	Total	
Emigrant Population Age 15+ Years ('000)	169.2	147.7	317.0	303.4	275.1	578.5	
Recent Emigrants Age 15+ Years ('000)	26.7	30.5	57.2	54.8	54.3	109.1	
Age 15–24 Years (% of population age 15+ years)	14.6	15.2	14.9	10.6	10.2	10.4	
Age 25–64 Years (% of population age 15+ years)	79.8	76.8	78.4	82.5	80.7	81.7	
Total Emigration Rates (%)	2.4	2.1	2.3	3.8	3.4	3.6	
Emigration Rates of the Highly Educated (%)	27.2	28.7	27.7	8.0	5.6	6.7	

Legal Migration Flows to OECD Countries (5 main destinations, '000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total	**33.7**	**33.7**	**41.7**	**36.0**	**34.7**	**30.1**	**30.3**	**39.9**
Italy	6.6	6.3	7.1	6.8	7.1	6.3	5.3	4.8
Korea, Republic of	4.8	1.7	4.2	5.9	4.7	5.3	4.8	5.5
Australia	4.8	5.3	5.8	4.9	6.1	5.7	4.6	3.9
Japan	1.1	1.3	1.2	1.4	1.5	1.5	2.2	3.1
United Kingdom	5.0	7.0	11.0	6.0	4.0	1.0	2.0	3.0

Stocks of International Students (3 main destinations, '000)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total	**9.3**	**11.1**	**12.2**	**13.2**	**13.4**	**13.2**	**12.2**	**12.4**
Australia							4.0	4.4
United States							2.9	2.8
United Kingdom							2.9	2.5

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Total	**1,221.8**	**1,446.1**	**1,642.5**	**1,792.4**	**1,831.4**	**1,932.2**	**n.a.**	**n.a.**
Saudi Arabia	380.8		517.7		600.0			
Kuwait	202.1		308.5		200.0			
United Arab Emirates	171.6		238.6		150.0			
Qatar	118.6		133.4					
Lebanon	93.4		117.0					

Flows of Workers Deployed (5 main destinations, '000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016e**
Total	**247.1**	**267.5**	**263.0**	**282.4**	**293.2**	**300.7**	**263.4**	**242.9**
Saudi Arabia	77.8	70.8	68.6	98.0	80.8	80.5	74.9	63.4
Qatar	43.9	54.7	52.6	57.5	80.7	84.6	65.1	59.5
United Arab Emirates	39.6	42.3	39.3	38.3	48.5	50.3	43.7	40.1
Kuwait	42.4	48.1	50.7	44.2	42.7	43.5	38.5	32.4
Oman	5.3	6.4	5.4	4.9	5.3	5.8	7.1	9.7

Net Migration Rate (per '000)	**1985–1990**	**1990–1995**	**1995–2000**	**2000–2005**	**2005–2010**	**2010–2015**	**2015–2020**	**2020–2025**
	–1.641	–2.877	–4.314	–1.031	–3.769	–2.991	–2.263	–2.2

Remittance Inflows (current $ million)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016e**
	3,337	4,123	5,153	6,000	6,422	7,036	6,980	7,252

TAIPEI,CHINA

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	22.2	n.a.	6.4	Employment–Population Ratio (age 15+ years), 2013	n.a.
2015	23.5	n.a.	0.7	Unemployment (% of labor force), 2015	3.8

Immigration in Taipei,China

	Stocks of Foreign Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	400	1.8	52	n.a.	n.a.	n.a.	n.a.
2010	474	2.0	62				

Stocks of Foreign Workers by Sector, 2016	Total	Agriculture	Manufacturing	Construction	Social Workers (nurses and homemaids)
Number of Foreign Workers ('000)	624.8	10.9	370.2	6.4	237.3
% of Total Employment					

Stocks of International Students ('000)	2005	2006	2007	2008	2009	2010	2011	2012
		3.9	5.3	6.3	7.8	8.8	10.1	11.6

Inflows of Foreign Workers ('000)	2005	2006	2007	2008	2009	2010	2011	2012

Emigration from Taipei,China to OECD Countries

	2000			2010/11		
Stocks of Persons Born in Taipei,China Living in OECD Countries	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	191.6	238.3	429.9	203.6	266.8	470.4
Recent Emigrants Age 15+ Years ('000)	42.5	54.0	96.4	42.9	58.9	101.8
Age 15–24 Years (% of population age 15+ years)	22.4	17.4	19.6	12.1	8.8	10.2
Age 25–64 Years (% of population age 15+ years)	73.7	78.5	76.4	79.4	83.7	81.8
Total Emigration Rates (%)	2.2	2.7	2.4	2.2	2.6	2.4
Emigration Rates of the Highly Educated (%)	5.3	7.0	6.0	4.0	4.9	4.4

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**22.5**	**24.2**	**20.7**	**18.3**	**17.5**	**22.2**	**18.3**	**21.9**
Japan	5.5	5.4	6.6	5.6	6.6	6.6	7.7	10.8
United States	9.1	8.0	6.7	6.2	5.3	5.4	4.7	4.9
Korea, Republic of	1.4	1.5	1.4	1.6	1.6	2.0	2.0	2.0
Australia	1.0	0.8	0.8	0.8	0.8	1.0	0.9	1.0
Canada	3.0	2.5	2.6	1.7	1.0	0.8	0.7	0.6

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total	**34.8**	**31.0**						
United States								
United Kingdom								
Australia								

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2005	2006	2007	2008	2009	2010	2011	2012
Total								

Flows of Workers Deployed (5 main destinations, '000)	2006	2007	2008	2009	2010	2011	2012	2013
Total								

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

THAILAND

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	62.7	3,473	4.5	Employment–Population Ratio (age 15+ years), 2014	71.5
2015	68.0	5,775	2.8	Unemployment (% of labor force), 2014	0.9

Immigration in Thailand

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	1,258	2.01	49	33.0	60.6	84.7	9.9
2015	3,913	5.76	50	17.7	77.5		

Stocks of Foreign Workers by Sector, 2016	Total	Manufacturing	Construction	Other Service Activities	Agriculture, Forestry, and Fishing	Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	Real Estate Activities	Activities of Households as Employers
Number of Foreign Workers ('000)	1,476.8	618.9	254.8	223.0	149.7	69.3	42.7	42.5
% of Total Employment	3.9	11.9	18.0	20.0	0.9	1.5	51.7	8.4
Stocks of International Students ('000)	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
	4.3	5.6	8.5	10.9	16.4	19.1	20.2	20.3
Inflows of Foreign Workers ('000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
	64.8	79.8	91.2	107.7	117.9	120.6	125.1	129.0

Emigration from Thailand to OECD Countries

	2000			2010/11		
Stocks of Persons Born in Thailand Living in OECD Countries	Men	Women	Total	Men	Women	Total
Emigrant Population Age 15+ Years ('000)	90.8	180.0	270.8	147.9	374.7	522.6
Recent Emigrants Age 15+ Years ('000)	15.8	33.9	49.7	22.7	82.9	105.7
Age 15–24 Years (% of population age 15+ years)	38.7	21.8	27.5	27.6	12.1	16.5
Age 25–64 Years (% of population age 15+ years)	59.6	76.3	70.7	68.9	84.8	80.3
Total Emigration Rates (%)	0.4	0.7	0.6	0.6	1.4	1.0
Emigration Rates of the Highly Educated (%)	2.4	3.1	2.8	2.0	3.3	2.7

Legal Migration Flows to OECD Countries (5 main destinations, '000)	2008	2009	2010	2011	2012	2013	2014	2015
Total	**47.4**	**47.4**	**51.0**	**53.6**	**58.8**	**61.4**	**86.8**	**63.6**
Korea, Republic of	8.6	5.8	6.9	10.3	13.8	18.3	48.3	20.1
Japan	10.5	9.9	10.9	13.6	15.4	15.4	14.3	14.5
United States	6.6	10.4	9.4	10.0	9.5	7.6	6.2	7.5
Germany	3.2	3.4	3.3	3.2	3.3	3.2	3.1	6.1
United Kingdom	4.0	4.0	6.0	3.0	4.0	4.0	3.0	6.0

Stocks of International Students (3 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2014
Total	**22.3**	**22.9**	**22.7**	**23.1**	**23.8**	**23.2**	**21.2**	**21.5**
United States							7.0	7.1
United Kingdom							6.0	6.2
Australia							3.2	2.9

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	2007	2008	2009	2010	2011	2012	2013	2016
Total	**450.0**				**997.3**	**1,039.0**		**153.3**
Taipei,China								74.2
Singapore								

Flows of Workers Deployed (5 main destinations, '000)	2009	2010	2011	2012	2013	2014	2015	2016
Total	**147.7**	**143.8**	**147.6**	**134.1**	**130.5**	**119.5**	**117.3**	**114.4**
Taipei,China	35.9	40.9	47.8	39.1	34.6	37.1	34.7	35.0
Singapore	14.0	12.7	11.5	11.9	10.7	8.2	7.3	5.8
United Arab Emirates	9.6	8.3	9.6	7.2	5.5	5.0	4.6	4.0
Malaysia	3.9	3.6	4.3	4.4	3.9	3.2	3.3	3.3
Hong Kong, China				2.5	2.2	2.2	2.2	2.2

Net Migration Rate (per '000)	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
	1.86	–3.833	1.96	3.45	–2.152	0.30	0.29	0.28

Remittance Inflows (current $ million)	2009	2010	2011	2012	2013	2014	2015	2016e
	1,748	2,306	3,060	3,626	4,219	3,384	5,895	6,025

VIET NAM

KEY INDICATORS

	Population (million)	GDP per Capita (constant 2010 $)	GDP Growth Rate (annual, %)	Labor Market Indicators (%)	
2000	77.6	788	6.8	Employment–Population Ratio (age 15+ years), 2014	75.9
2015	91.7	1,685	6.7	Unemployment (% of labor force), 2014	2.3

Immigration in Viet Nam

	Stocks of Foreign-Born Population (age 0+)			Foreign-Born Population (age 15+ years)			
	Total ('000)	% of Population	% Women	% Age 15–24 Years	% Age 25–64 Years	% Low Educated	% Highly Educated
2000	57	0.07	42	24.7	70.2	n.a.	n.a.
2015	73	0.08	42	14.4	80.8		

Stocks of Foreign Workers by Sector, 2011	**Total**
Number of Foreign Workers ('000)	78.4
% of Total Employment	

Stocks of International Students	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
	3.2	3.4	4.2	3.3	3.7	4.0	3.6	2.5

Inflows of Foreign Workers ('000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
	43.0	52.6	55.4	56.9	74.0	78.4	76.3	83.6

Emigration from Viet Nam to OECD Countries

	2000				2010/11			
Stocks of Persons Born in Viet Nam Living in OECD Countries	**Men**	**Women**	**Total**		**Men**	**Women**	**Total**	
Emigrant Population Age 15+ Years ('000)	747.4	768.6	1515.9		922.8	1016.1	1938.9	
Recent Emigrants Age 15+ Years ('000)	63.0	86.1	149.1		55.1	85.1	140.2	
Age 15–24 Years (% of population age 15+ years)	12.5	12.1	12.3		8.3	8.2	8.2	
Age 25–64 Years (% of population age 15+ years)	81.1	79.9	80.5		81.3	80.5	80.9	
Total Emigration Rates (%)	2.8	2.8	2.8		2.7	2.9	2.8	
Emigration Rates of the Highly Educated (%)	17.1	19.8	18.2		10.1	11.1	10.6	

Legal Migration Flows to OECD Countries (5 main destinations, '000)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Total	**98.7**	**77.1**	**88.0**	**94.8**	**93.7**	**102.3**	**126.5**	**152.1**
Japan	12.5	10.9	11.9	13.9	19.5	31.7	43.0	65.9
United States	31.5	29.2	30.6	34.2	28.3	27.1	30.3	30.8
Korea, Republic of	24.0	16.4	22.9	27.9	24.7	22.2	28.0	30.2
Germany	4.0	4.5	4.3	4.2	3.9	4.1	5.1	6.1
Australia	3.0	3.3	3.9	4.8	4.8	5.7	5.2	5.1

Stock of International Students (3 main destinations, '000)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total	**20.2**	**24.6**	**29.5**	**37.3**	**41.3**	**46.3**	**50.9**	**53.6**
United States							15.4	15.0
Australia							12.4	12.9
Japan							4.2	6.1

Emigration to Non-OECD Destinations

Stocks of Workers Overseas (5 main destinations, '000)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total	**500.0**							
Taipei,China	90.0							200.0
Malaysia	75.0			74.8			70.0	
Russian Federation	72.0							
Lao People's Democratic Republic	14.5					30.0		
Saudi Arabia	11.5							

Flows of Workers Deployed (5 main destinations, '000)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total	**73.0**	**85.5**	**88.3**	**80.3**	**88.2**	**106.8**	**116.0**	**126.3**
Taipei,China	21.7	28.5	38.8	30.5	46.4	62.1	67.1	68.2
Malaysia	2.8	11.7	10.0	9.3	7.6	5.1	7.4	2.1
Algeria	0.0	0.2	0.2	0.0	0.2	0.5	2.0	1.2
Macau, China	3.3	3.1	2.0	2.3	2.3	2.5	0.5	0.3
United Arab Emirates	4.7	5.2	1.2	1.7	2.1	0.8	0.3	0.1

Net Migration Rate (per '000)	**1985–1990**	**1990–1995**	**1995–2000**	**2000–2005**	**2005–2010**	**2010–2015**	**2015–2020**	**2020–2025**
	–1.018	–1.088	–0.824	–1.863	–2.018	–0.439	–0.42	–0.406

Remittance Inflows (current $ million)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016e**
	6,020	8,260	8,600	10,000	11,000	12,000	13,000	13,383

GENERAL NOTES

1. All tables with top three/five destinations are ranked by decreasing order of frequency for the last year available.
2. Data on remittances for 2016 are estimates.
3. "n.a." data not available.
4. Educational attainment levels are defined according to the International Standard Classification of Education (ISCED 1997).
   "Low-educated" persons have completed at best lower secondary education (ISCED 0/1/2).
   "Medium-educated" have completed at best post-secondary non-tertiary education (ISCED 3/4).
   "Highly-educated" persons hold at least a first stage tertiary degree (ISCED 5/6).
5. The definition of non-citizen students was only used for the countries for which no data on non-resident students were available.
6. Data on international students in the Asian countries are only for degree programs (undergraduate and upward) and do not include short-term language courses.
7. Stock of foreign workers in [country] by sector reports figures for the four largest employers of foreign workers.

DATA SOURCES

Data	Source
Immigrant Population in [Country]	
Total Immigrant Population Age 0+ ('000)	United Nations, Department of Economic and Social Affairs. 2015. Trends in International Migrant Stock: The 2015 revision (United Nations database, POP/DB/MIG/Stock/Rev.2015).
% of Total Population 0+	United Nations, Department of Economic and Social Affairs. 2015. Trends in International Migrant Stock: The 2015 revision (United Nations database, POP/DB/MIG/Stock/Rev.2015).
Age Structure (2000, %) (population age 15+ years):	United Nations, Department of Economic and Social Affairs. 2015. Trends in International Migrant Stock: The 2015 revision (United Nations database, POP/DB/MIG/Stock/Rev.2015).
Education (2000, %) (population age 15+ years):	DIOC-E 2000.
Emigrant Population: Persons Born in [Country] Living Abroad	DIOC-E 2000, DIOC 2000, DIOC 2010, Barro and Lee (2010) and Lutz et al. (2010).
Stocks of International Students	UIS Education database unless otherwise specified. Break in series in 2013.
Legal Migrant Flows	OECD International Migration Database (IMD)
International Students from [Country] in OECD Countries	OECD Education and Skills database
Net Migration Rate	United Nations, Department of Economic and Social Affairs, Population Division. 2015. World Population Prospects: The 2015 Revision, custom data acquired via website.
Remittance Inflows	World Bank

METADATA		
Emigration to Non-OECD Destinations	**Comments**	**Source**
Bangladesh		
Stocks of Workers Overseas in Non-OECD Countries		Population and Housing Census 2011; ILO and Department of Employment and Manpower Cambodia. 2010. Policy on Labour Migration for Cambodia. June (original source: Community Welfare Attache of the respective Middle East country).
Flows of Workers Deployed to Non-OECD Countries	All totals include the category "others."	Bureau of Manpower, Employment and Training (BMET)
Cambodia		
Stocks of Workers Overseas in Non-OECD Countries		ILO and Department of Employment and Manpower Cambodia. 2010. Policy on Labour Migration for Cambodia. June (original source: Community Welfare Attache of the respective Middle East country).
Flows of Workers Deployed to Non-OECD Countries		ILO ILMS
China, People's Republic of		
Stocks of Foreign Workers		Country presentation at ADBI-OECD roundtable (Ministry of Human Resources and Social Security).
International Students in OECD countries	Figures include those for Taipei,China.	
Stocks of Workers in Non-OECD Countries		Country report. 2008. *Asian and Pacific Migration Journal* Vol. 17, Nos. 3–4 (original source: Ministry of Commerce).
Flows of Workers Deployed to Non-OECD Countries		Ministry of Commerce
India		
Stocks of Workers Overseas in Non-OECD Countries		Ministry of Overseas Indian Affairs (MOIA). Annual Reports.
Flows of Workers Deployed to Non-OECD Countries		MOIA Annual Reports; Ministry of External Affairs, Department of Overseas Employment database. emigrate.gov.in; Country wise Emigration Clearances.
Indonesia		
Stocks of Foreign Workers	Trade includes wholesale and retail trade, hotels, and restaurants.	Ministry of Manpower and Transmigration
Stocks of Workers in Non-OECD Countries		(i) ILO News. 2010. News Release. 17 December. Based on BNP2TKI, available at http://www.ilo.org/jakarta/info/public/pr/WCMS_150358/lang--en/index.htm; (ii) Ministry of Manpower and Transmigration. Cited in IOM. 2010. *Labour Migration from Indonesia*; (iii) World Bank. Presentation on Malaysia-Indonesia Remittance Corridor; News reports.
Flows of Workers Deployed to Non-OECD Countries	All totals include the category "others."	BNP2TKI (Placement and Protection Agency)

Lao People's Democratic Republic		
Stocks of Foreign Workers		IOM. http://www.iom.int/cms/en/sites/iom/home/where-we-work/asia-and-the-pacific/lao-pdr.html.
Inflows of Foreign Workers	Number of work permits issued in 2011.	Department of Skills Development and Employment, Ministry of Labour and Social Welfare
Flows of Workers Deployed to Non-OECD Countries		ILO-ILMS
Malaysia		
Stocks of Foreign Workers	Figure for agriculture includes plantations.	ILO-ILMS
Mongolia		
Stocks of Foreign Workers		National Statistics Office of Mongolia, Mongolian Statistical Information Service
Nepal		
Flows of Workers Deployed to Non-OECD Countries		Department of Foreign Employment, for Nepalese Fiscal Years
Pakistan		
Stocks of Workers in Non-OECD Countries	Figures are for stocks of Pakistanis overseas (including workers, students, and other categories). We assume that for the Gulf countries, most of this figure represents migrant workers.	Bureau of Emigration and Overseas Employment
Flows of Workers Deployed		Bureau of Emigration and Overseas Employment
Philippines		
Inflows of Foreign Workers	New permits delivered to foreign workers.	ILO-ILMS
Stocks of Workers in Non-OECD Countries		Philippine Overseas Employment Administration
Flows of Workers Deployed to Non-OECD Countries		ILO-ILMS
Singapore		
Stocks of Foreign Workers		ILO-ILMS
Sri Lanka		
Stocks of Workers in Non-OECD Countries		Institute of Policy Studies. 2008. *International Migration Outlook, Sri Lanka* (original source: Bureau of Foreign Employment); Shaw, J. Sri Lanka Country Study (original source: SLBFE 2005).
Flows of Workers Deployed to Non-OECD Countries		Central Bank of Sri Lanka, Economic and Social Statistics of Sri Lanka.

Taipei,China		
Stocks of Foreign Workers		Bureau of Employment and Vocational Training
Stocks of International Students		Ministry of Education
International Students in OECD countries	Number of students obtaining visas from foreign nations.	Ministry of Education
Thailand		
Stocks of Foreign Workers		Department of Employment, Ministry of Labour
Inflows of Foreign Workers		Migration Information System in Asia (original source: Office of Foreign Workers' Administration)
Stocks of Workers in Non-OECD Countries	Includes illegal workers.	Bank of Thailand. 2009. Thailand's Experiences on Compilation of Compensation to Employee and Workers' Remittance statistics. Presentation, available online.
Flows of Workers Deployed to Non-OECD Countries		ILO-ILMS
Viet Nam		
Stocks of Foreign Workers		Ministry of Labor, Invalids and Social Affairs
Stocks of Workers in Non-OECD Countries		Ministry of Labor, Invalids and Social Affairs, country presentation at ADBI-OECD roundtable.
Flows of Workers Deployed to Non-OECD Countries		ILO-ILMS

ANNEX 2

COMPARATIVE TABLES

Table A2.1: Inflows from Asia to the Organisation for Economic Co-operation and Development by Nationality ('000s)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2014
Afghanistan	17	20	15	13	13	16	15	11	13	18	24	29	35	34	45	140
Azerbaijan	1	2	5	4	4	4	5	3	3	3	6	4	4	4	5	6
Bangladesh	23	24	19	22	30	37	42	34	40	50	50	50	42	43	47	51
Bhutan	0	0	0	0	0	0	0	0	1	3	9	14	13	11	9	7
Brunei Darussalam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cambodia	4	5	5	5	6	7	11	9	10	9	10	12	15	16	16	17
PRC	282	334	335	322	367	438	503	518	530	460	508	531	504	547	555	543
Georgia	1	2	7	7	8	11	10	9	8	8	8	9	10	11	12	14
Hong Kong, China	10	12	13	12	10	8	10	8	8	6	9	7	6	9	7	7
India	113	151	161	145	192	213	206	213	215	227	253	243	229	241	263	269
Indonesia	29	32	33	31	27	35	30	27	31	22	25	29	31	36	35	35
Japan	34	38	39	35	36	42	34	32	29	34	32	34	37	37	34	37
Kazakhstan	5	4	17	15	12	9	8	7	7	7	8	9	7	9	11	12
Korea, Rep. of	59	69	62	54	57	66	68	72	79	78	76	71	71	75	70	66
Kyrgyz Republic	1	1	3	3	3	3	3	4	3	3	4	3	3	3	3	4
Lao PDR	2	2	2	1	2	2	4	4	3	3	3	3	2	2	2	3
Malaysia	11	14	12	13	16	11	12	20	24	20	22	17	21	23	19	22
Maldives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mongolia	6	6	4	7	8	11	15	15	15	9	10	9	10	9	8	15
Myanmar	2	3	3	3	3	5	11	10	10	23	19	24	27	23	23	27
Nepal	4	3	5	6	8	9	14	17	19	23	25	30	33	39	42	47
Pakistan	54	59	49	47	73	74	83	74	76	77	100	106	84	73	78	100
Philippines	165	188	195	192	211	192	173	169	158	164	168	161	160	152	158	181
Singapore	6	6	6	5	6	7	7	7	7	5	7	9	9	8	9	7
Sri Lanka	23	21	22	24	23	28	28	21	33	33	41	36	35	30	29	31
Tajikistan	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2
Taipei,China	16	21	21	15	20	17	32	33	22	24	20	18	17	22	18	0
Thailand	32	35	34	35	36	47	51	48	47	47	50	53	59	61	87	64
Turkmenistan	0	0	0	0	0	1	1	1	1	1	2	1	1	1	0	1
Uzbekistan	8	6	8	11	8	9	11	12	20	13	16	16	19	19	21	21
Viet Nam	52	60	64	55	66	78	82	88	98	76	87	95	94	102	125	152
Total	**960**	**1,117**	**1,139**	**1,083**	**1,245**	**1,379**	**1,470**	**1,465**	**1,511**	**1,449**	**1,593**	**1,621**	**1,578**	**1,645**	**1,734**	**1,879**

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic.

Source: OECD International Migration Database.

Table A2.2: General Characteristics of Emigrants from Asia in the Organisation for Economic Co-operation and Development, 2010–2011

Country of Origin	Emigrant Population Age 15+ ('000)	Women (%)	Low Educated (%)	Highly Educated (%)	Age 15–24 Years (%)	Age 65+ (%)	Recent (Less than Age 5 Years) (%)
Afghanistan	394	43.3	45.3	23.0	24.6	5.9	19.7
Azerbaijan	86	56.6	22.1	43.6	17.0	11.4	17.9
Bangladesh	533	42.5	37.0	37.9	13.7	4.7	23.3
Bhutan	7	45.9	58.0	18.2	22.6	4.3	67.9
Brunei Darussalam	13	50.6	9.3	52.4	29.6	3.9	31.3
Cambodia	277	54.1	46.2	19.2	5.3	11.4	7.1
PRC	3,632	54.6	27.3	43.8	18.4	12.3	21.3
Georgia	180	58.7	28.2	33.2	11.0	13.1	20.0
Hong Kong, China	296	52.7	12.8	56.8	12.4	8.9	9.2
India	3,615	47.0	17.8	62.7	9.8	11.5	24.3
Indonesia	355	55.3	19.8	44.4	10.6	22.6	12.7
Japan	654	63.3	8.3	55.9	11.1	12.1	23.7
Kazakhstan	1,007	53.3	34.2	16.1	16.4	10.7	2.8
Korea, Rep. of	1,773	57.3	13.8	48.0	13.5	13.3	14.2
Kyrgyz Republic	18	65.8	14.6	54.3	19.1	2.7	30.6
Lao PDR	263	51.3	41.2	19.9	3.2	9.6	3.4
Malaysia	293	55.0	12.9	59.4	16.5	8.7	22.1
Maldives	2	38.4	16.8	31.4	13.0	7.2	43.8
Mongolia	23	62.5	16.0	46.3	24.6	1.5	45.8
Myanmar	125	49.9	38.6	35.1	15.0	13.2	36.2
Nepal	153	43.6	21.7	45.8	25.9	1.5	60.7
Pakistan	1,184	43.5	37.4	38.8	14.0	6.7	21.7
Philippines	3,015	62.1	13.2	52.3	9.7	11.8	15.0
Singapore	137	55.4	13.4	55.8	17.1	7.2	19.6
Sri Lanka	579	47.6	31.7	35.3	10.4	7.9	19.0
Tajikistan	13	53.0	13.7	46.7	18.8	7.0	9.7
Taipei,China	470	56.7	6.9	71.5	10.2	7.9	21.4
Thailand	523	71.7	35.3	31.5	16.5	3.3	21.9
Turkmenistan	12	64.3	26.3	38.9	19.9	7.7	36.4
Uzbekistan	149	54.5	16.0	47.0	16.3	10.7	12.4
Viet Nam	1,939	52.4	33.5	28.5	8.2	10.9	8.1
Total	**21,720**	**53.7**	**23.6**	**45.3**	**12.8**	**10.8**	**18.0**

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic.

Source: OECD Database on Immigrants in OECD Countries (DIOC) 2010/11.

Table A2.3: Emigration Rates to the Organisation for Economic Co-operation and Development by Level of Education, 2000/01 and 2010/11

	Total (%)		Highly Educated (%)	
	2010/11	2000/01	2010/11	2000/01
Afghanistan	2.0	1.1	5.7	3.2
Azerbaijan	n.a.	n.a.	n.a.	n.a.
Bangladesh	0.5	0.4	3.5	2.6
Bhutan	n.a.	n.a.	n.a.	n.a.
Brunei Darussalam	4.1	3.7	16.8	15.4
Cambodia	2.7	3.1	14.8	52.7
PRC	0.4	0.3	1.9	2.1
Georgia	n.a.	n.a.	n.a.	n.a.
Hong Kong, China	4.4	6.6	12.9	16.5
India	0.4	0.3	3.5	3.0
Indonesia	0.2	0.2	2.6	3.6
Japan	0.6	0.5	0.9	0.9
Kazakhstan	8.0	3.8	7.0	4.8
Korea, Rep. of	4.2	3.8	4.5	4.4
Kyrgyz Republic	0.4	1.2	1.7	2.2
Lao PDR	6.1	8.0	14.9	25.3
Malaysia	1.5	1.4	5.2	6.3
Maldives	0.6	0.3	10.2	6.9
Mongolia	1.1	0.3	2.9	1.3
Myanmar	0.3	0.2	1.5	1.5
Nepal	0.8	0.2	8.9	2.2
Pakistan	1.0	0.8	6.5	3.3
Philippines	4.8	3.9	8.1	6.8
Singapore	3.4	3.3	9.6	9.9
Sri Lanka	3.4	2.1	6.7	4.1
Tajikistan	0.3	0.5	1.8	2.3
Taipei,China	2.4	2.4	4.4	6.0
Thailand	1.0	0.6	2.7	2.8
Turkmenistan	0.3	n.a.	1.0	n.a.
Uzbekistan	0.7	n.a.	2.1	n.a.
Viet Nam	2.8	2.8	10.6	18.3
Average	**2.1**	**2.0**	**6.2**	**8.0**

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic, n.a. = no data available.

Source: OECD Database on Immigrants in OECD Countries (DIOC) 2000–01 and 2010–11.

Table A2.4: Outflows of Workers from Asian Countries, by Destination

	Bangladesh					India				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Gulf Cooperation Council countries										
UAE	215,452	14,241	24,232	25,271	8,131	141,138	202,016	224,033	225,718	163,731
Saudi Arabia	21,232	12,654	10,657	58,270	143,913	357,503	354,169	329,937	308,380	165,356
Oman	170,326	134,028	105,748	129,859	188,247	84,384	63,398	51,318	85,054	63,224
Kuwait	2	6	3,094	17,472	38,188	55,868	70,072	80,419	66,579	72,402
Bahrain	21,777	25,155	23,378	20,720	72,167	20,150	17,269	14,220	15,623	11,964
Qatar	28,801	57,584	87,575	123,965	120,382	63,096	78,367	75,935	59,384	30,619
Other Middle East										
Jordan	11,726	21,383	20,338	22,093	23,017	1,819	1,462	2,133	2,047	2,742
Lebanon	14,864	15,098	16,640	19,113	15,095	288	281	313	341	316
Israel										
Asia, OECD										
Japan	420	41	55	99	165					
Korea, Rep. of	1,447	2,121	1,748	2,359	1,689					
Asia, non-OECD										
Singapore	58,657	60,057	54,750	55,523	54,730					
Malaysia	804	3,853	5,134	30,483	40,126	21,241	22,388	22,926	20,908	10,604
Taipei,China										
Thailand						9	15	53	10	1
Hong Kong, China										
Brunei Darussalam	5,038	5,971	6,633	6,354	5,836					
Indonesia						11	38	29	6	1
India										
PRC										

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Table A2.4: Outflows of Workers from Asian Countries, by Destination

	Indonesia					Nepal				
	2012	2013	2014	2015	2016	2011/12	2012/13	2013/14	2014/15	2015/16
Gulf Cooperation Council countries										
UAE	35,571	44,505	17,962	7,619	2,575	34,503	58,586	55,426	53,094	52,793
Saudi Arabia	40,655	45,394	44,325	23,000	13,538	68,103	96,903	86,613	96,887	138,529
Oman	8,836	10,719	19,141	6,766	1,014	1,884	3,931	3,952	3,470	3,059
Kuwait	2,518	2,534	1,714	310	987	9,165	17,376	20,196	9,634	10,049
Bahrain	6,328	5,384	5,472	2,570	123	3,100	4,255	4,418	4,168	3,146
Qatar	20,380	16,237	7,862	2,460	1,355	44,883	103,932	128,550	124,050	129,038
Other Middle East										
Jordan	106	0	0	103	65					
Lebanon										167
Israel										189
Asia, OECD										
Japan	3,293	3,042	2,428	468	279					3,844
Korea, Rep. of	13,593	15,374	11,848	5,501	5,912					7,432
Asia, non-OECD										
Singapore	41,556	34,655	31,680	20,895	17,700					
Malaysia	134,023	150,236	127,827	97,635	87,616	96,272	158,663	210,009	196,497	60,979
Taipei,China	81,071	83,544	82,665	75,303	77,087					
Thailand	1,035	1,041	717	90	6					
Hong Kong, China	45,478	41,769	35,050	15,322	14,434					
Brunei Darussalam	13,146	11,269	11,616	9,993	8,152					
Indonesia										
India	535	409	203	68	97					
PRC	1,967	2,055	915	108	65					

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Table A2.4: Outflows of Workers from Asian Countries, by Destination

	Pakistan					Philippines				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Gulf Cooperation Council countries										
UAE	182,630	273,234	350,522	326,986	295,647	259,546	261,119	246,231	227,076	356,160
Saudi Arabia	358,560	270,502	312,489	522,750	462,598	330,040	382,553	402,837	406,089	533,120
Oman	69,407	47,794	39,793	47,788	45,085	16,048	16,577	15,880	22,274	
Kuwait	5	229	132	164	770	75,286	67,856	70,098	86,019	143,360
Bahrain	10,530	9,600	9,226	9,029	8,226	22,271	20,546	18,958	21,428	
Qatar	7,320	8,119	10,042	12,741	9,706	104,622	94,195	114,511	133,169	138,880
Other Middle East										
Jordan	279	345	328	321	282	3,025	2,223	3,393		
Lebanon	23	15	57	33	42	1,227	2,874	3,010		
Israel						4,582	4,385	4,590	2,288	2,850
Asia, OECD										
Japan	62	44	69	82	102	9,947	10,936	12,815		78,400
Korea, Rep. of	7	12	46	13	17	8,979	11,664	11,958		
Asia, non-OECD										
Singapore	47	42	76	68	33	172,690	173,666	140,205	141,453	125,440
Malaysia	1,309	2,031	20,577	20,216	10,625	38,407	34,088	31,451	26,199	47,040
Taipei,China						41,492	41,145	58,681	62,598	116,480
Thailand						9,204	8,659	6,653		
Hong Kong, China	17	20	38	29	38	131,680	130,686	105,737	85,704	125,440
Brunei Darussalam	74	67	48	85	85	14,907	17,000	11,478		
Indonesia						5,166	5,489	5,007		
India										
PRC	220	155	254	355	482	9,969	9,829	6,229		

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Table A2.4: Outflows of Workers from Asian Countries, by Destination

	Sri Lanka					Thailand				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Gulf Cooperation Council countries										
UAE	38,234	48,502	50,347	43,666	40,124	7,245	5,495	5,038	4,623	4,014
Saudi Arabia	97,993	80,887	80,480	74,894	63,389	517	509	446	36	358
Oman	4,889	5,317	5,759	7,082	9,748	298	280	260	245	
Kuwait	44,229	42,740	43,552	38,473	32,415	1,792	1,729	1,626	2,448	1,265
Bahrain	4,533	4,547	3,979	3,722	3,222	1,106	969	888	853	904
Qatar	57,478	80,724	84,622	65,139	59,527	2,623	2,392	2,449	2,273	1,562
Other Middle East										
Jordan	10,387	7,060	6,197	4,809	3,870					
Lebanon	3,945	3,537	3,058	2,604	2,640					
Israel	1,768					5,126	8,393	7,618	7,144	
Asia, OECD										
Japan	112					8,596	6,904	7,614	7,705	
Korea, Rep. of	5,629	5,402	6,686	6,967	8,609	10,393	11,758	9,835	,189	12,590
Asia, non-OECD										
Singapore	980	1,265	1,470	1,461	1,840	11,864	10,728	8,191	7,265	5,843
Malaysia	2,691	3,297	3,312	3,239	2,916	4,441	3,852	3,237	3,318	3,263
Taipei,China						39,128	34,631	37,105	34,738	35,027
Thailand	2									
Hong Kong, China	449	513	468	493	573	2,533	2,225	2,209	2,185	2,160
Brunei Darussalam	11	15	12	9	14	2,697	2,489	1,944	1,846	1,461
Indonesia						2,480	3,210	3,103	2,538	
India	97					2,480	3,210	3,103	1,860	
PRC	6					923	1169	725	405	

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Table A2.4: Outflows of Workers from Asian Countries, by Destination

	Viet Nam					Myanmar					Cambodia			
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015
Gulf Cooperation Council countries														
UAE	1,731	2,075	831	286	136	39	0	14	77	271				
Saudi Arabia	2,360	1,703	4,191	3,975	16									
Oman	154	25	57	86										
Kuwait	440	31	30	54	40	1	0	0	0					
Bahrain	11	16	9											
Qatar	105	206	850	455		10	77	15	0	73				
Other Middle East														
Jordan	20	0	0											
Lebanon														
Israel	210	141	484	268	250									
Asia, OECD														
Japan	8,775	9,686	19,766	27,010	39,938	0	36	518	1,678	2,384	102	111	518	1399
Korea, Rep. of	9,228	5,446	7,242	6,019	8,482	3,669	4,003	4,482	4,475	5,731	8,132	8,820	7,671	7,073
Asia, non-OECD														
Singapore	107	149	92	31	29	452	791	501	431	707	0	111	190	99
Malaysia	9,298	7,564	5,139	7,354	2,079	26,921	25,905	25,892	35,022	25,154	180	90	470	807
Taipei,China	30,533	46,368	62,124	67,121	68,244					102,722				
Thailand	0	0	0	0		37,347	36,029	33,188	53,578	113,210	26,390	13,468	15,839	16,163
Hong Kong, China	0	0	0		11									
Brunei Darussalam	74	18	0	0										
Indonesia	0	0	0	0										
India														
PRC	0	4	0		7									

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic, UAE = United Arab Emirates.

Note: Empty cells indicate no data available.

Source: National sources.

Table A2.5: Migrant Remittance Inflows in Asian Countries, 2000–2015 ($ million)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Afghanistan	...	...	...	...	...	...	...	...	106	152	342	185	252	314	268	300	310
Azerbaijan	57	104	181	171	227	623	790	1,268	1,518	1,255	1,410	1,893	1,990	1,733	1,846	1,270	640
Bangladesh	1,969	2,100	2,860	3,192	3,582	4,642	5,428	6,562	8,941	10,521	10,850	12,071	14,120	13,867	14,983	15,390	13,680
Bhutan	...	...	...	...	...	...	2	3	4	5	8	10	18	12	14	20	20
Brunei Darussalam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cambodia	121	133	140	138	177	164	184	186	188	142	153	160	172	176	377	390	320
PRC	758	1,209	2,354	4,620	6,640	23,626	27,565	38,395	47,743	41,600	52,460	61,576	57,987	59,491	62,332	63,940	61,000
Georgia	210	222	231	236	303	446	627	883	1,065	1,112	1,184	1,547	1,770	1,945	1,986	1,460	1,490
Hong Kong, China	136	153	121	120	240	297	294	317	355	348	340	352	367	360	372	390	400
India	12,845	14,229	15,707	21,015	18,753	22,125	28,334	37,217	49,977	49,204	53,480	62,499	68,821	69,970	70,389	68,910	62,750
Indonesia	1,190	1,050	1,260	1,490	1,866	5,420	5,722	6,174	6,794	6,793	6,916	6,924	7,212	7,614	8,551	9,660	9,230
Japan	1,374	1,987	1,821	1,079	930	905	1,177	1,384	1,732	1,595	1,684	2,132	2,540	2,364	3,733	3,670	3,660
Kazakhstan	122	171	205	147	166	62	84	143	126	198	226	180	178	207	229	190	310
Korea, Rep. of	4,862	4,836	5,530	6,301	6,574	5,178	4,826	5,130	6,952	5,982	5,836	6,582	6,571	6,455	6,551	6,450	6,400
Kyrgyz Rep.	9	11	37	78	189	313	473	704	1,223	982	1,266	1,709	2,031	2,278	2,243	1,690	2,000
Lao PDR	1	1	1	1	1	1	4	6	18	38	42	110	59	60	60	90	100
Malaysia	342	367	435	571	802	1,117	1,365	1,556	1,329	1,131	1,103	1,211	1,294	1,423	1,573	1,640	1,590
Maldives	2	2	2	2	3	2	3	8	6	5	3	3	3	3	3	0	0
Mongolia	12	25	56	129	202	180	181	178	225	200	266	279	320	256	255	260	260
Myanmar	102	116	105	84	117	129	115	81	55	54	115	127	275	1,644	3,103	3,240	3,310
Nepal	112	147	678	771	823	1,212	1,453	1,734	2,727	2,983	3,464	4,217	4,793	5,589	5,770	6,730	6,280
Pakistan	1,080	1,460	3,550	3,961	3,942	4,280	5,121	5,998	7,039	8,717	9,690	12,263	14,007	14,629	17,066	19,310	19,850
Philippines	6,957	8,769	9,740	10,244	11,473	13,733	14,988	15,853	18,064	19,078	20,563	21,922	23,352	25,369	27,273	28,480	29,880
Singapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0
Sri Lanka	1,163	1,190	1,312	1,434	1,586	1,976	2,167	2,507	2,925	3,337	4,123	5,153	6,000	6,422	7,036	6,980	7,250
Tajikistan	...	...	79	146	252	467	1,019	1,691	2,544	1,748	2,306	3,060	3,626	4,219	3,384	2,260	1,780
Taipei,China	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Thailand	1,700	1,250	1,380	1,610	1,620	1,187	1,333	1,635	1,898	2,776	3,580	4,554	4,713	5,690	5,655	5,890	6,030
Turkmenistan	...	...	...	...	...	...	14	30	50	34	35	35	37	40	30	20	10
Uzbekistan	...	...	...	...	...	...	898	1,693	3,007	2,071	2,858	4,276	5,693	6,689	5,828	3,050	2,260
Viet Nam	1,340	1,100	1,770	2,100	2,310	3,150	3,800	6,180	6,805	6,020	8,260	8,600	10,000	11,000	12,000	13,000	13,380
Total	**36,464**	**40,632**	**49,555**	**59,640**	**62,778**	**91,235**	**107,967**	**137,516**	**173,310**	**167,929**	**192,221**	**223,445**	**237,949**	**249,505**	**262,642**	**264,740**	**254,250**

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic, n.a. = no data available.

Notes: All numbers are in current US dollars.

Source: World Bank.

Table A2.6: Net Migration Rate (per 1,000 population)

	1985–1990	1990–1995	1995–2000	2000–2005	2005–2010	2010–2015	2015–2020	2020–2025
Afghanistan	–24.7	31.7	–4.1	8.2	–5.8	2.9	–1.7	–1.5
Azerbaijan	–4.6	–3.1	–2.8	0.9	1.2	0.0	0.0	0.0
Bangladesh	–0.4	–1.4	–1.2	–2.2	–4.8	–3.2	–2.8	–1.7
Bhutan	0.6	–32.7	0.1	9.4	4.9	2.6	0.0	0.0
Brunei Darussalam	2.4	2.8	2.0	1.9	–1.1	1.0	0.8	0.8
Cambodia	–1.9	8.3	6.1	–0.6	–4.3	–2.0	–1.9	–1.7
PRC	–0.1	–0.1	–0.1	–0.3	–0.4	–0.2	–0.2	–0.2
Georgia	–1.6	–20.9	–15.0	–12.1	–13.7	–14.9	–2.5	–2.6
Hong Kong, China	8.0	5.3	11.7	1.9	2.6	2.1	4.0	2.4
India	0.0	–0.1	–0.1	–0.4	–0.5	–0.4	–0.4	–0.3
Indonesia	–0.2	–0.4	–0.3	–0.8	–0.6	–0.7	–0.6	–0.5
Japan	–0.5	0.1	–0.2	0.3	0.4	0.6	0.4	0.4
Kazakhstan	–8.1	–17.3	–17.0	0.6	–0.4	1.9	0.0	0.0
Korea, Rep. of	0.8	0.3	0.7	0.3	–0.6	0.7	0.8	0.8
Kyrgyz Republic	–6.1	–12.4	–1.2	–6.9	–2.9	–4.9	–3.3	–3.1
Lao PDR	0.0	–2.7	–5.3	–5.3	–3.7	–5.5	–2.1	–2.0
Malaysia	5.2	3.1	4.5	5.3	5.3	5.3	1.6	1.5
Maldives	–2.5	–2.6	–0.8	9.2	10.5	11.2	4.4	2.1
Mongolia	0.0	–7.9	–4.5	–1.2	–1.1	–1.1	–1.0	–0.9
Myanmar	–1.0	–3.3	–2.4	–5.3	–5.9	–1.8	–0.4	–0.4
Nepal	–2.4	0.8	–4.1	–6.5	–7.8	–2.7	–2.4	–1.9
Pakistan	0.3	–1.7	–1.1	–0.9	–1.7	–1.3	–1.1	–0.8
Philippines	–1.0	–1.5	–2.1	–2.7	–3.3	–1.3	–1.2	–0.9
Singapore	8.4	15.3	13.8	20.7	18.8	12.7	10.4	4.9
Sri Lanka	–1.6	–2.9	–5.0	–4.7	–5.2	–4.7	–4.3	–3.5
Tajikistan	–2.8	–10.5	–9.8	–2.5	–2.0	–2.5	–2.2	–2.0
Taipei,China	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.	n. a.
Thailand	1.9	–2.1	2.3	1.2	0.2	0.5	0.3	0.3
Turkmenistan	–2.3	2.2	–3.0	–5.4	–2.5	–1.9	–0.9	–0.8
Uzbekistan	–3.6	–3.0	–2.0	–1.9	–1.0	–0.4	–0.3	–0.3
Viet Nam	–1.0	–1.1	–0.6	–1.6	–2.0	–0.4	–0.4	–0.4

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic, n.a. = no data available.

Source: UN DESA/Population Division. World Population Prospects: The 2017 Revision. https://esa.un.org/unpd/wpp/dataquery/ (accessed 20 December 2017).

Table A2.7: International Students in Organisation for Economic Co-operation and Development Countries by Nationality

	Number of International Tertiary Students Enrolled			Of Which at Master's and Doctoral Level	As a Percentage of Total Tertiary	Number of Graduates at Master's and Doctoral Level
	2014	2015	% change	2015	2015	2015
Afghanistan	4,050	5,550	37	2,350	42	220
Azerbaijan	10,100	14,190	40	4,070	29	760
Bangladesh	20,330	21,440	5	13,150	61	2,700
Bhutan	830	910	10	550	60	200
Brunei Darussalam	2,630	2,480	–6	500	20	300
Cambodia	2,650	2,860	8	1,340	47	230
PRC	686,120	745,870	9	321,120	43	68,310
Georgia	7,480	5,040	–33	2,150	43	340
Hong Kong, China	32,870	35,750	9	4,420	12	2,020
India	186,370	222,690	19	152,180	68	18,650
Indonesia	27,810	32,270	16	12,230	38	3,020
Japan	30,490	28,620	–6	9,670	34	1,980
Kazakhstan	9,250	10,600	15	3,450	33	860
Korea, Rep. of	100,600	102,740	2	29,540	29	2,300
Kyrgyz Republic	2,910	3,230	11	1,200	37	140
Lao PDR	770	750	–3	420	56	70
Malaysia	45,820	49,320	8	11,190	23	4,160
Maldives	1,780	,530	–70	210	40	110
Mongolia	7,200	7,430	3	2,690	36	240
Myanmar	3,720	4,210	13	1,210	29	220
Nepal	26,200	30,750	17	11,850	39	2,230
Pakistan	26,800	31,340	17	17,320	55	4,700
Philippines	10,930	12,430	14	4,020	32	690
Singapore	21,810	23,100	6	5,450	24	2,150
Sri Lanka	12,370	12,490	1	5,120	41	1,240
Tajikistan	1,110	1,350	22	410	30	70
Taipei,China	...	...	...	...	...	
Thailand	21,450	23,570	10	11,940	51	4,080
Turkmenistan	7,470	9,590	28	530	6	60
Uzbekistan	3,740	4,430	18	1,890	43	240
Viet Nam	53,610	63,660	19	19,120	30	3,820
Total	**1,369,270**	**1,431,510**	**5**	**629,750**	**44**	**121,990**
Rest of the world	1,688,530	1,854,800	10	836,900	45	172,770
Total	3,057,800	3,286,310	7	1,466,650	45	294,760
Share of Asia (%)	**45**	**44**		**43**		**41**

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic.

Note: Data for graduates in Japan, the Republic of Korea, and the United States are not available.

Source: OECD. Online Education Database. www.oecd.org/education/database.htm (accessed December 2017).

LABOR MIGRATION IN ASIA

Increasing the Development Impact of Migration through Finance and Technology

This report documents the increase in labor migration in Asia and looks at how finance and technology can aid its positive impact on home countries. As diasporas increase, governments have reached out to citizens abroad to provide them with financial instruments. Remittance channels have long been consolidated, but financial technology is changing the ways in which migrants remit—reducing fees and opening opportunities for new actors. One occupation driving labor migration, and incurring its own challenges, is work in information technology (IT). This report examines some of the latest developments in financial products and technology aimed at labor migrants from and in Asia, and discerns the factors determining the success of mobile IT workers from India. The four chapters in this report draw on issues raised and discussed during the *Seventh Roundtable on Labor Migration in Asia: Finance and Technology to Increase the Positive Impact of Migration on Home Countries*, held in Manila on 18–19 January 2017. The event brought together regional experts and policy makers and was co-organized by the Asian Development Bank Institute, the Organisation for Economic Co-operation and Development, the International Labour Organization, and the Asian Development Bank. The report's introductory chapter reviews recent regional migration trends. Two statistical annexes provide an overview of migration flows within Asia and between Asia and other regions.

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Kasumigaseki Building 8F
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008
Japan

Tel: +813 3593 5500

www.adbi.org

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2, rue André Pascal
75775 Paris Cedex 16
France

Tel: +33 1 45 24 82 00

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ILO Regional Office for Asia and the Pacific
United Nations Building, 11th Floor
Rajdamnern Nok Avenue, P.O. Box 2-349
Bangkok 10200
Thailand

Tel: +66 2 288 1710, 288 1755

www.ilo.org/asia