



Emerging Demographic Trends in Asia and the Pacific: The Implications for International Migration

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I. Executive Summary

Asia's populations have grown rapidly in the last half-century. From 1960 to 2000, the region experienced a major population boom, with most countries doubling in size. Fertility rates are declining, however, which means this exponential growth will not be sustained in the medium to long term.

Asia's working-age population (ages 15 to 64) is growing at around 1.5 percent per year, which is slightly above the world average. However, this growth rate will decrease sharply over the next two decades, falling by two-thirds by the late 2020s. The pattern is even more dramatic for the "migration-prone" 15-to-34 age group, which is increasing at less than half the rate of the overall workforce and will begin to decline in the 2020s. By 2040, the 15-to-34 age group population will start to shrink.

Two significant demographic trends explain why the exponential growth is not expected to last: rapid fertility decline and simultaneous increases in life expectancy. The region's demographic transition, which first produced a "youth bulge," will eventually result in population aging as the "boom generation" passes through the age structure. However, this age structure is not the same across the Asian continent due to huge intraregional differences in both the timing and magnitude of change. South Asia and some parts of Southeast Asia show rapid population growth while East Asia is experiencing a noticeable decline. Still, the absolute and relative size of the population will remain high. By 2030, the region will represent around 55 percent of the total global population in the 15-to-34 age group — a generation that is increasingly better educated and more integrated into global, economic, and social systems — and will therefore continue to be a critical player in global migration.

At present, Asia has a disproportionate share of the world's young, working-age population — which represents the most mobile cohort — and consequently has the most potential to significantly influence migration to and from the region.

Various factors are likely to influence this group's emigration potential, including

- the rate of workforce growth relative to population;
- the changing role of women;
- the strength of Asian economies, which are becoming more effective competitors for highly skilled workers and students from the region, who may choose to remain in Asia rather than move to an Organization for Economic Cooperation and Development (OECD) nation;
- the quality of higher education in Asian universities.

While Asia's share of the global workforce-age population will dip slightly — from 58.5 percent in 2005 to 57.1 percent in 2030 — the region's absolute numbers will remain much higher than Africa's (which will increase from 12.1 percent to 17 percent), even though the latter continent is in a period of rapid growth.

Consequently, we reach some broad conclusions. Based on demographic trends, there is considerable potential for increased migration from Asia, where the workforce is still growing, to Europe and North America, where it is declining or increasing only very slowly. However, a number of forces may counteract this established trend, such as the declining growth rate of the migration-

prone population, the regional distribution of growth, and the limited supply of skilled migrants. In the future, we may actually see more intraregional migration. While the Asian migration picture remains fluid, there is little doubt that OECD countries will face increased competition from Asian destination countries for skilled migrants over the next two decades.

II. Introduction

Sweeping forces have altered the landscape in Asia over the last few decades, but of all the changes in the last quarter century, none has had a greater impact than population change. This paper seeks to understand those changes and what it means for future human mobility. We divide our analysis into two parts. The first section, a demographic analysis of Asia and the Pacific, will lay the necessary groundwork for the second section's discussion of how future population trends in the region will impact international migration.

The first part summarizes the contemporary demographic situation in the region and examines the growth of the working-age population — those from ages 15 to 64 — with a special emphasis on the most “migration-prone” segment: the 15-to-34 age group.¹ We go on to explore the impacts of certain innate characteristics, such as gender, and also of future education levels to more accurately predict mobility. We also examine some of Asia's regional differences to help shed light on “who” exactly will move.

The second section explores how changes in the demographic backdrop are likely to affect international migration through 2030.² The far-reaching implications for international migration include how countries compete for skills, the nexus between students and the labor market, and how ever-denser social networks increase mobility.

Demographic changes in Asia — especially changes in the growth rate, age structure, and skill profile of the workforce-age groups — will have a significant impact on international migration to and from the region. However, migration is not “demographically determined” by rapid population growth alone. It is a much more complex process also shaped by factors such as the regional rate of economic growth, globalization, and social changes. This paper examines the demographic backdrop that underpins labor mobility in order to analyze current and future patterns of migration to, from, and within Asia in the next two decades.

¹ One of the few almost universal generalizations that can be made about migration is that young adults have the highest level of mobility since at this stage of the life cycle people tend to leave the parental home, move for education, and engage in moves associated with entering, adjusting to, and seeking advancement in the labour market.

² The vast size and cultural, ethnic, political, religious, and economic complexity of the Asia-Pacific region makes it difficult to generalize. Inevitably, this paper will generalize across the region, but we must bear in mind the huge variation among countries and also within nations.

III. Demographic Trends in East, Southeast, South-Central, and South Asia

Demographic Overview: The Current Landscape

Asia’s population has more than doubled since 1970, but the annual growth rate has halved at the same time (see Table 1). Among the most significant phenomena affecting Asia in recent decades is the “demographic transition” that has ushered in a decline in mortality and fertility rates in most countries in the region, though the extent and timing of fertility decline’s onset varies enormously by country.

Asia-Pacific Regions and Countries*	
East Asia	Pacific
China	Australia
China, Hong Kong SAR China, Macao SAR	Cook Islands
Democratic People’s Republic of Korea	Fiji
Japan	Kiribati
Mongolia	Marshall Islands
Republic of Korea	Micronesia (Federated States of)
	Nauru
	New Caledonia
Southeast Asia	New Zealand
Brunei	Niue
Cambodia	Palau
East Timor	Papua New Guinea
Indonesia	Samoa
Laos	Tokelau
Malaysia	Tonga
Myanmar	Tuvalu
Philippines	Vanuatu
Singapore	
Thailand	
Vietnam	
	Western Asia
South-Central Asia	Kazakhstan
Afghanistan	Kyrgyzstan
Bangladesh	Tajikistan
Bhutan	Turkmenistan
India	Uzbekistan
Iran	
Maldives	
Nepal	
Pakistan	
Sri Lanka	

*Includes only countries covered in this paper.

While the average birth rate across Asia has decreased by more than half, average life expectancy has risen by over 15 years, significantly altering the population's age structure.³ The proportion of dependent children has declined substantially while the elderly share has increased 75 percent. There has also been a significant redistribution of the population: over 40 percent live in urban areas compared with less than 25 percent a quarter century ago. These shifts result from multiple external factors, including rapid economic growth and structural changes, globalization, massive social change, and political developments. There is little evidence that the pace of demographic shifts in the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) region⁴ will slow down. Indeed, many of the observable trends will increase in both intensity and complexity, such that their implications are likely to be even more striking.

Table 1. ESCAP Region: Major Demographic Changes, 1970 to 2008*

Demographic variable	1970	2008	Percent change 1970 to 2008
Total population (millions)	2,041.2	4,119	+101.8
Percent of world population	55.2	61.4	+11.2
Annual growth rate ^b	2.2	1.0	-54.5
Percent urban ^b	24	42	+75.0
Percent ages 0 to 14 ^b	40	26	-35.0
Percent aged 65 and older ^b	4	7	+75.0
Dependency ratio ^b	80	50	-37.5
Total fertility rate ^{a, b}	5.4	2.2	-59.3
Expectancy of life at birth – males ^b	52	67	+28.8
Expectancy of life at birth – females ^b	54	72	+33.3

Notes: *The data exclude the countries of Central Asia, which were not part of the ESCAP region in 1970 and 1980.

^a TFR and life expectancies refer to the average of the five years prior to 1970.

^b Includes Central Asia in 2008.

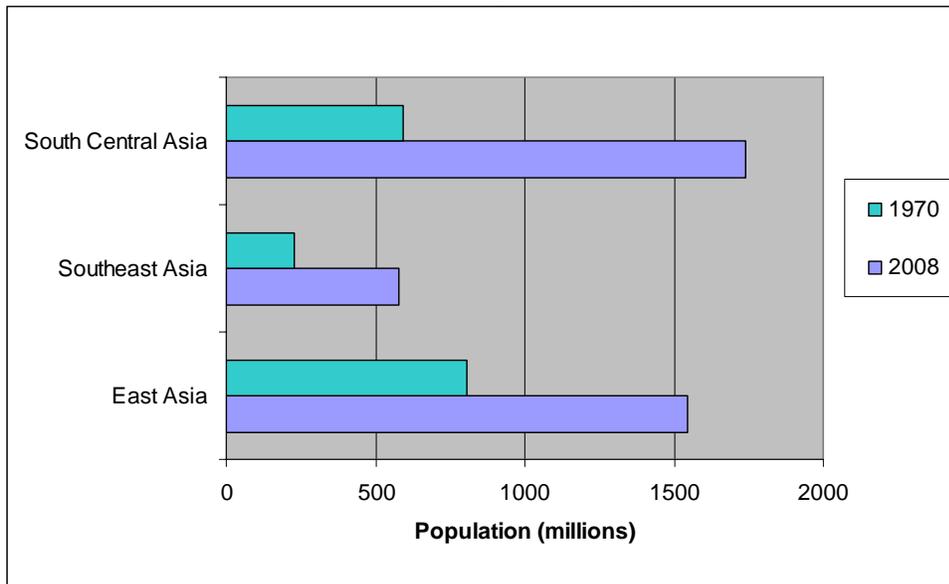
Source: ESCAP 1984, 2008.

A breakdown of these trends by region reveals the huge demographic diversity among ESCAP countries, which range in size from 1.3 billion (China) to fewer than 1 million inhabitants (several of the small island countries). Although some trends, such as fertility decline, are consistent throughout the region, considerable divergences include population growth rates (see Appendix 1). Although the rate of population growth over the last two decades has dropped, the extent of this decline varies greatly across the region. The reduction has been most pronounced in East and parts of Southeast Asia, and least pronounced in South Asia and the Pacific (see Figure 1). The root of the decline lies in the sharp reduction in fertility levels each country in the ESCAP region experienced (at differing rates) over the last quarter century (see Figure 2).

³ The average birth rate has declined from 5.4 children per woman in 1970 to a rate of 2.2 in 2008. Substantial fertility declines have occurred in the region's three largest countries: China (down 98.3 percent), India (97.2 percent), and Indonesia (97.8 percent).

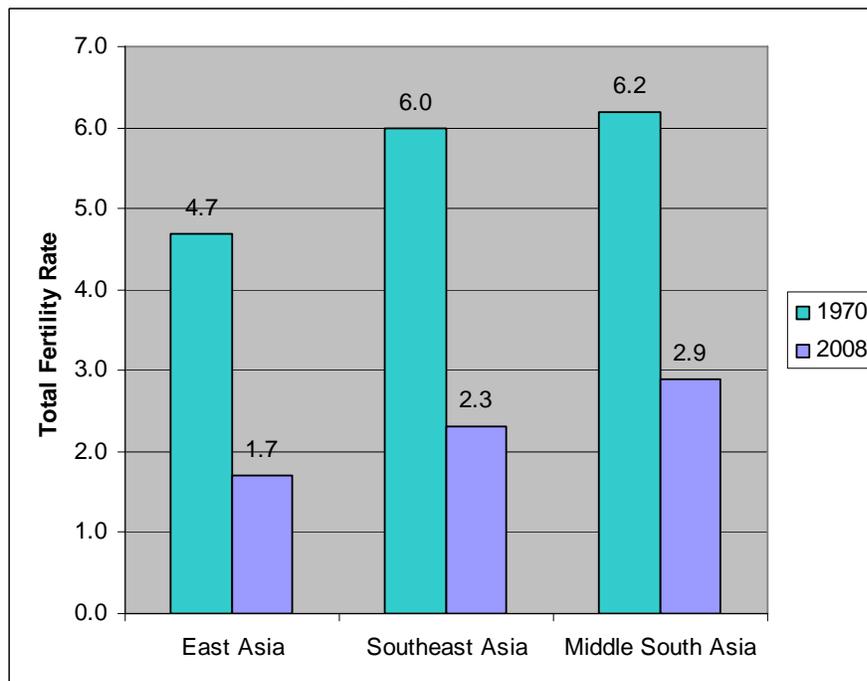
⁴ The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) has 62 members, 58 of them in the region. ESCAP stretches from Turkey in the west to the Pacific island nation of Kiribati in the east, and from the Russian Federation in the north to New Zealand in the south.

Figure 1. Population Size in Asia by Region: Change from 1970 to 2008



Source: UNESCAP 1984, 2008. For more information, see Appendix 1.

Figure 2. Fertility Decline by Region, 1970 to 2008



Source: UNESCAP 1984, 2008. For more information, see Appendix 1.

Life expectancies have also increased significantly in all Asia-Pacific nations since World War II, though the rates in some countries have not improved as much as in others due to poor health care and the lingering effects of war (see Appendix 1). In the mid-2000s, the average life expectancy for a

baby born in the ESCAP region was 67 for males and 72 for females.⁵ This is still well below levels in Western Europe (77 and 83, respectively) and North America (75 and 81, respectively), but it represents a substantial improvement over the last four decades. However, disparities among Asia-Pacific nations remain. Life expectancy ranges from high levels in Japan (79 for men and 86 for women) to low rates in Afghanistan (44 for both males and females). The legacy of long years of conflict and dislocation is still reflected in life-expectancy rates in Afghanistan as well as in Burma, Cambodia, and Laos. In Malaysia, Singapore, and Brunei, where life expectancies are in excess of 70 years, it is clear that living standards and the quality of health services have advanced to the levels typical of Western societies. On the other hand, some countries (e.g., Thailand, the Philippines, and Indonesia) still have life expectancies in the 60s, suggesting that government spending on health in those places has been limited despite a relative increase in prosperity. Further increases in life-expectancy rates will depend on major improvements in health services. Despite the significant regional variation, we can observe that a decline in mortality will accompany fertility decline all across Asia over the next few decades, altering the demographic landscape.

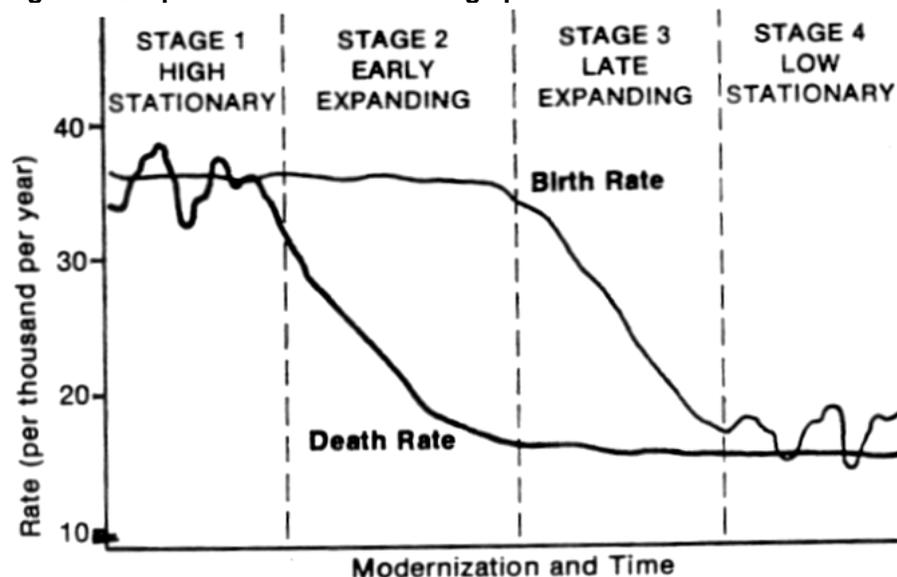
The Demographic Transition: From Rapid Growth to Population Decline

The early stages of demographic transition are characterized by high fertility levels with simultaneous declining mortality rates, a combination that produces very rapid population growth. There is a lag before the inevitable fertility decline, brought on by educational improvements and societal change, eventually translates into population decline. The differences in the magnitude and timing of this fertility decline can explain variations in population growth rates throughout Asia. Although the familiar demographic transition model (see Figure 3) oversimplifies a complex process, it is useful in the context of this paper to think of Asian countries falling at various points along the curve of population growth. Several nations in the region have reached replacement-level fertility on the far right-hand side of the diagram (e.g., Singapore and Hong Kong). Others, like Indonesia and Thailand, are fast approaching this stage, while some South Asian nations still have high fertility, as do the former Indo-Chinese countries and the Philippines.⁶

⁵ Although in many cases the data are poor and, as Ruzicka points out, should be “interpreted as representing the central point of a range of possible values rather than an exact actual level of mortality,” we can still observe a substantial increase in life expectancy rates. See Lado T. Ruzicka, “Implications of Mortality Trends and Differentials in the ESCAP Region,” *Asian Population Studies Series* 58 (1983): 4.

⁶ Richard Leete and Iqbal Alam, *The Revolution in Asian Fertility: Dimensions, Causes and Implications* (Oxford: Clarendon Press, 1993). The variations in timing need some extra comment. Appendix 8 depicts the proportion of the national population of six countries made up by 15-to-24-year-olds over the 1950-2050 period. In Japan, fertility decline began in the 1950s, so the proportion of 15-to-24-year-olds peaked in 1965 then declined dramatically. In Korea, fertility decline commenced in the 1960s, with the youth peak occurring in 1980. Fertility decline began in Indonesia and India in the 1970s so the youth peak was in 1990. In Laos, fertility decline did not begin until much later, so it is anticipated that the peak will occur in 2010. East Timor, on the other hand, has undergone massive disruption and mortality in recent decades so it has experienced fluctuations in the proportion made up by the youth population. Despite these variations, Westley and Choe have pointed out that from 1960 to 2000, “The number of adolescents and young adults doubled or more than doubled in nearly every country in Asia. The only exceptions were China, Japan, North Korea, and Kazakhstan.” See Sidney B. Westley and Minja Kim Choe, “Asia’s Changing Youth Population,” in *The Future of Population in Asia* (Honolulu: East-West Center, 2002).

Figure 3. Simplified Model of the Demographic Transition



Source: Hugo 1981.

A country's position on this chart — representing the ratio of fertility to mortality — has a substantial impact on its age structure.⁷ For much of the last half century, young age groups have dominated Asia's age pyramid due to high fertility and relatively high mortality. However, the onset of rapid, widespread, and substantial fertility decline has significantly reduced the dominance of very young age groups.

The Asian Youth Bulge: The Largest Generation Passing through Working Ages

The shift from high to low fertility across Asia and the Pacific has created a “youth bulge” of people between ages 15 and 24.⁸ In other words, Asia has large numbers of adolescents and young adults who were born when fertility was high but who were followed by declining numbers of children born after fertility declined.⁹ The Asian youth bulge represents a “boom” generation: a generation larger than those immediately before and after it that gradually works its way through nations' age structures.¹⁰ This is significant for migration because it signals a disproportionate increase in the

⁷ In the early stages of demographic transition, the period of both high mortality and high fertility, the age pyramid is broad-based but with a relatively flat slope because of the attrition of mortality. As mortality declines and fertility remains high, older age groups maintain the pyramid's broad base. However, as fertility decline begins, fewer people being born into the youngest age groups undercut the age pyramid.

⁸ Some writers have defined the youth bulge as a situation in which at least 20 percent of the population is ages 15 to 24, whereas a youth deficit occurs when this proportion falls below 15 percent. Fuller and Hoch have expanded upon the youth-bulge hypothesis. They have calculated a youth-bulge index for the main regions of Asia. The index is highest in Southeast Asia (3.22) and lowest in South Asia (2.29), with East Asia (3) falling in between. See G. Fuller and Robert B. Hoch, “Youth Bulges in Asia” (unpublished paper, University of Hawaii and Robert Hoch Consulting, Mimeo, April 2, 1998).

⁹ Westley and Choe, “Asia's Changing Youth Population.”

¹⁰ David E. Bloom, David Canning, and Jaypee Sevilla, *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change* (Santa Monica: RAND, 2003), xii, http://www.rand.org/pubs/monograph_reports/2007/MR1274.pdf.

population's most mobile sector and a decrease in the number of dependent children and elderly who would otherwise burden the workforce.

The youth bulge peaked in most Asian countries in 1985, when the population ages 15 to 24 reached its highest-ever proportion of the total population.¹¹ Table 2 shows the percentage growth of the 15-to-24 age group in the entire Asian region from 1960 to 2040 — before and after this peak — as the youth bulge passes through the population. While in 1960 Asia's youth population numbered 284 million and made up 17 percent of the population, by 1985 the population had more than doubled in size to arrive at its peak of 20.5 percent of the total population. Since then, growth has slowed due to the onset of fertility decline though absolute numbers remain high. Therefore, while in 2000 the Asian youth population represented less than 18 percent of the population, its absolute size reached 625 million people.

Table 2. Asian Population (in thousands) Ages 15 to 24, 1960 to 2000 and Projected 2020 and 2040

Year	Population ages 15 to 24		Annual percentage growth
	Number	Percent	
1960	282,897	17.28	
1980	491,143	19.50	2.80
1985	565,400	20.48	2.86
1990	613,497	20.26	1.65
2000	625,463	17.81	0.39
2020	679,547	15.72	0.42
2040	653,223	13.60	-0.20

Note: Excludes Western Asia.

Source: United Nations 2007.

In the future, we expect the youth population to keep increasing — albeit more slowly — until 2020 (reaching a peak of 680 million), after which the youth population will decline to 653 million. By 2040, young adults will make up 13.6 percent of the total population. The ratio of youth to older adults has shifted from 1:2 in 1970 to 1:3 in 2005. Table 3 breaks down this aggregate trend, showing the numbers ages 15 to 24 in each Asian nation over the 1950-2030 period. Most show rapid increases over the last half century and project slower growth or even a small decline in the next 25 years. Table 4, which shows the actual and projected annual growth rates, makes this trend clearer.

¹¹ Graeme Hugo and Hong Xoan Nguyen Thi, "Marriage Migration between Vietnam and Taiwan: A View from Vietnam," in *Female Deficit in Asia*, eds. Isabelle Attané and C.Z. Guilmoto (Paris: CICRED, 2007), 365-391.

Table 3. Asian Countries: Population (in thousands) Ages 15 to 24, 1950 to 2030

Country	1950	1970	1990	2000	2010	2020	2030
Afghanistan	1,552	2,361	2,607	4,202	6,090	8,277	10,780
Bangladesh	7,583	11,882	22,598	28,000	31,167	36,541	36,881
Bhutan	139	192	313	407	150	130	119
Brunei	9	24	48	56	74	81	84
Cambodia	843	1,313	1,801	2,445	3,535	3,285	3,631
China (ex. HK, Mac.)	101,339	158,205	251,310	198,946	218,974	178,829	170,804
China, Hong Kong SAR	448	777	896	986	886	785	739
China, Macao SAR	39	62	57	61	79	46	43
East Timor	85	116	142	134	247	336	474
India	69,278	100,363	163,865	190,107	235,057	245,592	245,357
Indonesia	15,941	21,255	37,627	42,268	42,184	42,255	40,642
Japan	16,396	19,831	18,788	16,098	12,637	11,865	10,227
Laos	345	517	781	1,024	1,431	1,417	1,453
Malaysia	1,097	2,094	3,414	4,198	5,199	5,428	5,486
Maldives	14	24	40	60	76	62	72
Mongolia	142	239	459	537	590	450	459
Myanmar	3,209	5,100	8,206	9,530	9,250	8,294	7,836
Nepal	1,579	2,209	3,471	4,408	6,209	6,991	7,521
Pakistan	7,467	11,162	20,126	27,156	38,872	37,516	41,860
Philippines	3,583	7,193	12,472	15,377	18,288	20,453	21,646
Republic of Korea	3,786	5,686	8,753	7,718	5,620	5,484	4,285
Singapore	183	451	563	500	656	560	411
Sri Lanka	1,389	2,441	3,214	3,632	3,279	2,844	2,688
Thailand	3,950	6,808	11,770	11,756	9,667	8,874	8,674
Vietnam	5,175	6,936	13,479	15,843	18,421	15,677	15,875

Source: United Nations 2007.

Table 4. Asian Countries: Annual Growth Rates (Percent) for the 15-to-24 Age Group, 1950 to 2030

Country	1950 to 1970	1970 to 1990	1990 to 2000	2000 to 2010	2010 to 2020	2020 to 2030
Afghanistan	2.61	0.52	6.12	3.78	3.12	2.68
Bangladesh	2.83	4.51	2.39	1.08	1.60	0.09
Bhutan	1.91	3.15	3	-9.50	-1.42	-0.88
Brunei	8.33	5	1.67	2.83	0.91	0.36
Cambodia	2.79	1.86	3.58	3.76	-0.73	1.01
China (ex. HK, Mac.)	2.81	2.94	-2.08	0.96	-2.00	-0.46
China, Hong Kong SAR	3.67	0.77	1	-1.06	-1.20	-0.60
China, Macao SAR	2.95	-0.4	0.7	2.62	-5.26	-0.67
East Timor	1.82	1.12	-0.56	6.31	3.13	3.50
India	2.24	3.16	1.6	2.15	0.44	-0.01
Indonesia	1.67	3.85	1.23	-0.02	0.02	-0.39
Japan	1.05	-0.26	-1.43	-2.39	-0.63	-1.47
Laos	2.49	2.55	3.11	3.40	-0.10	0.25
Malaysia	4.54	3.15	2.3	2.16	0.43	0.11
Maldives	3.57	3.33	5	2.39	-2.02	1.51
Mongolia	3.42	4.6	1.7	0.95	-2.67	0.20
Myanmar	2.95	3.05	1.61	-0.30	-1.08	-0.57
Nepal	1.99	2.86	2.7	3.49	1.19	0.73
Pakistan	2.47	4.02	3.49	3.65	-0.35	1.10
Philippines	5.04	3.67	2.33	1.75	1.13	0.57
Republic of Korea	2.51	2.7	-1.18	-3.12	-0.24	-2.44
Singapore	7.32	1.24	-1.12	2.75	-1.57	-3.05
Sri Lanka	3.79	1.58	1.3	-1.02	-1.41	-0.56
Thailand	3.62	3.64	-0.01	-1.94	-0.85	-0.23
Vietnam	1.7	4.72	1.75	1.52	-1.60	0.13

Source: United Nations 2007.

Asia's youth population has not grown uniformly. The youth bulge tends to be large in countries where fertility drops quickly from a very high to a very low level. The speed of the demographic transition also varies widely. There are substantial differences among Asia's three main subregions, which have significant implications for Asian youth (see Table 5). In China, the youth population increased 2.5 times between 1950 and 1990, but in the Philippines, it grew 3.3 times over the same period. The transition lasted less than 20 years in Japan, Taiwan, and South Korea but more than 50 years in the Philippines, where the youth share of the total population has remained near its peak of 20 percent for two decades. In East Asia, the youth peak occurred in 1990 and will decline over the first 20 years of the 21st century. In Southeast and South-Central Asia, the peak numbers will not occur until 2020 although South-Central Asia will experience faster growth.¹²

¹² Peter Xenos, Midea Kabamalan, and Sidney B. Westley, *A Look at Asia's Changing Youth Population* (Honolulu: East-West Center, 1999), 2, <http://www.eastwestcenter.org/fileadmin/stored/pdfs/p&p048.pdf>.

Table 5. Growth and Decline of Adolescent Populations, ESCAP Subregions, 1970 to 2020

1995 = 100	1970	1980	1990	1995	2000	2010	2020
East Asia							
10 to 14	90.0	128.8	99.5	100	113.9	102.4	97.7
15 to 19	93.1	109.5	125.1	100	100.6	103.0	96.7
20 to 24	58.1	72.0	103.6	100	80.0	91.7	82.6
Total 10 to 24	78.8	101.1	108.9	100	96.8	98.5	91.6
South-Central Asia							
10 to 14	59.4	74.8	88.1	100	107.1	118.6	121.6
15 to 19	56.8	75.7	93.5	100	113.9	130.0	138.5
20 to 24	50.4	70.9	90.6	100	107.2	131.4	146.1
Total 10 to 24	55.9	73.9	90.6	100	109.3	126.2	134.5
Southeast Asia							
10 to 14	67.3	84.6	95.0	100	104.2	110.9	107.5
15 to 19	58.1	77.9	96.0	100	105.4	113.7	117.2
20 to 24	48.4	72.1	92.4	100	104.3	115.1	123.1
Total 10 to 24	58.3	78.4	94.5	100	104.6	113.1	115.7

Note: 1995 is used as the base year and is assigned a value of 100. Thus, the chart clearly indicates the age groups that will decline or grow and by what amount.

Source: Jones 1997.

Experts have ascribed particular problems to societies living through these bulges and deficits. On one hand, countries experiencing youth bulges are considered to be more volatile since limited labor-market opportunities may frustrate the large numbers of young people and they could act out politically.¹³ On the other hand, youth deficits may result in labor shortages because, other things being equal, the ratio of new entrants to those leaving the workforce will worsen.¹⁴

For the purposes of this paper, however, the most important implication is that international migration is strongly concentrated in the 20-to-34 age group (because these are the ages of entry to the workforce, family formation, and leaving the parental home). Therefore, as we will see later, a boost in the size of the young-adult population has the potential to affect migration flows to, from, and within the region.

The Demographic Dividend

The passage of this bulge through the working-age population can produce a “demographic dividend” of economic growth when the workforce increases faster than the overall population — especially when it grows faster than the dependent segments of the population (children and the elderly).¹⁵ In Asia, the rapid and sustained declines in fertility that followed the boom generation

¹³ Fuller and Hoch, “Youth Bulges in Asia.”

¹⁴ Peter Xenos, “The National Youth Populations of Asia: Long-Term Change in Six Countries” (East-West Center Working Papers, Population Series No. 108-2, September 2001), <http://www.eastwestcenter.org/fileadmin/stored/pdfs/POPwp10802.pdf>.

¹⁵ The last large high-fertility cohorts are entering the working-age population in Asia at a time when the number of dependent children is decreasing and the number of dependent elderly remains small. See Ian Pool, “Demographic Dividends,” “Windows of Opportunity,” and “Development: age structure, population waves and cohort flows” (paper presented at CICRED seminar on “Age, Structural Transitions, Population Waves and Cohort Flows, and the Demographic Bonus,” Paris, February 23-26, 2004); Feng Wang and Andrew Mason, “Population Ageing: Challenges, Opportunities and Institutions,” in *Transition and Challenge: China’s Population at the Beginning of the 21st Century*, eds. Zhongwei Zhao and Fei Guo (Oxford: Oxford University Press, 2007); Andrew Mason and Ronald Lee, “Reform and Support Systems for the Elderly in Developing Countries: Capturing the Second

have created a special demographic situation: the ratio of the working-age to the nonworking-age population is the highest it has ever been. While this situation does not automatically confer a dividend of enhanced economic growth in an unfavorable policy environment, several empirical studies of Asian countries have confirmed that a dividend exists.¹⁶

If the correct policies are in place, the combined effect of this large working-age population and the appropriate health, family, labor, financial, and human-capital policies can create virtuous cycles of wealth creation.¹⁷ Asia's demographic dividend has coincided with the era of globalization, and the dividend will continue to increase for the next decade or so before the working-age population (15-64) begins to decline in the late 2020s.

Specifically, a demographic dividend can be delivered through the following three mechanisms:¹⁸

- *Increased labor supply:* The passing of the youth bulge into working ages, combined with higher female workforce participation (resulting from smaller families due to low fertility), produces more workers.
- *Higher savings:* Working-age people tend to have a higher level of output and also a higher level of savings than the very young, so a shift away from a younger age distribution favors the economy.
- *Human-capital investments:* Decreasing fertility rates mean that more health and educational resources are going to fewer people, boosting primary and secondary school enrollment rates.

Education is another important consideration. Almost all Asia-Pacific youth have some formal education and are easily the region's best-educated generation of young people. Therefore, not only are there more workers for each dependent than in past generations, but these workers' per capita productivity is much greater.

The literature suggests that a country's ability to maximize benefits from the demographic dividend largely depends on its ability to implement favorable macroeconomic, human-resource, social, and migration policies.¹⁹ Migration is a crucial element, as many poor Asia-Pacific countries may lose a significant part of their demographic dividend to more developed countries that are better able to recruit young and skilled nationals than companies at home.

Demographic Dividend," *GENUS* 62, no. 2 (2006): 11-35; Andrew Mason, "Demographic Dividends: The Past, the Present, and the Future," in *Population Change, Labor Markets and Sustainable Growth: Towards a New Economic Paradigm*, eds. Andrew Mason and Mitoshi Yamaguchi (Elsevier Press, 2007).

¹⁶ A high ratio of workers to dependents in China has contributed between 15 and 20 percent of economic growth during the reform era. However, the decline in economic growth rates following the 1997-1998 Asian economic crisis threatens to counteract Asia's demographic dividend. See Wang and Mason, "Population Ageing;" and Xiujian Peng, "Population Ageing, Human Capital Accumulation and Economic Growth in China," *Asian Population Studies*, 1(2): 169-188 (2005).

¹⁷ Bloom et al., "The Demographic Dividend."

¹⁸ *Ibid.*, 39.

¹⁹ *Ibid.*, 42.

Characteristics of the Migration-Age Population

The young working-age population has been growing quickly all over the world,²⁰ but nowhere is this more evident than in Asia. From 1970 to 2005, the growth of the mobile age groups in Asia was greater than the growth of the population as a whole. However, this trend is not sustainable over the long term. This section will look at some demographic factors (age structure, gender, and generational changes) that are likely to affect the region's migration-age population.

1. Age Structure

In most Asian countries, we already see the beginning of a significant long-term shift in age distribution. All Asian nations are to a greater or lesser extent experiencing population aging: the proportion age 65 or over is increasing, while the proportion under 15 is decreasing. The bulk of the redistribution in the age structure has been in the working-age groups (15 to 64), resulting in considerably improved dependency ratios and a potential demographic dividend. The proportion of the population in the working-age years has increased from 56 percent in 1970 to 67 percent in 2008. Moreover, the population in the peak-mobility age group (15 to 34) grew from 31.4 percent in 1970 to 36.8 percent in 1995 but fell to 34.1 percent in 2005. This group's growth rate varied greatly among the Asian and Pacific nations (see Table 6). The fastest rates of growth occurred in South Asia (especially Iran and Pakistan) and Southeast Asia (the Philippines, Brunei, and Malaysia). Nevertheless, the population grew substantially in the largest nations of the region: China, India, and Indonesia. On the other hand, Japan experienced little growth in this age group.

²⁰ The proportion of the world's population in the peak-mobility age group (15 to 34) increased to an unprecedented 34.2 percent of the global population in 1995 and continues to increase in absolute size. The large size of the cohorts currently entering the workforce reflects the high fertility rates 15 to 20 years ago and their unprecedented survival rates through infancy and childhood.

Table 6. ESCAP Region: Changing Age Composition, 1970 to 2008

Country	Population 15 to 64 (percent)			Population 15 to 34 (percent)		
	1970	2008	Annual percentage change	1970	2005	Annual percentage change
East Asia	58	72	2.1	31.8	32.3	1.9
China	56	73	2.3	31.3	39.5	2.5
China, Hong Kong SAR	59	74	2.5	30.1	28.3	2.0
Japan	69	65	0.7	35.8	25.5	0.3
Mongolia	53	67	3.5	32.7	40.8	3.8
Republic of Korea	55	72	2.4	31.9	31.3	1.8
Democratic People's Republic of Korea	na	67	3.1	30.2	31.0	1.3
Southeast Asia	54	65	2.8	31.4	35.8	2.9
Brunei	54	67	4.0	30	37.7	4.3
Myanmar	57	61	2.4	31.7	37.4	2.7
Cambodia	54	60	1.5	32.8	36.1	3.1
Indonesia	54	65	2.6	32	36.3	2.8
Laos	55	52	2.2	33.2	36.1	2.9
Malaysia	52	64	3.0	31.9	34.8	3.6
Philippines	51	61	3.5	32.8	35.5	3.5
Singapore	58	72	2.2	34.7	26.1	2.3
Thailand	52	71	3.2	30.7	32.2	2.5
Vietnam	55	67	2.7	28.6	37.4	3.0
South-Central Asia	54	62	2.5	35.4	35.2	3.3
Afghanistan	54	53	1.7	32.7	33.1	2.8
Bangladesh	51	62	2.9	36.0	36.1	3.5
Bhutan	55	63	1.7	38.8	35.4	2.7
India	54	63	2.4	34.9	34.6	3.0
Iran	50	69	3.6	42.0	42.1	4.2
Maldives	51	63	2.8	40.3	36.2	3.8
Nepal	55	59	2.6	34.6	34.6	3.4
Pakistan	51	57	3.0	36.2	35.3	3.8
Sri Lanka	54	67	2.1	33.1	34.4	2.0
Pacific	61	65	1.8	29.7	29.7	2.0
Australia	63	68	1.7	28.0	28.0	1.6
Fiji	54	64	2.2	27.8	27.4	1.1
New Zealand	60	66	1.3	34.3	35.1	2.3
Papua New Guinea	55	58	2.5	34.6	34.8	3.6

Source: UNESCAP 1984; Population Reference Bureau 2008; United Nations 2007.

2. Gender

Males have a striking (and increasing) dominance in the 20-to-34 age group, especially in East and South-Central Asia (see Appendix 2). In these nations, a longstanding pattern of greater male survival is due to the favoritism they receive in care, teaching, and attention. Now, however, males dominate at younger ages thanks to ultrasound machines that have allowed couples to abort unwanted female children.²¹ In China, the introduction of similar technology, together with the one-

²¹ See Judith Banister, "Shortage of Girls in China Today," *Journal of Population Research* 21, no. 1 (2004):19-45; Prabhat Jha, Rajesh Kumar, Priya Vasa, Neeraj Dhingra, Deva Thiruchelvam, and Rahim Moineddin, "Low Male-to-Female Sex Ratio of Children Born in India: National Survey of 1.1 Million Households," *Lancet* 367 (2006): 211-218.

child family policy, has also served to increase the ratio of male children to female children.²² Hence, the number of males per 100 females in the 20-to-34 age group in China will increase from 104.5 percent in 1990 to 109.7 percent in 2020. This pattern of increasing male dominance in young-adult age groups, which is evident in other East and South Asian nations, has implications for future international migration of females.

In some Asian countries, women have traditionally had lower levels of educational participation than men as well as more constraints on their mobility. These circumstances are changing fast in most nations. Accordingly, it is increasingly likely that more Asian women will have the requisite skills and independence to migrate independently. Recent research in Singapore, for example, has noted a marked shift in the numbers of independent migrant women from Japan and other Asian countries over the last decade: they now outnumber those who migrated as dependent spouses, the formerly dominant category. Asia-Pacific women are already working abroad in such areas as nursing, and demand will continue to grow with the aging of OECD populations. However, more women migrate for jobs in unskilled areas, especially in domestic work, child care, and care for the elderly, as part of an “international care chain.”²³ Demand for such migrant workers will undoubtedly continue to increase.

Working against this trend is the fact that the number of young women in Asia will increase only 57.5 million from 2000 to 2020, while the size of the young male population will increase 66.3 million over the same period. It is not clear how this gender imbalance within the migration-prone age groups will affect international labor migration. As gender imbalance grows, opportunities for women will increase in their home countries and might slow female migration, even among women with improved education and skills.

3. Generational Changes

Circumstances — including varying levels of prosperity and access to education — shape each generation and make each birth cohort different from the last. In Asia, the youth generation now entering the migration age differs from earlier cohorts in a number of ways.²⁴ First, today’s young adults are the first generation to grow up in the era of globalization, and second, they have been exposed to accelerated economic growth and prosperity in Asia, universal education, access to mass media, and the electronic age. These circumstances have influenced not only the human-resource skills they have acquired but their aspirations, preparedness to migrate, and knowledge of the outside world. We cannot predict with certainty the implications such factors will have on future migration. This generation may be more prone to international moves than earlier generations. Yet with increased prosperity and opportunities in Asia, today’s Asian youth may be less inclined to move to OECD nations and more attracted to other destinations in Asia.

²² Jonathan Watts, “China offers parents cash incentives to produce more girls: Beijing forced to tackle effects of one-child policy,” *The Guardian*, July 16, 2004.

²³ Graeme J. Hugo, “Care Worker Migration, Australia and Development,” *Population, Space and Place*, (forthcoming).

²⁴ See Graeme J. Hugo, “A Demographic View of Changing Youth in Asia,” in *Youth in Transition: The Challenges of Generational Change in Asia*, eds. Fay Gale and Stephanie Fahey (Bangkok: UNESCO, 2005), 59-88;

Graeme J. Hugo, “Migration and Development in Asia” (Keynote Presentation to International Conference on Population and Development in Asia: Critical Issues for A Sustainable Future, Phuket, Thailand, March 20-22, 2006).

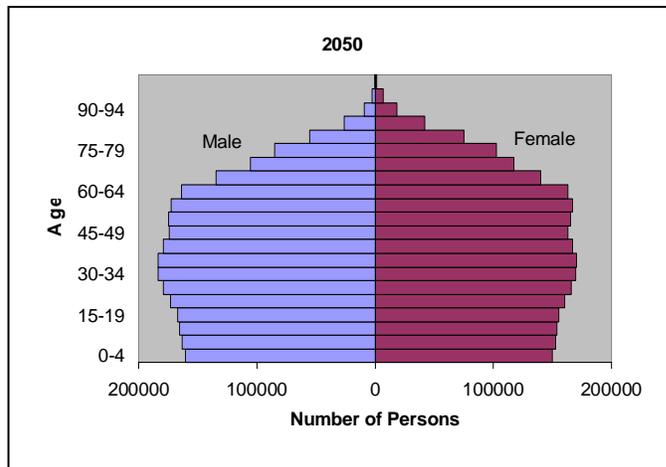
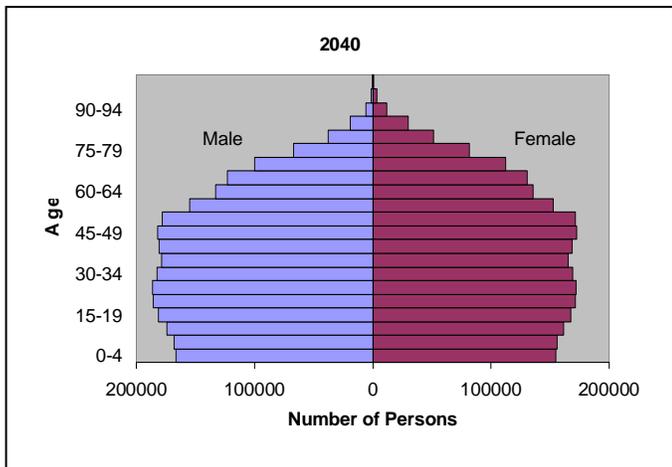
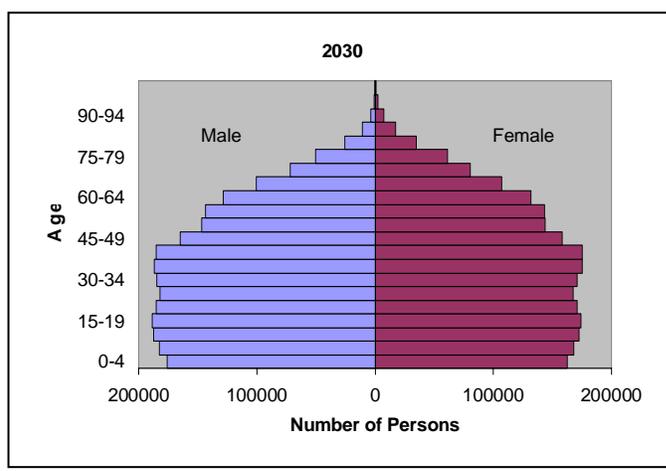
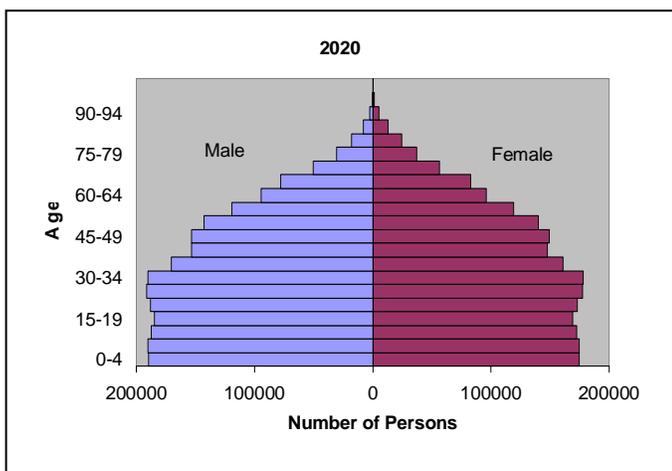
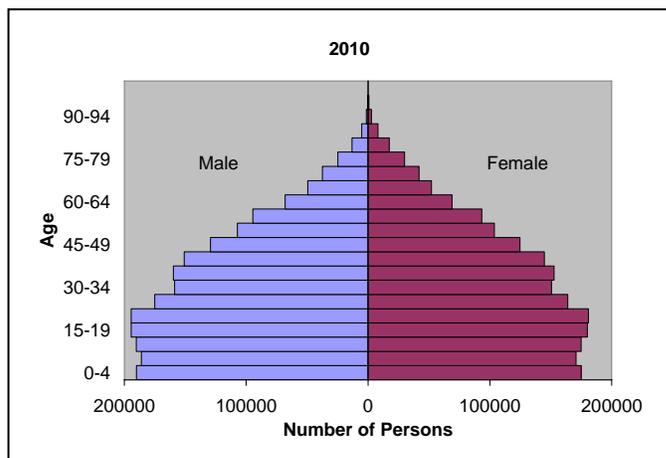
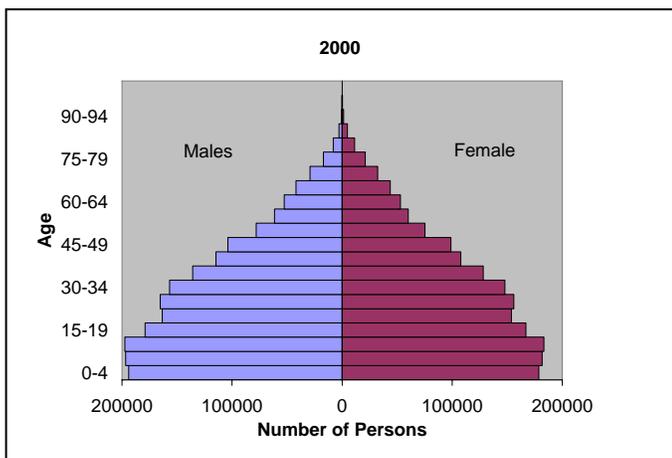
Forecasted Growth of the Migration-Age Population

The growth rate of the workforce-age groups (including the younger working ages) in the ESCAP region is certain to decelerate over the next few decades in response to the declines in fertility and mortality outlined earlier. In 2005, Asia and the Pacific accounted for 57.7 percent of the world's 6.51 billion residents but constituted 59 percent of the 4.19 billion people ages 15 to 64 and hosted 63.7 percent of the migration-prone age group.²⁵ By 2050, however, the world's working-age population will increase 40.1 percent to reach 5.87 billion, and the total global population will rise 41.1 percent to 9.2 billion. Thus, after initially increasing faster than the total population, the workforce-age group will begin to grow more slowly than the total population due to global aging. The Asia-Pacific share of the global working-age population will fall to 54.2 percent while its share of 15-to-34-year-olds (the migration ages) will drop to 54.6 percent. Therefore, while a disproportionate share of both the world's working-age and migration-age populations currently live in Asia and the Pacific, this will no longer be the case over the coming decades.

The fundamental shift in the Asian population's age composition is shown in Figure 4. At present, the region's age structure follows the more or less even pyramidal shape of a relatively fast-growing population with relatively high mortality and fertility. However, over the next half century, reductions in fertility and increases in life expectancy will see the age structure move toward a pillar shape in which dependent children make up a smaller proportion of the population. The projected changes in the population ages 15 to 64 are shown in Table 7. From 2000 to 2010, the number of working-age people in Asia will increase 18 percent. However, growth will fall off in the second and third decades of the 21st century when the cohorts born in the low-fertility 1990s enter the working-age groups. Moreover, the rate of decline will continue such that in the 2040s, the workforce ages will decrease 0.2 percent (6.3 million people).

²⁵ The United Nations has undertaken the most authoritative population projections for the Asian region (examining 2005 to 2050). The medium variant of the UN projections is used here. United Nations, *World Population Prospects: The 2006 Revision* (New York: United Nations, 2007).

Figure 4. Asia: Age-Sex Structure of Projected Population (in thousands), 2000 to 2050



Source: United Nations 2007

Table 7. Asia: Projected Changes in Population Ages 15 to 64, 2000 to 2050

Year	Number aged 15 to 64 (thousands)	Percent change over previous ten years	Median age*	Percent of total population ages 15-64
2000	2,242,738	19.5	26.0	63.9
2010	2,646,492	18.0	29.2	67.3
2020	2,918,956	10.3	32.1	67.5
2030	3,098,322	6.1	35.3	67.1
2040	3,159,624	2.0	38.1	65.8
2050	3,153,354	-0.2	40.2	64.4

Note: * Includes Western Asia.

Source: United Nations Medium Variant Projections, United Nations 2007.

However, the working-age population will grow at a *faster* rate than the total population in Asia until 2010, so their share of the overall population will increase from 63.9 percent in 2000 to 67.3 percent in 2010. Therefore, while the working-age population of Asia will increase by almost 50 percent from 2000 to 2040, the bulk of this increase will occur in the first half of this period. Despite the projected decline in growth rates, Asia's working-age population in 2050 will be almost five times larger than it was in 1995.

If we look at the most mobile age group (ages 15 to 34), its growth rate is slower than that of the working population as a whole and will decrease faster (see Table 8). Thus, the young workers' share of the total population will decline from a high of 36.5 percent in 2000 to 25.5 percent in 2050. Despite this drop, another 78 million persons ages 15 to 34 will be added to Asia's population over the next two decades, before the massive fertility declines begin to affect this age group's size.

Table 8. Asian Countries: Projected Changes in Population Ages 15 to 34, 2000 to 2050

Year	Number ages 15 to 34 years (thousands)	Percent change over previous ten years	Median age*	Percent of total population ages 15-34
2000	1,281,922	17.5	26.0	36.5
2010	1,314,411	2.5	29.2	33.4
2020	1,359,438	3.4	32.1	31.4
2030	1,324,099	-2.6	35.3	28.7
2040	1,311,281	-1.0	38.1	27.3
2050	1,248,181	-4.8	40.2	25.5

Note: * Includes Western Asia.

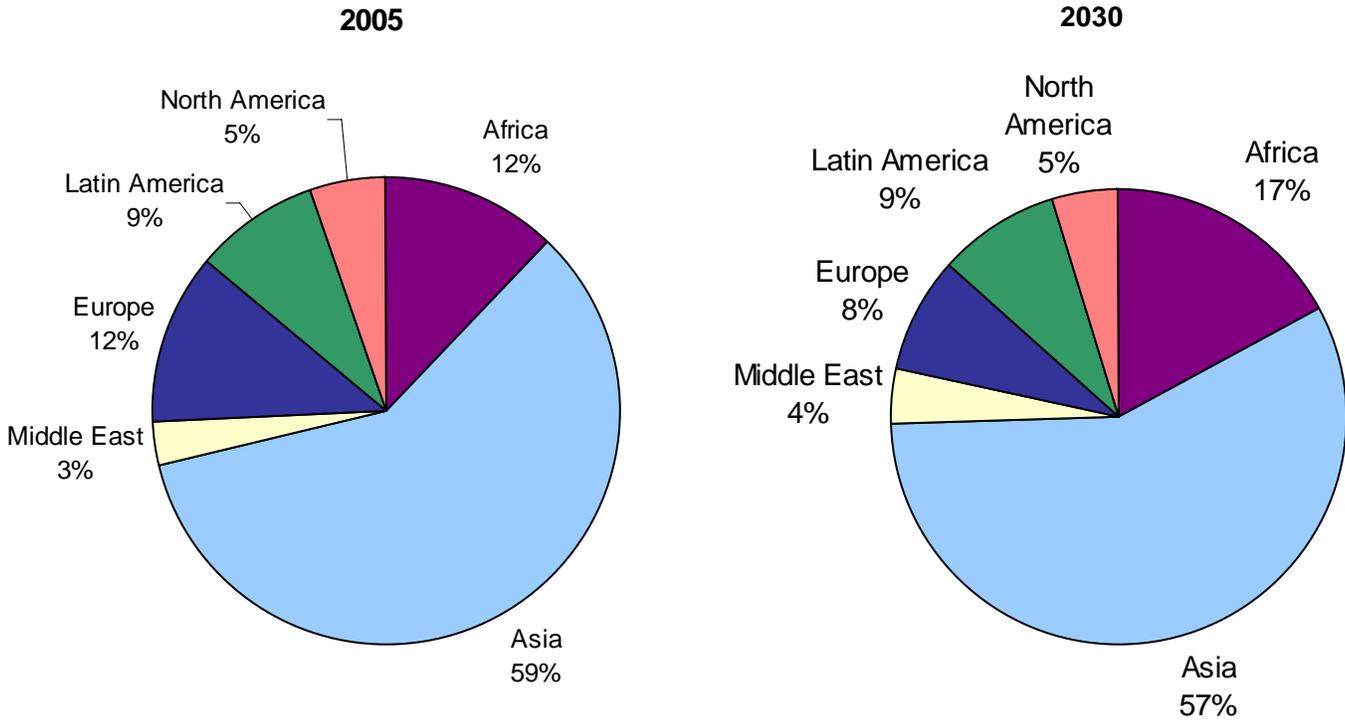
Source: United Nations Medium Variant Projections, United Nations 2007.

Global Perspective: How Does Asia Compare to the Rest of the World?

In analyzing how demographic change affects migration to and from Asia, we need to consider demographic trends in other regions of the world. Figure 5 compares the future changes in the size of Asia's workforce to the forecasts for other world's regions; Figure 6 focuses on the migration-prone 15-to-34 age group.²⁶

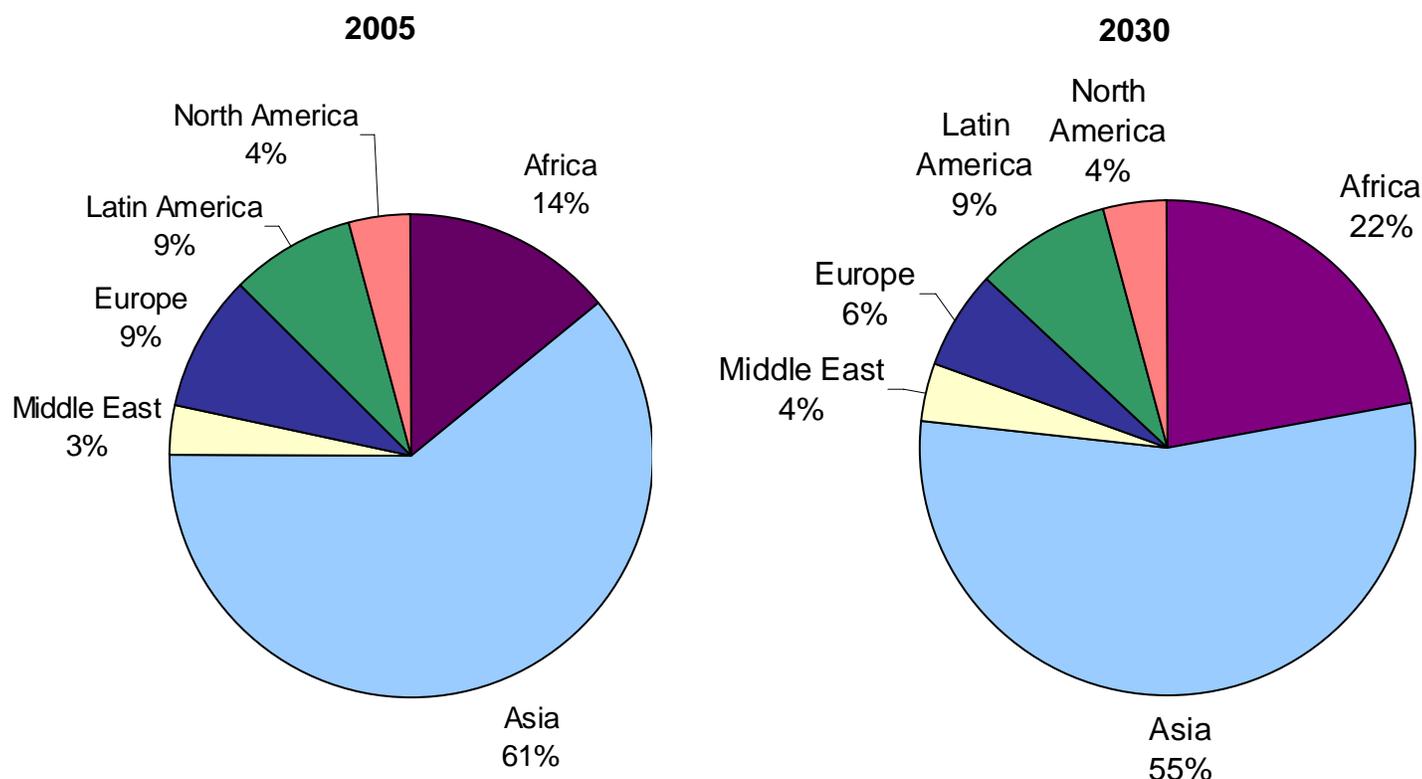
²⁶ While there is always some uncertainty in population projections, this particular forecast simply involves the aging of people who have already been born, so the numbers are likely to be accurate.

Figure 5. Regional Distribution of World Working-Age Population (Ages 15 to 64), 2005 and 2030



Source: United Nations 2007. (See Appendix 3, Table A3-1 for more information).

Figure 6. Regional Distribution of World Migration-Prone Population (Ages 15-34), 2005 and 2030



Source: United Nations 2007. (See Appendix 3, Table A3-2 for more information).

In Asia, the growth rate of the 15-to-34 age group will remain higher than average from 2005 to 2010 but is then projected to fall below the global average. The size of the 15-to-34 age group is already contracting in most East Asian countries, notably China and Japan (in Japan the decline is occurring at a 2.5 percent annual rate over the 2005-2010 period). By the next decade, 15 Asian countries will experience declines in the migration-prone age groups, while in the 2020s, 25 countries will be in this category.

Nevertheless, in terms of sheer numbers, the Asian working-age population will remain dominant relative to the rest of the world. The Asian workforce is expected to grow by 647 million from 2005 to 2030 (52.3 percent of the total world increase). Therefore, while Asia's share of the world's workforce-age population will fall — from 58.5 percent in 2005 to 57.1 percent in 2030 — its absolute numbers will remain much higher than Africa's (whose share will increase from 12.1 percent to 17.0 percent), even though the latter region is in a period of rapid growth.

The relevant global trends can be summarized as follows:

- The size of the aggregate global workforce will continue to increase until 2030, albeit at a decreasing rate (from 1.51 percent per year from 2005 to 2010 to 0.78 percent per year from 2020 to 2030).

- The size of the aggregate global migration-prone population will also continue to increase at a slower rate (0.85 percent per year from 2005 to 2010, 0.55 percent per year in the following decade, and 0.21 percent per year in the 2020s).
- In Europe, the 15-to-34 age group will decline over the entire period, falling from 205.7 million in 2005 to 154.1 million in 2030 — pointing to the growing shortage of young workers in Europe.
- In North America and Oceania, the 15-to-34 age group will grow at above the global average from 2005 to 2020 but will expand only marginally from 2020 to 2030.
- From 2005 to 2030, the main absolute growth of people ages 15 to 34 will occur in Africa (320 million to 540 million) and the Middle East (77 million to 99 million).

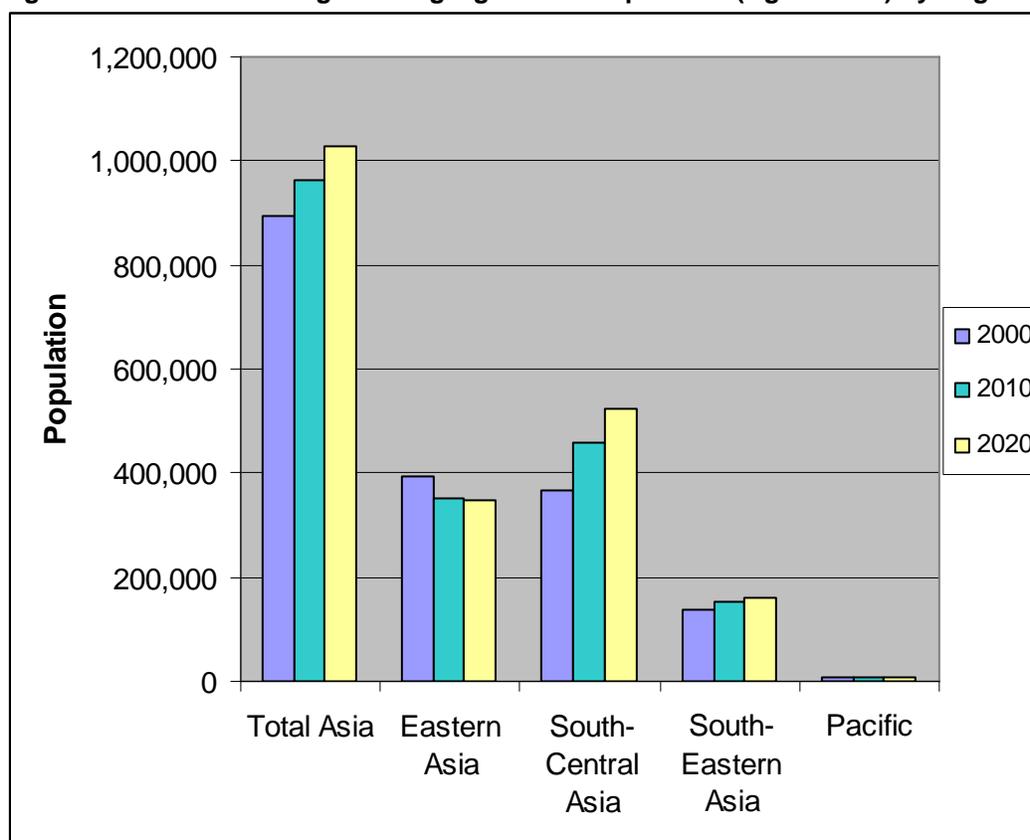
After two decades of rapid increases in the size of the migration-prone age groups in Asia and the Pacific, growth has ceased, and the size of the workforce will decline at a slow — but increasing — rate over the next two decades.²⁷ However, absolute numbers remain high. Even in 2030, the region will have around 55 percent of the total global population in the 15-to-34 age group — a generation that is increasingly better educated and more integrated into global, economic, and social systems — and will therefore continue to be a critical player in global migration.

Where Will Future Asian Migrants Come from?

Asia's migration-age population is not growing uniformly across the region. Several Asian nations are likely to experience slow growth or even declines in their workforce-age populations while others will continue to experience significant growth (see Appendix 4, Table A4-1). In East Asia, the youth population will decline — in both relative and absolute size — in the next two decades due to the sustained low fertility in the region, especially in the demographic giant China (whose population decline coincides with a time of unprecedented rapid economic growth). The situation is somewhat different in both South-Central and Southeast Asia, where the *rate* of growth of the 20-to-34-year-old population will decline, but the population itself will continue to grow over the next two decades (see Figure 7).

²⁷ While the total size of the working-age population in Asia rose 15 percent between 1990 and 2000, growth over the next two decades will be only half this rate.

Figure 7. Growth in Young Working-Age Asian Population (Ages 20-34) by Region, 2000 to 2020



Source: United Nations 2007 (see Appendix 2 for more information).

The fertility decline that has influenced almost all Asian nations was slowest in South Asia, so the young-adult population will continue to grow by over 20 percent from 2000 to 2010, decreasing to a somewhat lower level in the following decade. In Southeast Asia, the growth rate from 2000 to 2010 will be half the level it was in 1990 to 2000, decreasing to less than a quarter of the 1990s level from 2010 to 2020. From 2005 to 2010, only Japan will see its workforce-age population shrink, but by the 2020s, eight other countries will join it. These eight countries include the world's largest country, China, which will experience an annual decline of 0.23 percent in its workforce-age group during the 2020s. China's experience differs significantly from the other demographic giants in Asia: India, Indonesia, Pakistan, and Bangladesh, which will experience annual increases during the 2020s of 1.14, 0.61, 1.77, and 1.41 percent, respectively. Increases of greater than 2 percent per year are anticipated in Afghanistan, East Timor, Vanuatu, and the Solomon Islands. The lowest growth or decline is generally in Eastern Asia and the Polynesian part of the Pacific (Samoa and Tonga). More rapid growth will be in South Asia, Melanesia (the Solomon Islands, Papua New Guinea, and Vanuatu) and the former Indochinese countries (Laos and Cambodia). Southeast Asia will experience some growth but of less than 1 percent per year.²⁸

²⁸ Exceptions are Singapore and Thailand (with annual declines of 1.15 and 0.32 percent, respectively), and East Timor, Brunei, the Philippines, and Malaysia (with annual increases of 3.34, 1.34, 1.57, and 1.01 percent, respectively).

It is notable that in the Philippines, one of the premier global emigration nations, the 15-to-34 age group will continue to grow more than 1 percent annually through 2020 (see Appendix 4, Table A4-2). The same is true for the large South Asian countries of Pakistan, Bangladesh, and India. The pattern in the Pacific is interesting too, with a contrast between anticipated declines in Tonga, Fiji, Samoa, and French Polynesia and strong growth in Papua New Guinea, the Solomon Islands, Vanuatu, Guam, and New Caledonia as a result of differences in fertility and the level of emigration.

China's situation is especially interesting, given that it has become a major source of immigrants for OECD countries. Its workforce-age population, which increased from 818 million in 1995 to 929 million in 2005, is projected to rise to 992 million by 2020 before it declines to 970 million in 2030. At the same time, India's working-age population, which increased from 565 million in 1995 to 704 million in 2005, is projected to jump to 1.02 billion in 2030. In Indonesia, the same population increased from 124 million to 149 million and is projected to reach 194 million in 2030.

The fast-growth era for the migration-prone population in Asia and the Pacific is rapidly coming to an end. These age groups will grow by more than 1 percent per year in the 2020s in only six nations, though the sheer numbers will still be so large that the potential for substantial migration will remain strong.

IV. The Implications for International Migration

The same process that concentrates population in the demographic-dividend age group — the 20s and 30s — has equally important implications for migration. This is because the young working-age groups are the most mobile, migration-prone segments of the population. Their rapid growth in Asia and the Pacific has coincided with unprecedented international migration opportunities.

The potential implications of such migration include the following:

- *Loss of demographic dividend.* The source country would lose some of its demographic dividend because it would have fewer workers for each dependent. Also, since migration is selective, the departing workers would likely be among the most productive and skilled.
- *Greater dependency ratios.* Countries with net gains of immigrants would benefit from a higher ratio of workers to dependents, thus some of the demographic dividend would transfer to destination countries.
- *Development gains.* The emigration of workers does not necessarily mean the origin country's economy loses those workers' contributions. The possible positive effects of emigration include increased remittances, higher foreign direct investment, and information and knowledge transfers. Also, many migrants return home — permanently, temporarily, and virtually.²⁹

²⁹ See Robert E.B. Lucas, *International Migration and Economic Development: Lessons from Low-Income Countries* (London: Edward Elgar Publishing, 2005); World Bank, *Global Economic Prospects 2006: Economic Implications of Remittances and Migration* (Washington, DC: World Bank, 2006).

Where Will Migrants Go?

Demographic projections show the inevitability of significant migration from Asia, where the workforce is still growing, to Europe and North America, where it is declining or growing only very slowly. However, examining international migration requires more than just looking at the size of the workforces across the world. Asian workers no longer migrate exclusively to OECD countries. International migration within Asia is increasing, and some Asian countries are attracting migrants *from* OECD countries, such as Australia.

The rest of this section examines nondemographic migration determinants such as the competition for the highly skilled, economic expansion and increased opportunities for international students in Asia, the changing position of women, generational changes, the extension of migrant-based social networks, and increasing cooperation within Asia and the Pacific.

Increased International Migration within the Asian Region

Analyses of international migration tend to emphasize South-North, low-income-to-high-income country migration, focusing on flows from Africa, Latin America, and Asia to Europe, North America, and Oceania. However, intraregional migration is significantly larger in scale,³⁰ especially in the vast Asia-Pacific region.

In the past, the dominant form of intracountry movement in Asia consisted of unskilled and semiskilled migration from labor-surplus countries like India, Indonesia, Pakistan, Burma, Bangladesh, Sri Lanka, Indonesia, the Philippines, China, and Vietnam, to high-income, low-fertility countries like Singapore, Hong Kong, Japan, Taiwan, South Korea, Malaysia, and Thailand.³¹ The demand for such labor is likely to continue and even increase.

That said, Asian countries will need more skilled labor. Despite considerable variation from country to country, economic growth has been strong throughout Asia, especially in China and India, which are producing greater demand for skilled migrants. In addition to having economies that increasingly rely on skilled workers, countries like Singapore, South Korea, Taiwan, Hong Kong, and of course Japan are home to businesses offering wages and conditions on par with those in OECD countries. Moreover, decades-long low fertility in these countries means fewer young people coming into the workforce compared with the number of workers hitting the retirement age.

Asia's increased dependence on skilled labor has led countries to pursue policies that seek to retain their own skilled labor and recruit skilled workers from elsewhere. Singapore has an active policy of seeking skilled migrants to settle for at least an extended period.³² Hong Kong also has large communities of expatriates from other parts of Asia as well as from countries like Australia and the

³⁰ Dilip Ratha and William Shaw, *South-South Migration and Remittances* (Washington, DC: World Bank, 2007).

³¹ Graeme J. Hugo, "Asian Labour Migration Trends" (first Draft of a report to the Asian Development Bank, January 2008).

³² Mui Teng Yap, "Singapore Country Report" (paper presented at the Workshop on International Migration and Labour Markets in Asia, Japan Institute of Labor, Tokyo, February 17, 2006), http://www.jil.go.jp/foreign/event_r/event/documents/2006sopemi/countryreport10.pdf.

United Kingdom.³³ While these expatriates are predominantly on temporary residence permits, the Hong Kong government in 2006 announced the Quality Migrant Admission Scheme (similar to the points systems used in Australia and Canada) designed to attract around 1,000 relatively young and well-educated people to settle permanently.³⁴ . Even in China, rapid economic growth has brought a significant influx of skilled migrants, albeit mostly on temporary residence permits.³⁵ In recent years, China has been one of the largest sources of skilled migrants for countries like Australia, causing a shortage of skilled workers that has reportedly strained development efforts in China.³⁶

There is little doubt that OECD countries will face increased competition for skilled migrants from Asian countries over the next two decades, if they are not already experiencing it now. This pressure will be felt in a number of ways:

- As noted, Asian countries are increasingly equipped to compete with OECD countries for the highly skilled. Rapid economic growth and structural changes in Asian economies have created opportunities at home that were previously only available abroad.
- As conditions continue to improve in Asia and the Pacific, nationals who are already abroad will be tempted to return. This pattern has already been observed in Taiwan,³⁷ Korea,³⁸ and increasingly in China.³⁹
- Skilled Asian workers choosing between another Asian country or an OECD country may favor the former because of proximity and cultural factors.
- Asian economies will become increasingly attractive to skilled workers from OECD nations, a trend already seen with the significant numbers of highly skilled Australian workers moving to Asian countries (see Table 9). The familiar South-North dichotomy employed in many migration analyses is no longer a given and will continue to weaken over the next two decades.

³³ Stephen W.K. Chui, "Recent Trends in Migration Movements and Policies in Asia: Hong Kong Region Report" (paper presented at the Workshop on International Migration and Labor Markets in Asia, Japan Institute of Labor, Tokyo, February 17, 2006).

³⁴ Benjamin Wong, "New immigration points system targets 'top quality' applicants," *South China Morning Post*, June 29, 2006.

³⁵ Youngtang Ma, "Recent Trends and Data of Economy, Labor Market and Migration in China for 2005" (paper presented at the Workshop on International Migration and Labor Markets in Asia, Japan Institute of Labor, Tokyo, February 17, 2006).

³⁶ "China's People Problem: Human Resources," *The Economist*, April 16, 2005.

³⁷ H.C. Tsai, "A Study on the Migration of Students from Taiwan to the United States: A Summary Report," *Journal of Population Studies* 12 (1988): 91-120.

³⁸ Lucas, *International Migration and Economic Development*.

³⁹ David Zweig, Chen Changgui, and Stanley Rosen, "Globalization and Transnational Human Capital: Overseas and Returnee Scholars to China," *The China Quarterly* 179 (September 2004): 735-757.

Table 9. Enrollment Changes, School-Age Populations, and Gross Enrollment Ratios (GER) in Tertiary Education by Average Annual Growth, Year, and Region, 1991 to 2004

Region	Average annual growth							Tertiary GER		
	Tertiary enrollment				Tertiary school-age population					
	1991-1996	1996-1999	1999-2004	1991-2004	1991-1996	1996-1999	1999-2004	1991	1999	2004
Arab states	8.9	14.3	3.4	7.9	2.4	3.5	2.8	11	19	21
Central & Eastern Europe	0.7	9.0	7.1**	5.0	1.1	1.2	0.8	33	39**	54
Central Asia	-3.4	-5.1	8.1**	0.4	0.9	1.0	2.5	29	19**	25
East Asia and the Pacific	7.1	3.8	11.8	8.1	-1.8	-1.2	0.5	7	13	23
Latin America and the Caribbean	2.6	8.8	5.5	5.1	1.6	1.4	0.9	17	21	28**
North America and Western Europe	2.2	-0.4	3.0	1.9	-1.0	-0.6	0.5	52	61	70
South and West Asia *	4.3	11.0	6.0	6.8	1.3	2.6	2.1	6	-	11
Sub-Saharan Africa	4.5	9.0	8.9	7.2	2.7	2.7	3.2	3	4	5
World	3.5	5.2	6.6	5.1	0.1	0.9	1.4	13.7	17.9**	23.7

Notes:** UNESCO Institute of Statistics estimation.

* Data refer to 2000 instead of 1999.

The tertiary school-age population represents a five-year cohort derived on a country-by-country basis. It converts five years after the theoretical/typical age of secondary education completion.

Source: UNESCO 2006, 23.

The Competition for the Highly Skilled

Contemporary migration is divided between the situation of highly skilled workers, for whom governments facilitate migration, and that of unskilled migrants, for whom governments erect stronger barriers against movement; scholars call this divide a bifurcation.⁴⁰ Countries are competing to boost their national stocks of human capital by opening themselves up to entrepreneurial, skilled, and highly educated migrants.⁴¹ This section examines the supply and demand of Asian-Pacific young adults in international skilled-labor markets.

1. Education

One of the most profound changes in Asia over the last three decades has been governments extending universal education. While postgraduate education has remained the prerogative of the privileged elite in many nations, in recent years the number of Asians receiving tertiary education and training has jumped. The global number of students in tertiary education in their home country doubled between 1991 and 2005, reaching 138 million (see Figure 8). East Asia and the Pacific represented the fastest-growing region, with the numbers rising from 14 million in 1991 to 42 million in 2005, for an increase of 28 million students over that period, while in South and West Asia

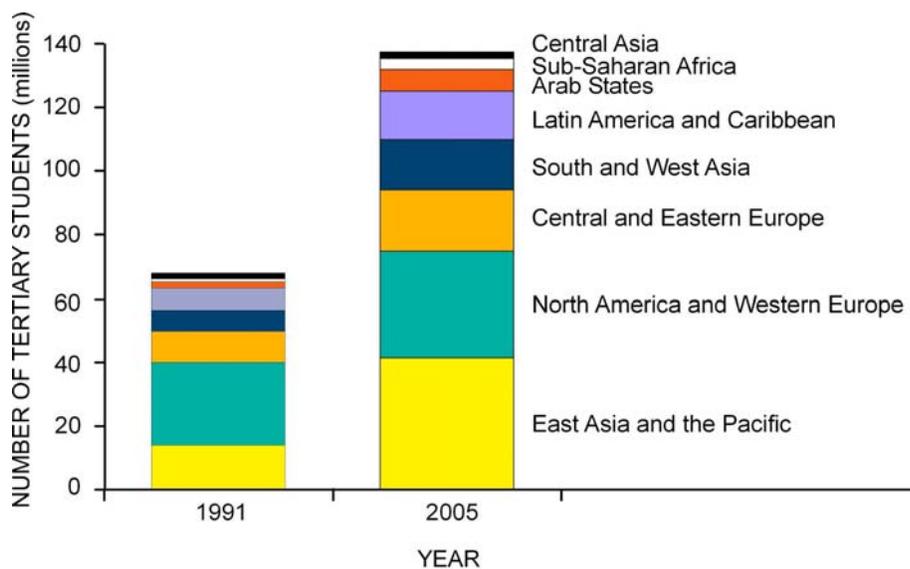
⁴⁰ Stephen Castles and Mark Miller, *The Age of Migration: International Population Movements in the Modern World*, 3rd ed. (New York: The Guilford Press, 2003).

⁴¹ Christiane Kuptsch and Pang Eng Fong, eds., *Competing for Global Talent* (Geneva: International Institute for Labor Studies, 2006).

the numbers more than doubled from 6 million in 1991 to 16 million in 2005. Even more striking is China, where the number of students in tertiary education doubled between 1999 and 2002 and nearly doubled again between 2002 and 2006 (see Appendix 5). In 2006, China had 23 million tertiary students, the largest number of any country and 15 percent of the world total.⁴² While the growth in other countries, such as India, has been more modest, the overall picture for Asia remains one of substantial growth. Interestingly, Malaysia, one of the main contributors of Asian students to OECD nations, has experienced significant growth in its population receiving tertiary education (see Appendix 5).

⁴² United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute of Statistics, *Global Education Digest 2006: Comparing Education Statistics Across the World* (Montreal: UNESCO Institute of Statistics, 2006).

Figure 8. Number of Tertiary Students Worldwide, 1991 and 2005 (in millions)



Source: UNESCO 2006, 21; UNESCO 2007, 132.

The most spectacular increases in Asian tertiary enrollments and enrollment ratios⁴³ have occurred in East Asia though the data do not reflect such increases as they do not factor in overseas student migration (see Table 9). Yet East Asia has had the largest increased growth in student mobility and accounts for 29 percent of the world's foreign students.⁴⁴

⁴³ The Gross Enrollment Ratio is the number of pupils enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. For the tertiary level, the population used is the five-year age group following on from the secondary school leaving age.

⁴⁴ United Nations Educational, Scientific and Cultural Organization, *Global Education Digest 2006: Comparing Education Statistics across the World* (Montreal: UNESCO Institute of Statistics, 2006) pp. 21 and 22.

On the surface, the massive increase in the numbers of highly educated youth in Asia, especially East Asia, substantially expands the pool of potential skilled migrants to OECD nations. However, the quality, type, and transferability of the education received in the region, relative to OECD country requirements, raises concerns among policymakers who want highly educated migrants to find jobs at rather than below their education level. These issues, along with many Asian youth lacking English language skills, limit the potential for large numbers of new graduates to migrate to OECD countries.

Although high-income countries' immigration policies overwhelmingly favor high-skilled immigrants, these countries will likely need unskilled and semiskilled workers as the size of their own workforces begins to decline. Some OECD countries have already developed seasonal temporary labor schemes to fill shortages in select sectors (e.g., horticulture and viticulture), and many unskilled and semiskilled jobs have moved to low-wage nations, often to Asian countries though some low-skill jobs are difficult to export.⁴⁵ In other words, OECD countries could turn to less-educated migrants from Asian countries to fill lower-skilled jobs.

2. Students and Skilled Migration

The nexus between students and skilled migration is growing as a significant number of skilled Asia-Pacific migrants first enter certain OECD countries as students. Australia best represents this trend: since making it easier for foreign students to settle, in 1999, its universities have seen a dramatic increase in overseas-born students, the bulk of them from Asia.⁴⁶ In OECD countries, policymakers increasingly see foreign students as the “raw material to train some of the human capital they need.”⁴⁷

However, Asian students may not necessarily continue to seek higher education in OECD countries at the same rates. Quality tertiary education opportunities in the Asia-Pacific region, especially in China, have expanded. These homegrown universities have the added advantage of proximity, lowers costs, and cultural familiarity. Consequently, more young Asians may choose to study in their home country, or as an international student in another Asia-Pacific country, instead of migrating to an OECD nation. The large increase in the number of foreign students in China, Japan, and Korea offers some evidence of this trend. Moreover, Malaysia in recent years has successfully attracted students from poorer neighboring countries, and 20 percent of Singapore's university students are foreign.

⁴⁵ One example is in the burgeoning aged-care sector in OECD countries. Hugo (forthcoming), for example, has shown that Australia faces a 3 percent annual increase in demand between 2001 and 2011 for paid care workers, and a 3.2 percent and 3.9 percent per year increase in each of the next two decades. In all, over the next three decades, Australia will need an extra 69,954 workers in the residential care field and 136,457 in nonresidential home-based care. He shows the need cannot be fully met within the Australian labor market and that current immigration regulations, which are strongly focused on skills, mean that most potential aged-care workers cannot gain entry to Australia.

⁴⁶ Overseas students in Australia numbered 208,038, three quarters from Asia (Hugo, Callister, and Badkar 2008, p.156)

⁴⁷ Ronald Skeldon, “Globalization, Skilled Migration and Poverty Alleviation: Brian Drains in Context” (working paper T15, Development Research Center on Migration, Globalization and Poverty, University of Sussex, November 2005), 17.

3. Extension of Migrant-Based Social Networks

Stronger links between Asia and people and institutions in other nations also have relevance to migration patterns. These links are partly the result of expanded Asian communities in other nations due to migration. These large communities mean that the proportion of young Asians and Pacific Islanders with some social capital in OECD countries (in the form of relatives and friends abroad) has increased. Although the extent to which Asian diasporas help conationals migrate varies, the strength of those bonds is considerable, and networks are a major facilitating factor in migration.⁴⁸ Much of the discussion about social networks focuses on family reunion and unskilled or semiskilled migration; it is rarely considered in terms of skilled migration. However, increasing evidence shows that social networks can be crucial in whether skilled Asians choose to migrate to an OECD nation, and if so, which one. Social networks can also spill over into professional linkages, allowing people to exchange information about job opportunities and conditions. Hence, it is possible to see concentrations of compatriot migrants in particular economic subsectors in OECD nations.⁴⁹

Based on demographic trends, increased immigration from Asia-Pacific countries to the OECD could considerably increase over the next two decades. But a number of intervening factors may counteract this potential, including the declining growth rate of the migration-prone population, the concentration of this growth in select regions, and the limited pool of skilled young people able and willing to migrate.

V. Conclusion

Demographic change is but one of the constellation of forces shaping international migration in the Asia-Pacific region. Nevertheless, it has played a powerful role in Asia's increased scale of migration over the last two decades, and it will continue to do so for the next two decades.

Even as the Asia-Pacific region's population continues its rapid expansion, the timing and magnitude of demographic change vary enormously across individual countries, with some working-age populations growing while others decline. As a result, several Asian nations face great pressure over the next decade to quickly absorb increasing numbers of workers. In some respects, this pressure parallels the situation Europe faced in the second half of the 19th century and the early 20th century, when demographic pressure contributed to the large-scale migrations of more than 40 million people to North and South America, Australasia, and southern Africa. Of course, the

⁴⁸ See Douglas Massey, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino, and J. Edward Taylor, "Theories of International Migration: A Review and Appraisal," *Population and Development Review* 19, no. 3 (1993): 431-466; Douglas Massey, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino, and J. Edward Taylor, *Worlds in Motion: Understanding International Migration at the End of the Millennium* (Oxford: Oxford University Press, 1998).

⁴⁹ A most notable example is the Information Technology industry in Silicon Valley in California, where social networks have been crucial in channelling Indian IT professionals into that region. See Xiang Biao, "Indian Information Technology Professionals' World System: The Nation and the Transition in Individuals' Migration Strategies," in *State/Nation/Transnation: Perspectives on Transnationalism in the Asia/Pacific*, eds. Brenda S.A. Yeoh and Katie Willis (London: Routledge, 2004), 161-178; and Xiang Biao, "Towards Sustainable 'Brain Circulation': What India and China Can Learn from Each Other" (paper Presented at the International Conference on Population and Development in Asia: Critical Issues for a Sustainable Future, Phuket, Thailand, March 20-22, 2006).

contemporary situation for countries like China, Indonesia, the Philippines, and the South Asian nations is different because the numbers involved are so much larger than those Europe experienced prior to World War I.⁵⁰

Yet it is generally believed that international migration will not play the same role for the Asia-Pacific region as it did for Europe at a comparable stage of demographic transition. This is partly because of the scale issue but also due to greater settlement barriers that potential destination countries have put in place.

Nevertheless, aging and fertility decline in high-income countries are creating a significant demand for workers that will lead to continued South-North migration out of Asia-Pacific nations and into Europe, North America, and Oceania.

The needs of high-income countries represent only one side of the coin, however, when it comes to shaping international migration flows over the next two decades. The growing demographic (and economic) differentials *among* countries of the Asia-Pacific could have an equally dramatic impact. These differentials are widening the gap between the region's low-income and high-income countries.

Against that backdrop, governments in Asia are changing their immigration and integration policies. They increasingly see migration as a long-term structural element in their economies rather than an unfortunate, temporary necessity. Though some significant barriers remain, more governments in the region are developing immigration and emigration policies that recognize their current and future demographic and economic realities. Examples include Singapore and South Korea, which have evolved from viewing migration as a short-term temporary phenomenon to seeing it as a long-term structural necessity, and have put in place a range of migration and settlement policies.

The numerous and complex forces transforming international migration in Asia and the Pacific are closely related to globalization and the massive economic, political, and social change sweeping the region. Moreover, migrants' social networks and a fast-growing, regionally based immigration industry have provided a self-perpetuating momentum to the region's international migration. Hence international migration within and beyond Asia will continue to grow.

Still, demographic changes and trends must not be ignored, particularly in the coming decades as international migration from the Asia-Pacific region most likely continues to expand.

⁵⁰ Richard A. Easterlin, "Influences in European Overseas Emigration before World War I," *Economic Development and Cultural Change* 9 (April 1961): 331-351.

Appendix 1. ESCAP Region: Major Demographic Indicators, 1970 to 2008

Country	Population		Annual Population Growth Rate		TFR			Expectation of Life					
	(millions)		1970-80	2008	1970	2008	Percent Change	1970		2008		Percentage Change	
1970	2008	Males						Females	Males	Females	Males	Females	
East Asia	805.1	1547.0	1.7	0.5	4.7	1.7	-98.3	58	62	72	76	24.1	22.6
China	682.0	1336.3	1.7	0.6	5.1	1.7	-98.3	58	61	71	75	22.4	23.0
Hong Kong	3.1	7.0	2.6	0.8	4.0	1.0	-99.0	65	72	79	85	21.5	18.1
Japan	94.1	128.1	1.1	0.1	2.1	1.3	-98.7	68	74	79	86	16.2	16.2
Mongolia	0.9	2.6	2.9	1.0	5.9	1.9	-98.1	56	60	64	70	14.3	16.7
Republic of Korea	25.0	48.6	1.8	0.3	4.5	1.2	-98.8	56	69	75	82	33.9	18.8
Democratic People's Republic of Korea	na	23.9	-	0.3	na	1.9	na	na	na	65	69	na	na
Southeast Asia	228.4	577.9	2.2	1.2	6.0	2.3	-97.7	46	48	68	73	47.8	52.1
Brunei Darussalam	0.1	0.4	-	2.0	na	2.3	na	na	na	75	80	na	na
Myanmar	22.3	49.2	2.4	0.8	5.4	2.1	-97.9	46	49	59	65	28.3	32.7
Cambodia	5.4	14.6	-0.3	2.0	6.2	3.4	-96.6	44	47	57	62	29.5	31.9
Indonesia	97.7	234.3	1.9	1.1	6.1	2.2	-97.8	42	43	68	72	61.9	67.4
Lao People's Democratic Republic	2.4	5.9	2.3	1.7	6.1	3.2	-96.8	39	42	63	66	61.5	57.1
Malaysia	8.2	27.7	2.6	1.8	6.1	2.6	-97.4	55	58	72	77	30.9	32.8
Philippines	28.1	90.5	2.7	2.0	6.0	3.2	-96.8	54	57	69	74	27.8	29.8
Singapore	1.6	4.5	1.4	1.2	3.4	1.3	-98.7	66	70	78	82	18.2	17.1
Thailand	27.2	63.1	2.5	0.4	6.3	1.5	-98.5	53	58	68	77	28.3	32.8
Timor-Leste	na	1.2		3.5		6.5	na			60	62	na	na
Viet Nam	35.4	86.4	2.2	1.3	5.7	2.1	-97.9	42	45	70	73	66.7	62.2

Middle South Asia	591.8	1740.8	2.3	1.5	6.2	2.9	-97.1	47	46	64	67	36.2	45.7
Afghanistan	9.8	28.2	2.6	3.8	6.9	7.1	-92.9	37	38	44	44	18.9	15.8
Bangladesh	51.4	161.3	2.6	1.7	7.0	2.9	-97.1	44	43	63	65	43.2	51.2
Bhutan	0.9	0.7	2.2	1.4	6.3	2.3	-97.7	40	39	64	68	60.0	74.4
India	439.4	1186.2	2.1	1.4	6.0	2.8	-97.2	47	46	63	67	34.0	45.7
Iran	21.6	72.2	3.0	1.3	7.0	2.0	-98.0	48	49	69	73	43.8	49.0
Maldives	0.1	0.3	3.0	1.7	na	3.0	na	na	na	67	70	na	na
Nepal	9.3	28.8	2.2	2.0	6.2	3.3	-96.7	40	39	63	64	57.5	64.1
Pakistan	49.4	167.0	2.8	1.8	7.2	3.6	-96.4	50	47	65	66	30.0	40.4
Sri Lanka	9.9	20.3	1.7	1.1	4.7	1.9	-98.1	64	65	69	76	7.8	16.9
Pacific	15.6	34.1	1.7	1.5	3.5	2.5	-97.5	62	67	73	78	17.7	16.4
Australia	10.3	21.4	1.4	1.5	2.9	1.8	-98.2	69	75	79	84	14.5	12.0
Fiji	0.4	0.8	1.9	0.8	4.6	2.6	-97.4	66	70	67	71	1.5	1.4
New Zealand	2.4	4.1	1.5	1.0	3.2	2.2	-97.8	69	75	78	82	13.0	9.3
Papua New Guinea	1.9	6.5	2.6	2.0	6.2	3.7	-96.3	45	45	55	60	22.2	33.3
Samoa	0.1	0.2	1.0	0.1	na	4.6	na	na	na	70	76	na	na
Solomon Islands	0.1	0.5	3.4	2.3	na	3.8	na	na	na	63	65	na	na

Source: UNESCAP 1984, 2008.

Appendix 2. Asian and Pacific Countries: Actual and Projected Population (in thousands) Ages 20 to 34, 1990 to 2020

Year	Males	Females	Total	Percent growth
Total Asia				
1990	401,341	375,836	777,175	
2000	459,471	434,523	893,994	15.0
2010	496,459	466,131	962,590	7.7
2020	533,926	495,550	1,029,476	6.9
East Asia				
1990	188,712	176,987	365,697	
2000	201,444	190,619	392,063	7.2
2010	182,520	169,349	351,869	-10.3
2020	182,190	164,979	347,169	-1.3
South-Central Asia				
1990	155,828	142,700	298,528	
2000	189,981	176,236	366,217	22.7
2010	237,178	220,853	458,031	25.1
2020	271,518	252,150	523,668	14.3
Southeast Asia				
1990	56,801	56,149	112,950	
2000	68,046	67,668	135,714	20.2
2010	76,761	75,929	152,690	12.5
2020	80,218	78,421	158,639	3.9
Pacific				
1990	3,321	3,260	6,581	
2000	3,488	3,501	6,989	6.2
2010	3,857	3,738	7,595	8.7
2020	4,365	4,184	8,549	12.6

Source: United Nations 2007.

Appendix 3

Table A3-1. World Regions: Population (in thousands) Ages 15 to 64, 2005 to 2030

World region	2005		2010		2020		2030		Percent growth per year		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	2005 to 2010	2010 to 2020	2020 to 2030
Africa	508,906	12.14	578,457	12.80	737,644	14.69	925,414	17.04	2.60	2.46	2.29
Asia	2,451,321	58.47	2,646,492	58.57	2,918,956	58.12	3,098,322	57.06	1.54	0.98	0.60
Middle East	132,105	3.15	148,562	3.29	180,001	3.58	207,985	3.83	2.38	1.94	1.46
Europe	498,776	11.90	500,245	11.07	476,325	9.48	445,995	8.21	0.06	-0.49	-0.66
Latin America & the Caribbean	356,492	8.50	386,599	8.56	438,298	8.73	472,494	8.70	1.63	1.26	0.75
North America	223,109	5.32	234,856	5.20	245,980	4.90	252,630	4.65	1.03	0.46	0.27
Oceania	21,666	0.52	23,167	0.51	25,448	0.51	27,121	0.50	1.35	0.94	0.64
World	4,192,374	100.00	4,518,379	100.00	5,022,653	100.00	5,429,960	100.00	1.51	1.06	0.78

Source: United Nations 2007.

Table A3-2. World Regions: Population (in thousands) Ages 15 to 34, 2005 to 2030

World region	2005		2010		2020		2030		Percent growth per year		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	2005 to 2010	2010 to 2020	2020 to 2030
Africa	320,874	14.77	363,505	16.04	448,685	18.74	540,024	22.08	2.53	2.13	1.87
Asia	1,374,741	63.27	1,368,520	60.38	1,359,438	56.77	1,324,100	54.14	-0.09	-0.07	-0.26
Middle East	76,859	3.54	83,080	3.67	92,162	3.85	99,350	4.06	1.57	1.04	0.75
Europe	205,676	9.47	196,711	8.68	170,354	7.11	154,115	6.30	-0.89	-1.43	-1.00
Latin America & the Caribbean	193,485	8.90	201,458	8.89	210,398	8.79	211,554	8.65	0.81	0.44	0.05
North America	92,017	4.24	97,018	4.28	102,360	4.27	104,778	4.28	1.06	0.54	0.23
Oceania	9,934	0.46	10,394	0.46	11,433	0.48	11,868	0.49	0.91	0.96	0.37
World	2,172,772	100.00	2,266,644	100.00	2,394,830	100.00	2,445,790	100.00	0.85	0.55	0.21

Source: United Nations 2007.

Appendix 4

Table A4-1. Asia and the Pacific: Projected Growth of the Population Ages 15 to 64, 2005 to 2010, 2010 to 2020, and 2020 to 2030

	2005 to 2010		2010 to 2020		2020 to 2030	
	Country	Percent growth per year	Country	Percent growth per year	Country	Percent growth per year
Declining	Japan	-0.70	Japan	-0.93	Republic of Korea	-1.16
			China, Macao SAR	-0.16	Singapore	-1.15
			Republic of Korea	-0.06	China, Macao SAR	-1.07
					Japan	-0.75
					China, Hong Kong SAR	-0.56
					Sri Lanka	-0.38
					Thailand	-0.32
					China	-0.23
				Dem People's Rep of Korea	-0.19	
Growth 0 to 0.99 percent per year	Republic of Korea	0.57	Sri Lanka	0.00	New Zealand	0.10
	Thailand	0.71	Thailand	0.15	Australia	0.29
	Sri Lanka	0.72	Kazakhstan	0.17	Fiji	0.37
	Dem People's Rep of Korea	0.81	China	0.19	Myanmar	0.38
	China	0.95	Singapore	0.21	Bhutan	0.40
			China, Hong Kong SAR	0.32	Kazakhstan	0.42
			New Zealand	0.47	Samoa	0.45
			Australia	0.48	Mongolia	0.57
			Fiji	0.67	Guam	0.58
			Dem People's Rep of Korea	0.70	Indonesia	0.61
			Myanmar	0.89	French Polynesia ⁵¹	0.65
			Tonga	0.97	Kyrgyzstan	0.71
					Vietnam	0.71
					Polynesia	0.72
					New Caledonia	0.74
				Turkmenistan	0.87	
				Micronesia	0.98	
Growth 1.00 to 1.99 percent per year	Australia	1.01	Iran	1.07	Malaysia	1.01
	Fiji	1.02	Kyrgyzstan	1.09	Uzbekistan	1.02
	New Zealand	1.02	French Polynesia	1.18	Iran	1.10
	Tonga	1.05	Mongolia	1.22	India	1.14
	Kazakhstan	1.10	Indonesia	1.24	Tonga	1.17
	China, Hong Kong SAR	1.35	Guam	1.28	Brunei	1.34
	French Polynesia	1.47	Vietnam	1.35	Bangladesh	1.41
	Myanmar	1.49	New Caledonia	1.37	Tajikistan	1.53
	China, Macao SAR	1.51	Turkmenistan	1.39	Philippines	1.57
	Indonesia	1.52	Polynesia	1.42	Laos	1.60
	Polynesia	1.53	Micronesia	1.43	Maldives	1.61
	Micronesia	1.75	Uzbekistan	1.61	Cambodia	1.70
	Guam	1.79	Malaysia	1.61	Papua New Guinea	1.73

⁵¹ Polynesia includes French Polynesia, Samoa, Tonga, American Samoa, Cook Islands, Niue, Pitcarin, Tokelau, Tuvalu, Wallis, and Futuna Islands.

	Singapore	1.86		India	1.63		Pakistan	1.77
	Samoa	1.92		Bhutan	1.73		Nepal	1.90
	Mongolia	1.93		Maldives	1.73			
	New Caledonia	1.98		Samoa	1.76			
				Brunei	1.89			
				Bangladesh	1.91			
				Cambodia	1.97			
Growth	India	2.09		Philippines	2.05		Vanuatu	2.08
2.00 to 2.99 percent per year	Kyrgyzstan	2.15		Pakistan	2.13		Solomon Islands	2.12
	Malaysia	2.25		Laos	2.22			
	Bangladesh	2.31		Tajikistan	2.32			
	Vietnam	2.33		Nepal	2.35			
	Philippines	2.38		Papua New Guinea	2.52			
	Iran	2.40		Vanuatu	2.70			
	Turkmenistan	2.58		Solomon Islands	2.76			
	Brunei	2.65						
	Papua New Guinea	2.66						
	Uzbekistan	2.69						
	Tajikistan	2.77						
	Nepal	2.82						
	Pakistan	2.88						
	Cambodia	2.94						
Growth	Solomon Islands	3.03		Afghanistan	3.30		Afghanistan	3.06
3.00 percent per year and up	Bhutan	3.03		East Timor	3.38		East Timor	3.34
	Maldives	3.07						
	Laos	3.18						
	Vanuatu	3.20						
	East Timor	3.57						
	Afghanistan	4.19						

Source: United Nations 2007.

Table A4-2. Asia and the Pacific: Projected Annual Growth of the Population Ages 15 to 34, 2005 to 2010, 2010 to 2020, 2020 to 2030

	2005 to 2010		2010 to 2020		2020 to 2030	
Declining	Japan	-4.17	Republic of Korea	-1.56	China, Macao SAR	-3.11
	Republic of Korea	-1.18	Iran	-1.29	Singapore	-2.27
	China	-0.94	China, Macao SAR	-1.20	Mongolia	-2.23
	Thailand	-0.82	Sri Lanka	-1.04	Republic of Korea	-2.12
	Dem People's Rep of Korea	-0.23	Kazakhstan	-0.96	Bhutan	-1.39
	China, Hong Kong SAR	-0.19	Thailand	-0.74	China	-1.27
			China, Hong Kong SAR	-0.73	Dem People's Rep of Korea	-1.26
			Japan	-0.69	Sri Lanka	-1.11
			Mongolia	-0.62	Japan	-1.02
			China	-0.46	Iran	-0.86
			Myanmar	-0.40	China, Hong Kong SAR	-0.84
			Vietnam	-0.07	Myanmar	-0.81
			Bhutan	-0.04	Vietnam	-0.73
					Turkmenistan	-0.66
					Thailand	-0.52
					Kyrgyzstan	-0.47
					Uzbekistan	-0.42
					Maldives	-0.37
					Samoa	-0.27
					Kazakhstan	-0.25
					French Polynesia ⁵²	-0.21
					Fiji	-0.20
					New Zealand	-0.17
					Indonesia	-0.16
Growth	Myanmar	0.25	Indonesia	0.01	Micronesia	0.00
0 to 0.99 percent per year	Indonesia	0.33	Kyrgyzstan	0.09	New Caledonia	0.00
	Sri Lanka	0.34	Fiji	0.13	Tonga	0.00
	Kazakhstan	0.42	Turkmenistan	0.21	Australia	0.08
	French Polynesia	0.45	Maldives	0.29	Laos	0.10
	China, Macao SAR	0.54	Dem People's Rep of Korea	0.32	Tajikistan	0.15
	Tonga	0.55	Australia	0.36	Brunei	0.19
	New Zealand	0.59	Singapore	0.41	Cambodia	0.19
	Australia	0.61	New Zealand	0.43	India	0.24
	Mongolia	0.82	Uzbekistan	0.54	Malaysia	0.27
			French Polynesia	0.64	Guam	0.31
			Tonga	0.78	Pakistan	0.40
			New Caledonia	0.83	Bangladesh	0.54
			Malaysia	0.93	Nepal	0.99
Growth	Micronesia	1.01	India	1.01	Papua New Guinea	1.15
1.00 to 1.99 percent per year	New Caledonia	1.02	Philippines	1.17	Philippines	1.15
	Samoa	1.03	Bangladesh	1.19	Vanuatu	1.22
	Fiji	1.10	Brunei	1.24	Solomon Islands	1.35
	Singapore	1.33	Cambodia	1.24		
	Vietnam	1.35	Pakistan	1.36		
	Kyrgyzstan	1.44	Micronesia	1.38		
	Guam	1.55	Laos	1.55		

⁵² Polynesia includes French Polynesia, Samoa, Tonga, American Samoa, Cook Islands, Niue, Pitcarin, Tokelau, Tuvalu, Wallis, and Futuna Islands.

	Malaysia	1.66		Guam	1.55		
	India	1.71		Tajikistan	1.85		
	Bangladesh	1.81		Nepal	1.91		
	Iran	1.84					
	Philippines	1.88					
Growth	Turkmenistan	2.02		Solomon Islands	2.08	Afghanistan	2.83
2.00 to 2.99 percent per year	Uzbekistan	2.09		Samoa	2.26		
	Papua New Guinea	2.16		Vanuatu	2.28		
	Solomon Islands	2.22		Papua New Guinea	2.46		
	Maldives	2.40					
	Tajikistan	2.62					
	Nepal	2.80					
	Bhutan	2.83					
	Pakistan	2.91					
	Laos	2.98					
Growth	Vanuatu	3.01		Afghanistan	3.31	East Timor	3.33
3.00 percent per year and up	Brunei	3.37		East Timor	3.44		
	Cambodia	3.37					
	East Timor	3.86					
	Afghanistan	4.34					

Source: United Nations 2007.

Appendix 5. Asia and Pacific: Number of Enrollments in Tertiary Education by Country, 1999 to 2007

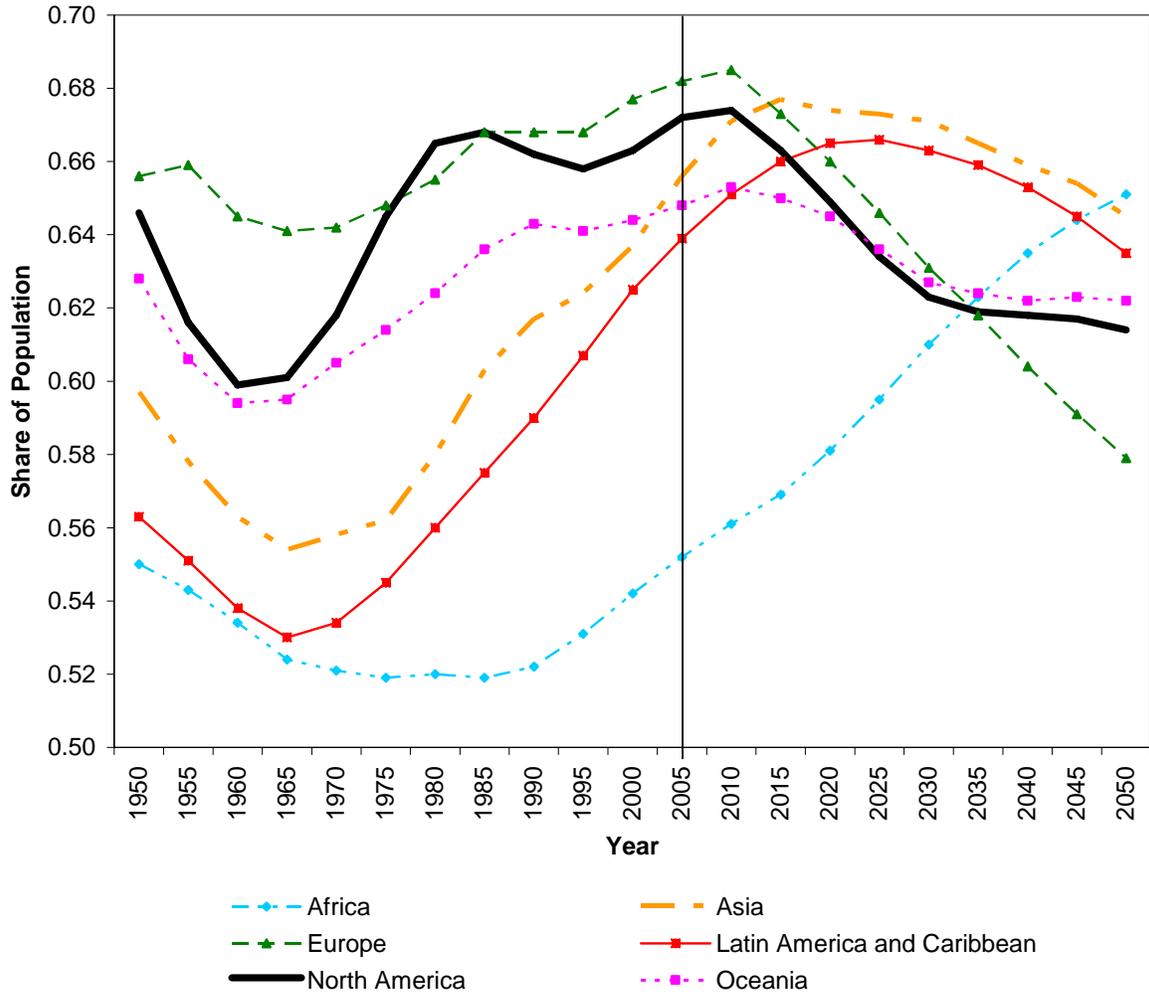
Country	1999	2000	2001	2002	2003	2004	2005	2006	2007
Asia									
Afghanistan	...	...	...	...	26211	27648	...	...	...
Armenia	60684	62794	68704	75474	73603	79321	86629	99293	...
Azerbaijan	107783	117077	120693	121475	121156	122770	128634	131507	...
Bangladesh	709224	726701	878537	855339	877335	821364	911600	...	...
Bhutan	1479	1837	1893	...	...	...	...	4141	...
Brunei	3705	3984	4479	4418	4546	4917	5023	5094	...
Cambodia	...	22108	25416	32010	43210	45370	56810	75989	...
China	6365625	7364111	9398581	12143723	15186217	...	...	23360535	...
Cyprus	10842	10414	11934	13927	18272	20849	20078	20587	...
Dem People's Rep of Korea	...	...	...	...	...	...	...	...	...
Georgia	130164	137046	140627	149142	155453	155058	174255	144991	...
Hong Kong (China), SAR	...	...	...	...	146039	147724	152294	155324	...
India	...	9404460	9834046	10576653	11295041	11852936	11777296	12852684	...
Indonesia	...	...	3017887	3175833	3441429	3551092	3660270	3657429	...
Japan	3940756	3982069	3972468	3966667	3984400	4031604	4038302	4084861	...
Kazakhstan	323949	370321	445651	519815	603072	664449	753181	780783	772600
Kyrgyzstan	131222	160684	190508	209245	201128	205224	220460	233463	...
Laos	12076	14149	16745	23018	28117	33760	47424	56716	...
Macao, China	7458	7471	13996	20420	26272	24815	23420	23291	...
Malaysia	473357	549205	557118	632309	725865	731077	696760	...	...
Maldives	.	.	.	.	73	73	...	-	...
Mongolia	65272	74025	84970	90275	98031	108738	123824	138019	...
Myanmar	335497	550705	553456	555060	...	...	...	...	...
Nepal	...	94401	103290	119670	124817	147123	...	...	...
Philippines	2208635	...	2432002	2467267	2427211	2420997	2402649	2483988	...
Republic of Korea	2636388	2837880	3003498	3129899	3210142	3223431	3224875	3210184	3204036
Singapore	...	...	...	...	...	...	...	...	...
Sri Lanka	...	...	...	...	...	...	...	...	...
Tajikistan	76293	79978	78540	85171	97466	108456	119317	133385	...
Thailand	1814096	1900272	2095694	2155334	2205581	2251453	2359127	2338572	...
East Timor	...	...	...	6349	...	...	...	...	...
Turkmenistan	...	...	...	...	...	...	...	...	...
Uzbekistan	295859	305409	323211	344604	359708	376904	265957	280837	288550
Vietnam	810072	732187	749253	784675	829459	1328485	1354543	...	...
Pacific									
Australia	845636	845132	868689	1012210	1005977	1002998	1024589	1040153	...
Cook Islands	.	.	.	.	.	.	.	.	...
Fiji	...	...	...	...	12779	12783	12717	...	...
Kiribati	.	.	.	.	.	.	.	.	...
Marshall Islands	...	...	888	903	919	...	...	...	...

Micronesia (Federated States of)	1510	1539	...	...	...	...	...	...	...
Nauru	.	.	.	.	.	.	.	.	...
New Zealand	167308	171962	177634	185099	195511	243425	239983	237784	...
Niue	.	.	.	.	.	.	.	.	...
Palau	...	597	480	484	...	...	...	...	...
Papua New Guinea	9943	...	...	...	...	...	...	...	...
Samoa	1871	1182	1179	...	...	...	...	...	...
Solomon Islands	.	.	.	.	.	.	.	.	...
Tokelau	.	.	.	.	.	.	.	.	...
Tonga	364	526	453	600	668	657	...	...	...
Tuvalu	.	.	.	.	.	.	.	.	...
Vanuatu	643	656	675	895	914	955	...	...	...

Note: "..." indicates data not available.

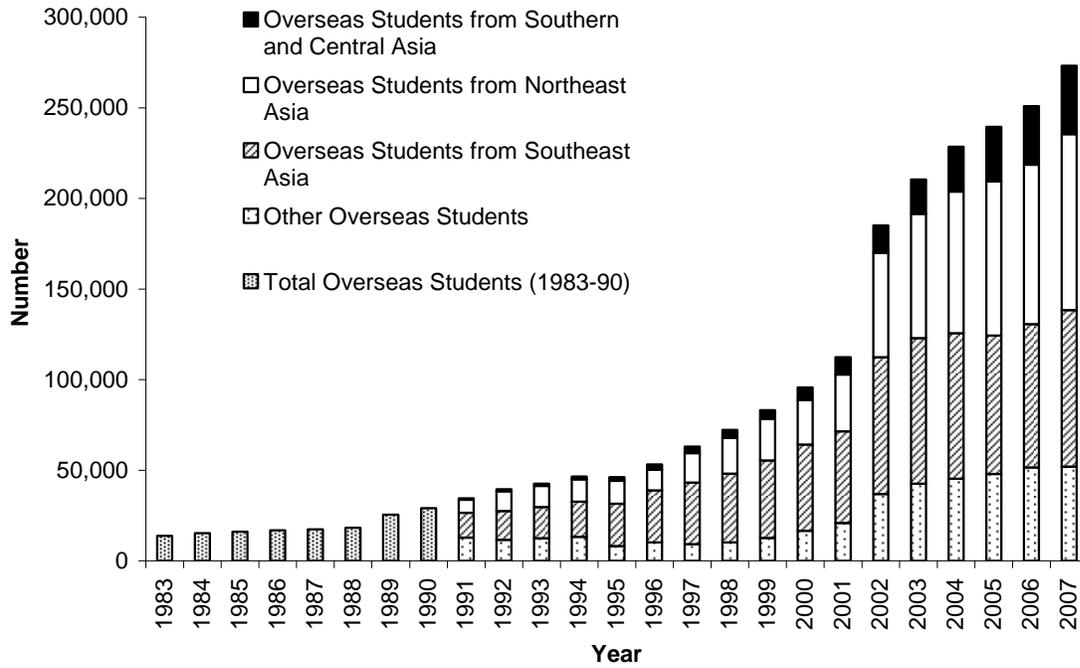
Source: UNESCO 2006 and 2007.

Appendix 6. World Regions: Share of Population in Working Ages, Actual, 1950 to 2005 and Projected, 2010 to 2050



Source: United Nations 2007.

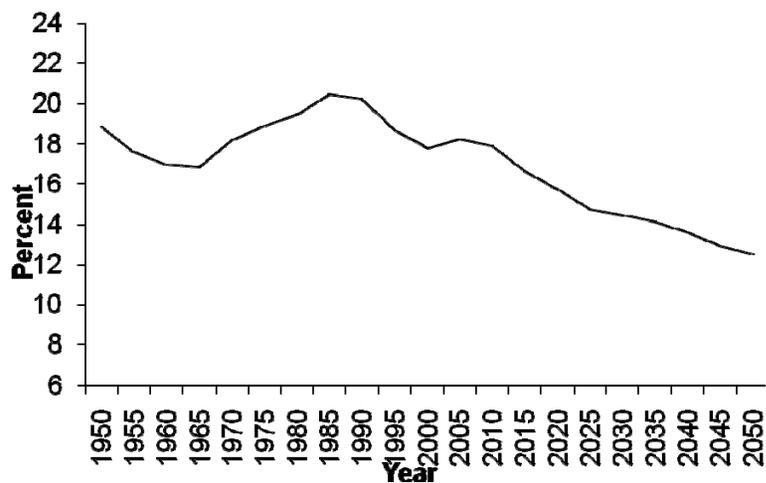
Appendix 7. Overseas Students in Australian Universities, 1983 to 2007



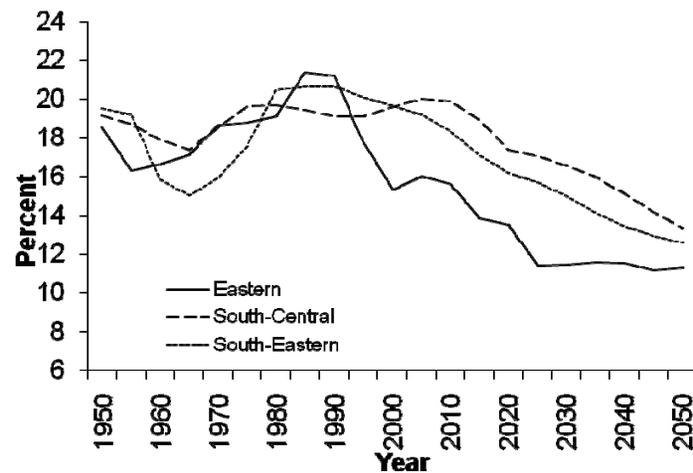
Source: Australian Department of Education, Employment, and Workplace Relations.

Appendix 8. Selected Asian Countries: Proportion of the Population Ages 15 to 24, 1950 to 2005 (Actual) and 2010 to 2050 (Projected)

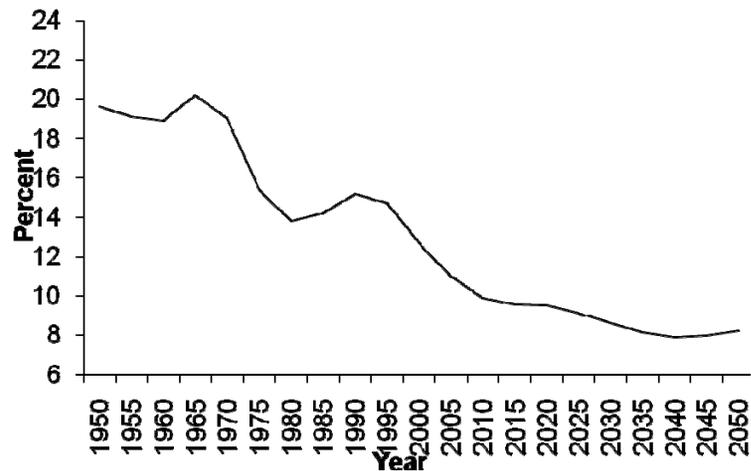
Asia



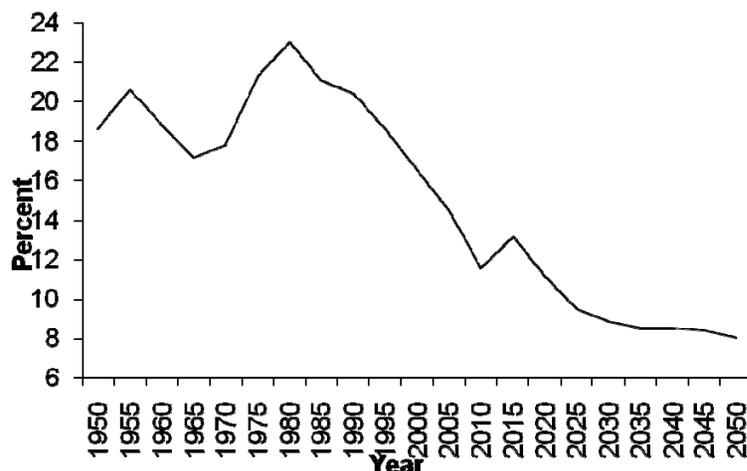
Asia Regions



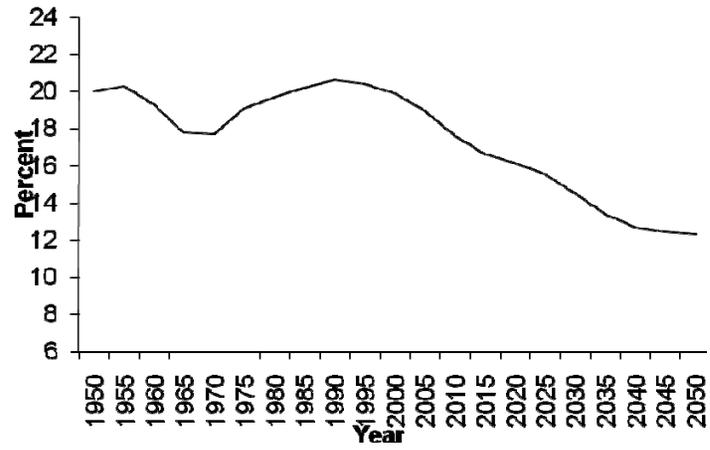
Japan



Republic of Korea



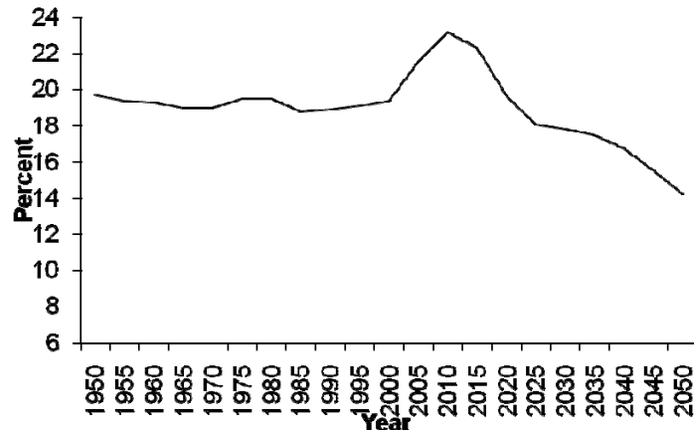
Indonesia



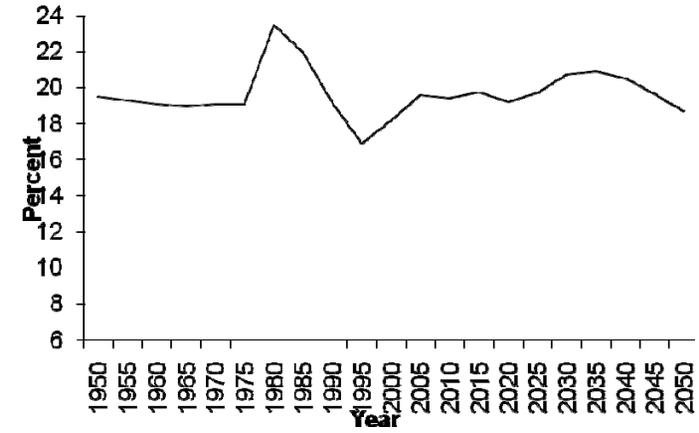
India



Laos



East Timor



Source: United Nations 2007.

VI. About the Author

Graeme Hugo is University Professorial Research Fellow, Professor of the Department of Geographical and Environmental Studies, and Director of the National Centre for Social Applications of Geographic Information Systems at the University of Adelaide. His research interests are in population issues in Australia and Southeast Asia, especially migration. His books include *Australia's Changing Population* (Oxford University Press), *The Demographic Dimension in Indonesian Development* (with T. H. Hull, V. J. Hull, and G. W. Jones, Oxford University Press), *International Migration Statistics: Guidelines for Improving Data Collection Systems* (with A.S. Oberai, H. Zlotnik, and R. Bilsborrow, International Labor Office), and *Australian Census Analytic Program: Australia's Most Recent Immigrants* (Australian Bureau of Statistics). In 2002 he secured a five-year ARC Federation Fellowship for his research project on the new paradigm of international migration to and from Australia. He is working on reports on Migration and Development for the Australian government and for the Asian Development Bank.

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