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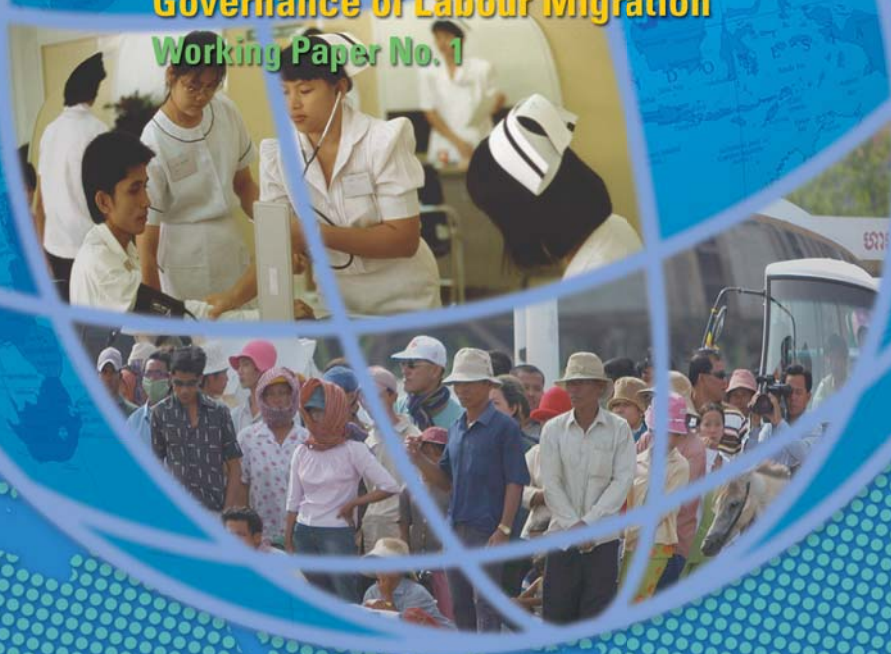
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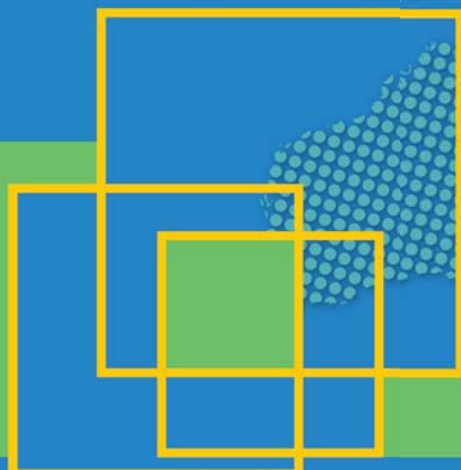


European Union



# **Underlying Factors in International Labour Migration in Asia: Population, Employment and Productivity Trends**

**Gavin W. Jones**



**Regional Office for Asia and the Pacific  
January 2008**



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# Underlying Factors in International Labour Migration in Asia: Population, Employment and Productivity Trends

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# Underlying Factors in International Labour Migration in Asia: Population, Employment and Productivity Trends

Gavin W. Jones\*

In Asia, migration pressures are likely to remain strong for many years to come because of the diverging trajectories of growth of the working age population and the vast differences in earnings between the more developed and the poorer countries of the region. While trends in education and in employment structure are bound to modify the underlying pressures for international mobility, the conclusion that migration pressures will remain strong is no longer in doubt.

## 1. The demographic transition and population growth rates

While the countries in East Asia, Southeast Asia and South Asia are in different stages of demographic transition - mature, intermediate, and early - they are all moving inexorably towards the mature stage. Population growth rates in all areas have declined dramatically since the 1970s. South Asia now has large areas (mostly in India) of below-replacement fertility, and Pakistan finally appears to be moving rapidly toward lower fertility levels. Projections indicate the imminent decline of population in Japan (expected to set in around 2010) and the Republic of Korea (expected to set in around 2015, or even earlier, given the recent collapse in fertility), in sharp contrast to the continued massive growth in Pakistan.

**Table 1. Asia: Current population, growth rates and projected increases**

	Population (million) 2000	Av. annual growth rate 1970-75	Av. annual growth rate 2000-05	Projected % increase 2000-2030	
				All ages	0-29
<b>East Asia</b>	1,481	2.11	0.67	12.0	-19.8
<b>Southeast Asia</b>	520	2.34	1.40	36.7	0.2
<b>South-Central Asia</b>	1,486	2.32	1.66	47.5	15.8

Source: United Nations, 2003

Table 1 shows that continued population growth is expected in each major region of Asia, but the final column shows that if we look at their population aged under 30, substantial declines are expected in East Asia, and near zero growth in Southeast Asia over the next 30 years. This is a reflection of population growth momentum related to earlier high fertility.

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### *East Asia*

Like Europe, East Asia is facing the prospect of declining population and extreme ageing. How quickly these happen depends on what happens in the world's most populous country, China, where estimates of fertility decline are still a matter of lively debate among Chinese demographers.

### *Southeast Asia*

Southeast Asia is much more varied than East Asia. Most of the region is moving in the direction of below-replacement fertility – Singapore and Thailand are there already, Indonesia and Myanmar will probably get there within the next decade. However, Malaysia, Philippines, Laos, and Cambodia are moving only slowly towards replacement level, and Timor Leste is a very high fertility outlier. The significance of continuing rapid population growth in these countries varies. Malaysia is relatively wealthy and can deal with the planning implications of such growth with equanimity. It is only in the state of Sabah, where migration, much of it undocumented, is fuelling the rapid growth, that population growth is posing real issues. However, the Philippines is a much larger and poorer population, and continuing rapid population there in the context of sluggish economic growth and political instability suggests that the Philippines will continue to be a major country of origin, and rely heavily on remittances from overseas workers.

### *South Asia*

This region is more varied today than most demographic observers would have allowed for two or three decades ago. India runs the gamut from states with below replacement fertility to those with continuing relatively high fertility. The line roughly dividing north from south, stressed by Dyson and Moore (1983), continues to be crucial, and seems to indicate the continuing importance of women's autonomy or lack of it in influencing fertility levels. The Muslim countries also show a wide range of circumstances. Iran has experienced dramatic fertility decline. Bangladesh has surprised with a sharp, but now stalled, fertility decline despite having very early marriages; but Pakistan's fertility is much higher despite much later marriages. However, there is now clear evidence of fertility decline in Pakistan after a long period during which it was maintained at very high levels, (Feeney and Alam, 2003).

## **2. Patterns of fertility and mortality transition**

The seemingly inexorable downward movement in fertility rates in most countries of Asia has been well illustrated by Gubhaju and Moriki-Durand (2003). A modified and updated version of the information contained in their paper is shown in Table 2. They divide these countries into three groups according to their TFR in 1995-2000: high (TFR > 5), intermediate (TFR 2.1-4.9) and low (TFR < 2.1). The low group typically were already lower than most of the others in 1970-75. The intermediate group, into which most of the countries fall, typically had TFRs of 5 to 6.5 in 1970-75, and most



of them have seen substantial declines since then. The high group did not differ much from the intermediate group in initial levels of fertility, but their fertility levels have fallen little. The last holdout of very high fertility may be Afghanistan.

The pattern of fertility decline in India bears further examination. In the southern states of Kerala and Tamil Nadu, there has been a spectacular drop in TFR from around 5 in the early 1960s to below replacement level in 1998. In the same period, women in the northern states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh also reported declines, but only from levels above 6 to levels above 4 (Kumar, 2002). The family planning program seems to have been influential in initiating the fertility decline in most states, but not in Kerala. The fertility decline began in the south at a higher level of social development, in terms of indicators such as female literacy rate, infant mortality, and female age at marriage, than in the north (Ram and Ram, 2002).

The challenge in reaching replacement fertility in the northern states is the patrilineal, highly stratified and feudalistic class system, with very limited female autonomy (Sathar and Phillips, 2001; Dyson, 2002).

The success of the southern states of India in lowering fertility is mirrored by their neighbour, Sri Lanka. This predominantly Buddhist nation, noted for its high levels of social development and of female autonomy, has also reached below-replacement fertility at relatively low levels of income per capita.

Turning now to mortality, in general, Asia has made enormous strides in lowering mortality and improving health (Caldwell, 1999). Table 3 gives the broad trends. Even more progress can be hoped for. Ratios of 10 to 1 in infant mortality rates between high and low mortality countries can surely be narrowed. What is more, the maternal mortality ratio varies even more dramatically between Asian countries.

**Table 2. Trends in total fertility rates (TFRs) in selected countries in the ESCAP region, 1950-1955, 1970-1975 and 1995-2000**

Country, territory or area	High fertility (TFR = 5.0 or higher)			Percentage change	
	1950-1955	1970-1975	1995-2000	1950-1955 to 1970-1975	1970-1975 to 1995-2000
Cambodia	6.3	5.5	5.3	-12.7	-3.6
Laos, PDR	6.2	6.2	5.3	0.0	-14.5
Bhutan	5.9	5.9	5.5	0.0	-6.8
Pakistan	6.3	6.3	5.5	0.0	-12.7
Maldives	7.0	7.0	5.8	0.0	-17.1
Afghanistan	7.7	7.4	6.9	-3.9	-6.8
Country, territory or area	Intermediate fertility (TFR = 2.11-4.99)			Percentage change	
	1950-1955	1970-1975	1995-2000	1950-1955 to 1970-1975	1970-1975 to 1995-2000
Vietnam	5.7	6.7	2.5	17.5	-62.7
Islamic Republic of Iran	7.0	6.4	2.5	-8.6	-60.5
Indonesia	5.5	5.2	2.6	-5.5	-50.0
Mongolia	6.0	7.3	2.7	21.7	-63.0
Brunei Darussalam	7.0	5.4	2.7	-22.9	-50.0
Malaysia	6.8	5.2	3.3	-23.5	-36.5
Myanmar	6.0	5.8	3.3	-3.3	-43.1
India	6.0	5.4	3.5	-10.0	-32.1
Philippines	7.3	6.0	3.6	-17.8	-40.0
Bangladesh	6.7	6.4	4.0	-4.5	-38.3
Nepal	5.8	5.8	4.7	0.0	-19.8
Country, territory or area	Low fertility (TFR = 2.10 or lower)			Percentage change	
	1950-1955	1970-1975	1995-2000	1950-1955 to 1970-1975	1970-1975 to 1995-2000
Hong Kong, China	4.4	2.9	1.1	-34.1	-62.1
Macao, China	5.0	3.2	1.2	-36.0	-62.5
Japan	2.7	2.1	1.4	-22.2	-33.3
Republic of Korea	5.4	4.3	1.5	-20.4	-65.1
Singapore	6.4	2.6	1.6	-59.4	-38.5
China	6.2	4.9	1.8	-21.0	-63.3
Thailand	6.4	5.0	1.95	-21.9	-61.0
Democratic People's Republic of Korea	5.4	4.3	2.1	-20.4	-51.2
Sri Lanka	5.9	4.1	2.1	-30.5	-48.8

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, (United Nations publication, Sales No. E.01.XIII.8)

**Table 3. Trends in mortality, selected Asian countries**

	1960-65	1970-75	1980-85	1990-95	2000-05 (Projected)
<b>Infant mortality rate</b>					
Japan	25	12	7	4	3
Malaysia	63	42	28	15	10
Thailand	84	66	47	29	20
Indonesia	166	126	89	59	42
Cambodia	140	181	110	91	73
India	157	132	106	78	64
Pakistan	161	142	123	104	87
<b>Life expectancy at birth</b>					
Japan	69.0	73.3	76.9	79.5	81.5
Malaysia	55.7	63.0	68.0	70.7	73.1
Thailand	57.2	61.0	65.0	67.4	69.3
Indonesia	42.5	49.2	56.2	62.6	66.8
Cambodia	43.4	40.3	52.1	55.5	57.4
India	45.5	50.3	54.9	59.9	63.9
Pakistan	45.0	49.0	53.0	56.9	61.0

Source: United Nations 2003; last column shows projected rather than actual figures.

Rising expectation at birth in Asian countries, mirrored in the lengthening of expectation of life for those reaching 65, has important implications for the length of the retirement period and lends weight to pressures to extend the age of retirement or do away with such an age altogether.

### **3. Fertility trajectories, the growth or decline of the labour force, and the economic incentives for labour mobility**

The effect of rapid fertility decline on population ageing is what has attracted a lot of attention from planners in East and Southeast Asia. Ageing has proceeded much further in Japan than elsewhere in the region (23 per cent aged 65+ in 2005). The Republic of Korea will reach that 23 per cent level by 2030. By that year Thailand's proportion of elderly will only have reached 15 per cent, and in China, 14 per cent. However, the numbers of elderly in China will rise from 85 million in 2005 to 196 million in 2030.

Less attention has been paid to another outcome of sustained low fertility, namely, that some countries will face a fall in the absolute size of the labour force if current

demographic and labour force trends continue (McDonald and Kippen, 2001). The decline in labour force in some countries and rapid growth in others will be likely to provoke migratory movements, although the extent to which these occur will of course depend on economic conditions and the policy stance of different governments towards such movement.

Demand and supply for labour are out of sync in a number of higher-income Asian countries because high economic growth rates are boosting demand for labour but demographic realities restrict its supply. The demographic transition in countries such as Japan, Korea, and Singapore, along with longer periods spent by the youth in school, has reduced the supply of new workers entering the labour force. As shown in Table 4, the 1990s and the first half of the 2000-2010 decade saw a dramatic shrinkage of the numbers aged 15-24 in Japan and South Korea, and the beginnings of a decline in Thailand, Hong Kong and Singapore, although in Singapore the numbers are rising again, presumably because of substantial inflows of contract workers. At the same time, wide differences in average earnings between countries (see Figure 1 and Table 5) and high levels of unemployment and underemployment in the poorer countries are contributing to pressures for more migration.

**Table 4. Index of growth in numbers in the working ages, 1990-2030 (1990=100)**  
(a) Aged 15-24

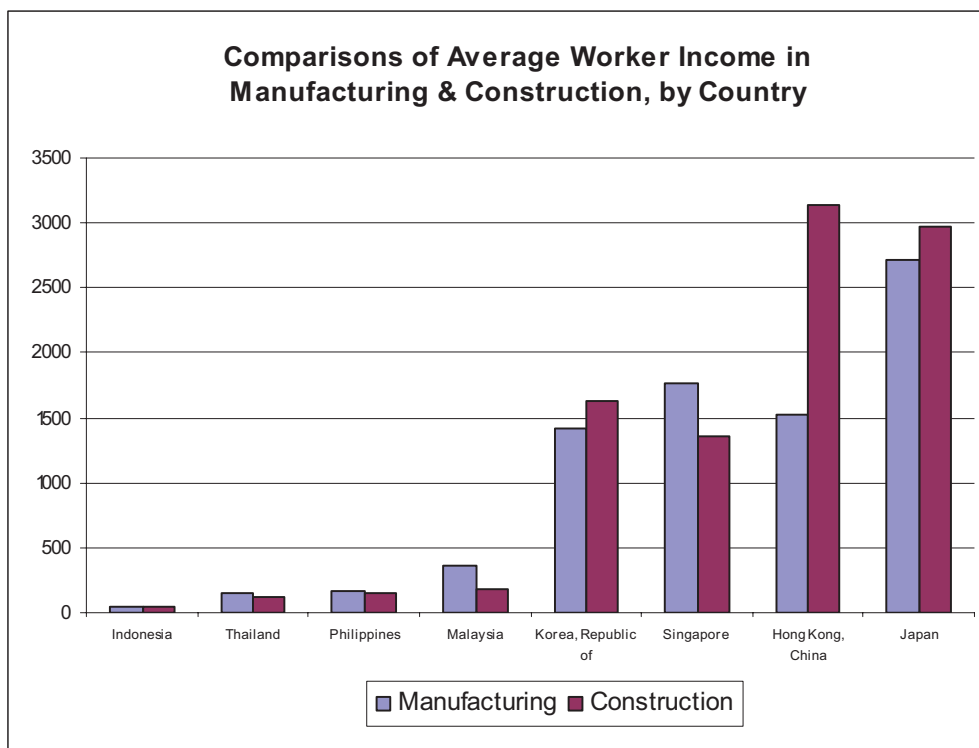
	1990	2000	2010	2020	2030
Japan	100	86	67	64	60
South Korea	100	87	76	62	50
Singapore	100	89	117	99	76
Hong Kong	100	105	95	85	87
Malaysia	100	127	148	160	156
Thailand	100	93	90	84	81
Indonesia	100	112	110	110	107
Philippines	100	124	146	153	152
Laos	100	131	175	204	230

(b) aged 15-64

Japan	100	101	95	87	82
South Korea	100	113	119	119	106
Singapore	100	130	155	158	142
Hong Kong	100	120	138	142	135
Malaysia	100	134	169	199	220
Thailand	100	120	133	139	139
Indonesia	100	124	145	163	173
Philippines	100	131	167	201	227
Laos	100	131	175	226	279

Source: United Nations Population Division, 2003

**Figure 1: Comparisons of year 2000 monthly worker incomes in 7 countries, by industry.**



Source: International Labor Organization, 2005

**Table 5.**  
**Approximate monthly salaries of trained nurses with 3 or more years' experience, various countries (US\$), 2005**

Country	Monthly salary (US\$)*	% of Japanese salary	Notes
Japan	2,100		
South Korea	1,500-2,900		Nursing college graduate - after tax
Singapore	1,500		
Taiwan	580-870	28-41	
Malaysia	390- 475	19-23	\$390 in govt., \$475 in well-paying private hospital
Thailand	143-285	7-14	
Philippines	189-283	9-13	
Indonesia	100-160	5-8	\$100 is golongan 2A in govt.
India	200	10	
Bangladesh	80-85	4	Government; not much private sector in health

\* Includes basic salary plus allowances. Source: A range of journal and newspaper articles, and personal information from knowledgeable informants.

**TABLE 6. INDEX OF GROWTH OF POPULATION IN LABOUR FORCE AGE GROUPS, 2000-2050, UN MEDIUM PROJECTIONS (year 2000=100)**

	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
<b>Age 15-64</b>											
Japan	100	98	95	90	86	84	81	78	72	68	66
South Korea	100	102	105	107	105	99	94	88	82	76	71
Singapore	100	109	120	124	122	116	109	105	103	103	102
Malaysia	100	112	126	138	148	157	164	170	175	178	179
Thailand	100	106	111	114	116	117	116	115	114	112	110
China	100	107	112	115	114	113	111	107	102	100	97
India	100	111	122	133	143	151	159	164	168	171	171
Philippines	100	113	127	141	153	164	174	181	187	190	190
Indonesia	100	109	117	124	131	136	139	140	139	138	136
Bangladesh	100	113	128	142	156	169	181	192	201	209	215
Pakistan	100	116	134	152	169	187	205	223	239	252	261
Nepal	100	115	132	149	166	183	200	216	231	245	255
Sri Lanka	100	107	112	118	118	119	118	117	115	112	107
<b>Age 15-24</b>											
Japan	100	88	78	76	75	73	70	66	64	63	63
South Korea	100	91	86	84	71	60	57	56	56	53	50
Singapore	100	110	131	136	112	91	86	92	92	107	103
Malaysia	100	106	116	127	126	125	123	122	122	116	113
Thailand	100	99	96	93	90	86	87	85	85	81	80
China	100	109	110	98	89	84	87	89	89	78	74
India	100	111	118	121	122	122	122	120	120	111	105
Philippines	100	109	118	123	124	124	123	122	122	114	108
Indonesia	100	100	98	97	98	99	95	89	89	85	85
Bangladesh	100	110	118	124	127	131	134	137	137	137	136
Pakistan	100	119	132	136	140	147	156	162	162	162	162
Nepal	100	114	130	143	147	150	155	161	166	167	166
Sri Lanka	100	98	92	87	84	82	81	80	76	73	71

**TRENDS IN POPULATION IN LABOUR FORCE AGE GROUPS, 2000-2050, UN MEDIUM PROJECTIONS (continued)**

<b>Age 25-64</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045</b>	<b>2050</b>
Japan	100	100	98	93	89	87	84	80	74	70	66
South Korea	100	106	111	113	114	111	104	97	89	83	77
Singapore	100	109	117	122	124	121	114	107	103	102	102
Malaysia	100	114	130	143	158	171	182	191	199	205	207
Thailand	100	108	116	122	125	126	126	126	125	123	120
China	100	107	113	120	121	122	118	122	108	106	104
India	100	111	125	139	152	164	175	184	191	198	200
Philippines	100	116	132	151	169	185	200	213	223	230	233
Indonesia	100	112	125	137	146	153	159	163	164	162	159
Bangladesh	100	115	133	152	171	188	205	221	235	247	256
Pakistan	100	115	136	161	186	210	233	257	281	303	318
Nepal	100	115	132	153	176	201	224	246	267	287	303
Sri Lanka	100	110	120	127	132	133	133	132	130	127	122

**Trends in Ratio of**

<b>15-44 to 45-64</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045</b>	<b>2050</b>
Japan	1.42	1.49	1.38	1.37	1.22	1.11	1.06	1.09	1.19	1.25	1.30
South Korea	2.60	2.07	1.72	1.47	1.24	1.15	1.08	1.09	1.03	1.01	1.07
Singapore	2.22	1.64	1.30	1.15	1.12	1.18	1.26	1.29	1.15	1.06	1.08
Malaysia	3.32	2.90	2.61	2.45	2.34	2.23	2.07	1.97	1.77	1.62	1.52
Thailand	2.74	2.37	2.03	1.81	1.72	1.62	1.54	1.98	1.43	1.43	1.43
China	2.69	2.45	2.05	1.65	1.43	1.37	1.37	1.33	1.34	1.30	1.33
India	3.27	3.09	2.88	2.66	2.48	2.36	2.18	2.00	1.82	1.66	1.56
Philippines	3.88	3.61	3.35	3.07	2.83	2.56	2.32	2.09	1.87	1.71	1.58
Indonesia	3.44	3.14	2.81	2.41	2.14	1.93	1.74	1.63	1.56	1.52	1.47
Bangladesh	4.05	3.76	3.44	3.10	2.86	2.64	2.41	2.22	2.02	1.90	1.81
Pakistan	3.85	3.78	3.64	3.51	3.40	3.19	2.86	2.46	2.17	2.01	1.91
Nepal	3.73	3.68	3.64	3.55	3.38	3.15	2.88	2.59	2.29	2.06	1.93
Sri Lanka	2.93	2.53	2.22	1.95	1.78	1.63	1.47	1.41	1.37	1.37	1.41

Table 6 presents our projections of trends in the labour force of Asian countries, by age group, over the 2000-2050 period. From the table a number of key points emerge:

- If we locate Asian countries along a continuum, from very rapid to declining growth of labour force, Japan will be found at the extreme end. Its labour force has been declining since 2000, whereas in South Korea and China, the decline is not expected to set in until after 2015. During the coming 10 years (2005-2015), Japan will be the only large country in Asia that will experience a declining labour force.
- If the comparison is made of populations at ages when most enter the labour force: 15-24 years, one finds that the phenomenon of declining labour forces is however more widespread. Numbers at these ages have been declining over the decade of the 1990s in Japan, South Korea, China, and Thailand. They will continue to decline over the 2000-2010 decade in all these countries, plus Sri Lanka and Indonesia.
- The exceptions are Pakistan, Bangladesh, Nepal and the Philippines, which will continue to experience massive growth of their labour force over the coming two decades.
- Numbers in the older labour force age groups (45-64) will increase especially rapidly. This reflects the earlier broad-based pyramidal age structure and the time lag before cohorts who were born as fertility was declining reach these ages. In Pakistan, Nepal, Bangladesh, Philippines, Malaysia and India, these numbers will at least double: in Pakistan and Nepal, by 2025; in Bangladesh and the Philippines, by 2030; in Malaysia by 2045 and in India by 2050.
- While the general trends in labour force growth are clear, the precise growth will depend on more complex factors affecting labour force participation rates. For example, the decline in the 15-24 age groups will become more rapid because extended education will keep many out of the labour force for longer periods of time. Also, in many countries, women's labour force participation rates have been steadily increasing.
- A degree of inverse correlation can be expected between the growth of labour force and a country's admission of labour migrants, as for example Japan, South Korea and Taiwan. However, the correlation is far from perfect. Despite its fast growing labour force (same rate as Philippines and India), Malaysia is drawing in migrants.
- Labour force will increase much faster in India than in China. Over the coming decade (2005-2015) India's population aged 15-64 will increase by 20 per cent, but China's by only 7 per cent. And in the crucial 15-24 year age group, China's numbers will *decline* by 10 per cent, whereas India's will increase by 9 per cent.
- There are enormous regional variations in the rate of growth of the labour force within both China and India. States of India span the gamut from below-replacement fertility to still-high fertility. This is likely to mean that internal labour migration will be more important than international labour migration for these countries.



- Complex patterns of internal movement are likely in both countries, but in the case of India, there are a number of factors causing “stickiness” in such movement, in particular, state policies on recruitment, “sons of the soil” policies, and language barriers.

#### **4. Would altering labour force participation rates affect these projections much?**

In our estimates shown in Table 6 we have assumed that rates of labour force participation will not change. Is this realistic a realistic assumption? There is no doubt that changing labour force participation rates *can* substantially modify the apparent growth of the labour force. The issue is whether they are likely to change over the coming decades, and whether the change will be big enough to justify modifying our earlier projections.

Male labour force participation rates typically decline at young ages (15-24) as education expands and young people stay longer in educational institutions, and at older ages (55+ and especially 65+) as agriculture’s share of total employment declines and more men are in occupations where retirement is mandatory or conventional at certain ages. For females, trends in participation rates are more complex, and there can be many offsetting factors. One example is that as women move from rural areas, where female participation rates are typically higher than average to urban areas, we might expect a decline in overall participation rates, but there is often simultaneously a rise in participation rates in urban areas as a result of changing urban labour markets, falling birth rates and changing attitudes towards women’s roles (Jones, 1984).

Because female participation rates are lower than for males in almost every country, they offer greater scope for increases that might help to offset the projected declines in the size of the working age population in some countries.

To obtain a better idea of what we might expect in the future we examined the changes in LFPRs since 1990 using ILO’s data base on labour force surveys. We summarize our broad findings in Table 7. We found dramatic changes in LFPRs over the period only in Bangladesh and Sri Lanka but these appear to result of definitional or procedural changes in labour force surveys rather than real changes. By a large the participation rates have been relatively stable in most countries. Detailed analysis would be required for each country to sharpen this conclusion, and to isolate actual trends in LFPRs and the reasons responsible for them. However, in general our assumption seems justified that changes in LFPRs will not significantly affect our projections of growth in the labour force.

**Table 7. Trends in Labour Force Participation Rates, ages 15+, 1990-2004**

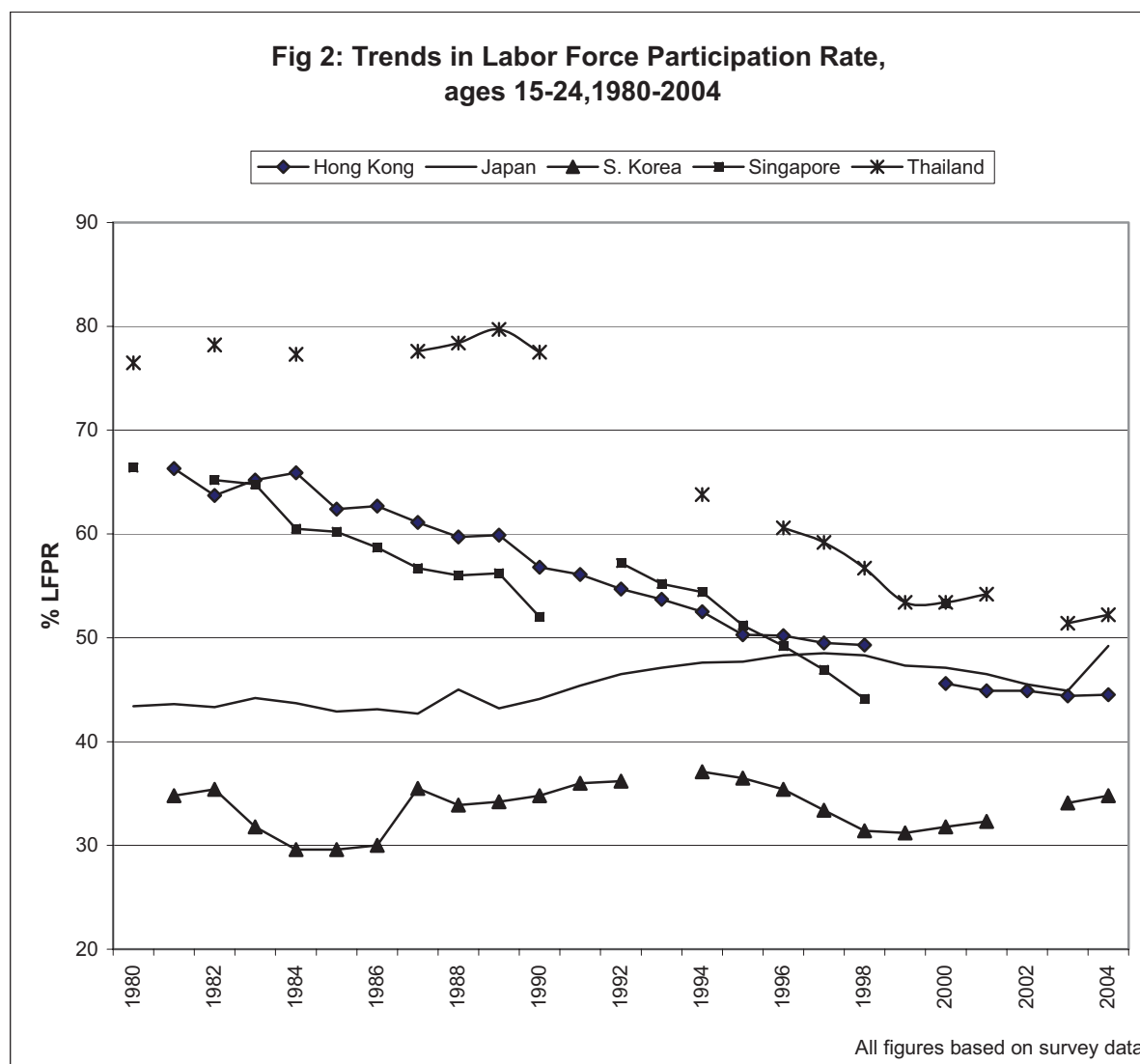
	Both sexes			Males			Females		
	1990	2000	2004	1990	2000	2004	1990	2000	2004
Bangladesh	78.6	72.1	57.3**	89.1	87.2	87.4	67.4	55.9	26.1**
Hong Kong	63	60.7	61.3	78.9	73.2	71.7	46.6	49.1	51.9
India	57.9	58.7		80.4	78.4		33.7	37.7	
Indonesia	63.3	67.9		82.7	84.6		44.6	51.5	
Japan	63.3	62.5	60.4	77.2	76.4	73.4	50.1	49.3	48.2
S. Korea	60	60.7	62.1	73.9	74	75	47	48.3	49.9
Philippines	64.5	64.3	66.5	81.8	80.3	82.9	47.5	49.3	50.2
Singapore	63.1	68.6		79.2	81.1		50.3	55.5	
Sri Lanka	61.5*	55.6	54	77.9	75.7	74.8	45.3*	36.5	34.7
Thailand	81.9	72.7	73.4	87.7	80.6	81.8	76.3	64.9	65.1

Source: ILO data base; all data taken from Labour Force Surveys, not Censuses.

\*But years before and after averaged only 57 in the case of both sexes, 36.5 for females

\*\* Clearly affected by changes in definition of female work

There are two possible exceptions to this conclusion. One concerns age group 15-24, from which most first-time labour force entrants are drawn. It was shown in Table 6 that in many countries, numbers in this age group are already declining, and more countries will soon join this group. Trends in LFPRs in this age group appear to be exacerbating this trend. In other words, not only are the numbers in the age group shrinking, but the LFPR is also declining (see Figure 2) particularly in Hong Kong, India, Singapore, Sri Lanka and Thailand. However, in Singapore, there has been little change in the LFPRs since the mid-1980s, in Sri Lanka since the mid-1990s, or in Thailand since the late 1990s. In Japan and Republic of Korea, there has been no detectable trend in LFPR for the 15-24 age group over the entire period. The main reason for the decline in the LFPR at these ages, in those countries where it has occurred, is no doubt extended schooling.



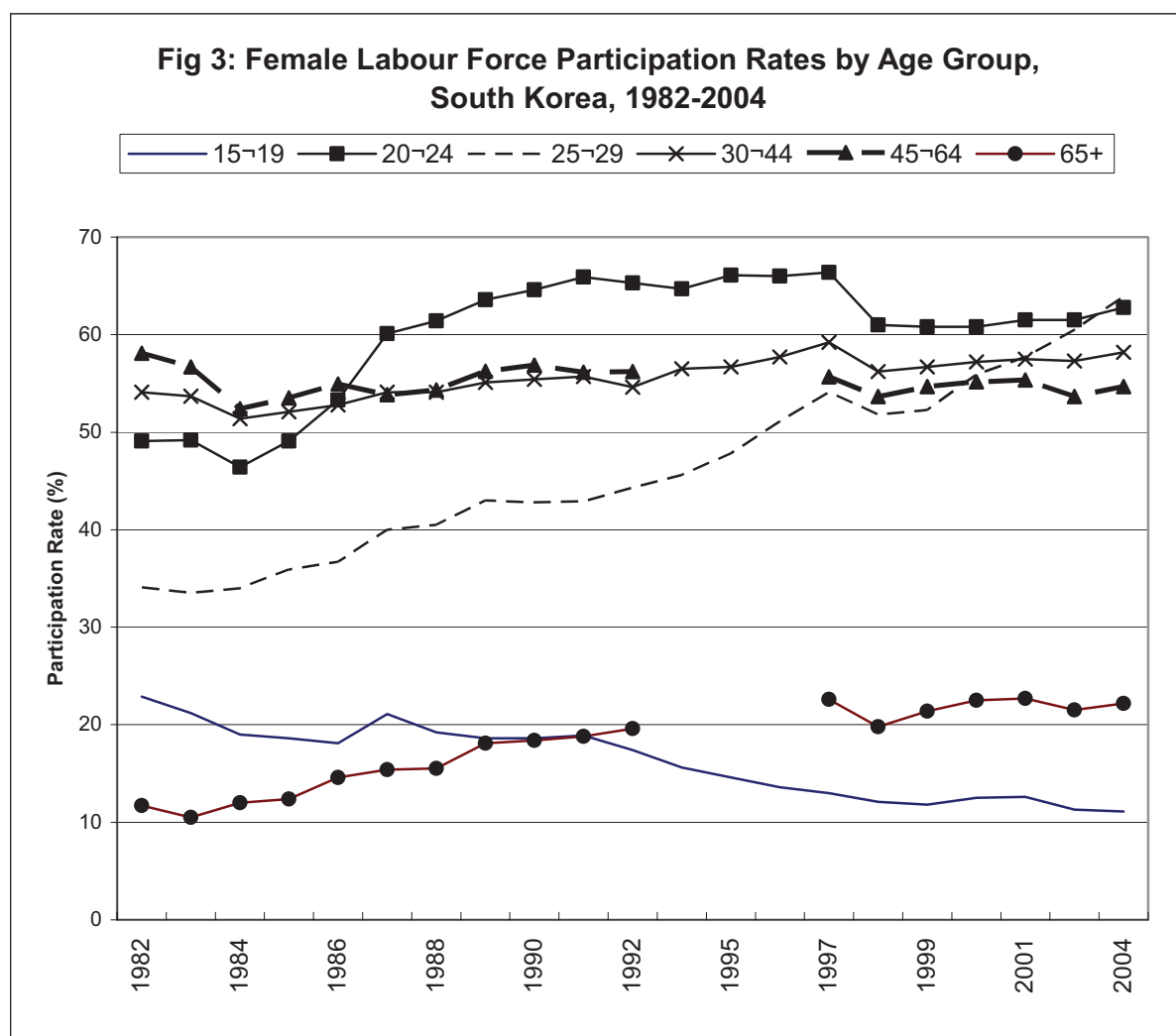
It is also possible to predict more substantial changes in LFPRs for women. Horton (1999) concluded, based on analysis of available labour force surveys (from the 1960s to 1990s) from Asia, Latin America, North Africa and the Middle East, that the increase in women's labour force participation is associated with a shift of employment out of agriculture into other industries and occupations.<sup>1</sup> In general, female labour force participation rates have risen in the wealthier countries of the region – Japan, South Korea, Taiwan, Singapore and Malaysia (see also Okunishi 2001: 304-308). In Singapore and Malaysia, this was associated with rapid industrialization over the 1970s and 1980s (Wong, 1981), but the increases levelled off in the 1990s.

<sup>1</sup> It is actually quite difficult to trace trends in LFPRs because of the need to follow time trends in data from sources using comparable definitions and procedures (e.g. not mixing trends from Censuses and labour force surveys).

Though their participation rates have been gradually rising, they are still somewhat lower than in most Western countries. There is clearly *some* scope for bringing more women into the labour force in these countries, but overall, there does not appear to be a great deal of scope for further raising female participation rates.

In Japan, the relatively high participation rate for women masks the fact that a high proportion of women's employment is in part-time work. Labour supply could be increased further by bringing more of these women into full-time work. There has been a substantial increase in the LFPR for females aged 25-29 since the late 1970s, and some rise at ages 30-34, but not much change at other ages (Retherford et al., 2001, Figure 6). The rise at ages 25-34 is linked to the sharp increase in non-marriage at these ages, though the causal relationship is not clear. Retherford et al. (2001: 83) think the causality runs mainly from trends in LFPR to marriage trends and not the other way around).

In the Republic of Korea (see Figure 3), there has been a decline in LFPRs at ages 15-19 since the early 1980s, a sharp rise (but later a decline) at 20-24, a spectacular rise at age 25-29, a steady rise at ages 30-34, little change at 35-64, and an increase at ages 65+. There is little doubt that the decline at age 15-19 is related to extended schooling, whereas the rise at ages 20-34 is related to delayed marriage and the collapse in fertility, though as in the case of Japan, the direction of causality is not clear. One could assume that further increases will take place at ages 20-34 (where rates in Korea are still below those in Japan and in most Western countries), but it seems to have levelled off since 1998 suggesting that the rise may have already run its course. It is puzzling however why the levelling off of LFPR occurred at just the time when fertility was collapsing and marriage delay accelerating. This underlines that we really do not understand the causal mechanisms involved, and therefore have a very weak basis for predictions.



Source: International Labour Organization, LABOURSTA Statistics Database, Geneva, 2006

From the foregoing brief assessment of recent trends in LFPRs we conclude that our forecast of labour force growth as presented in Table 6 are unlikely to be greatly modified over the next decade or two by changes in LFPRs. One projection should suffice to illustrate this point. Raising the participation rates for females at different ages in Korea<sup>2</sup> to the maximum reasonable level would lead to the index of labour force growth at ages 15-64, rising from 98 in 2005 to just under 100 in 2030, rather than falling to 81. This is without allowing for any decline at all in male rates, though some decline in these rates at the youngest and oldest ages seems likely. Such a change in projected growth in the Korean labour force does not alter the basic point of Table 6, which is that the labour supply in the wealthy countries of the region will be stagnant or declining, whereas it will be increasing rapidly in key countries potentially supplying labour to these countries.

<sup>2</sup> Raising female LFPRs between 2005 and 2030 from 63 to 70 per cent at age 20-24, from 57 to 70 per cent at age 25-34, from 62 to 70 per cent at age 35-44, and from 54 to 60 per cent at age 45-64.

## **5. How realistic are the fertility and migration assumptions that underlie these projections?**

The United Nations projections used above are simply the result of particular assumptions. The fertility and migration assumptions are particularly important in their effect on the projected growth of the labour force, although the former obviously has a delayed impact. In high and medium fertility countries, the United Nations sets a total fertility rate floor of 1.85 below which no drop before 2050 is allowed. In the case of low fertility countries, projections are made for five or 10 years, after which a gradual increase toward 1.85 is projected. These assumptions appear reasonable regarding eventual fertility increases in low fertility countries.

In the case of migration, the future path for a given country is based on past international migration trends and on its policy. Thus for countries such as Japan and Republic of Korea, the projections reflect the past low levels of immigration and the likelihood of no major changes in migration policy. In both countries it is clear that without large increases in the admission of foreign workers, temporarily or permanently, their labour forces will shrink.

The very low fertility reached in a number of countries in the region (Japan, Republic of Korea, Singapore, perhaps China and certainly its major cities Beijing, Shanghai and Hong Kong) appears to result from a number of factors including caution in family building as a result of people's insecurity about (a) their long-term employment prospects and (b) the possibility of marriage ending in divorce. Increased education and rising female labour force participation rates have increased the opportunity costs of raising children for many women. Career prospects and the demands placed on women in the workforce highlight rather starkly the trade-off between working and raising children. There is no doubt about the pressures facing women who want to combine a career and raising a family in countries such as Japan and Singapore, given the glacial changes in male attitudes to their role in the household and the enormous pressures to produce 'successful' children (Retherford, Ogawa and Matsukura, 2001; Tsuya and Bumpass, 2004). Consumerism and spread of individualism has probably also affected the assessment of the relative attraction of raising a family and other alternatives. In China, of course, government policy has played a major role in the decline in fertility.

Consistent with its social engineering approach to many problems over the past 40 years, the Singapore government announced in August 2004 a new policy for raising the birth rate, featuring a raft of measures including increased cash and tax rebate incentives for having babies, an extra month of maternity leave (from two to three months) paid by government, and increased child care allowances, including a reduced maid levy and taxation relief for grandparent care of children. Other measures to make Singapore more friendly to families include doing away with Saturday work for government servants and measures to make employers more understanding of the needs of workers with children. Similarly, in Taiwan (where the

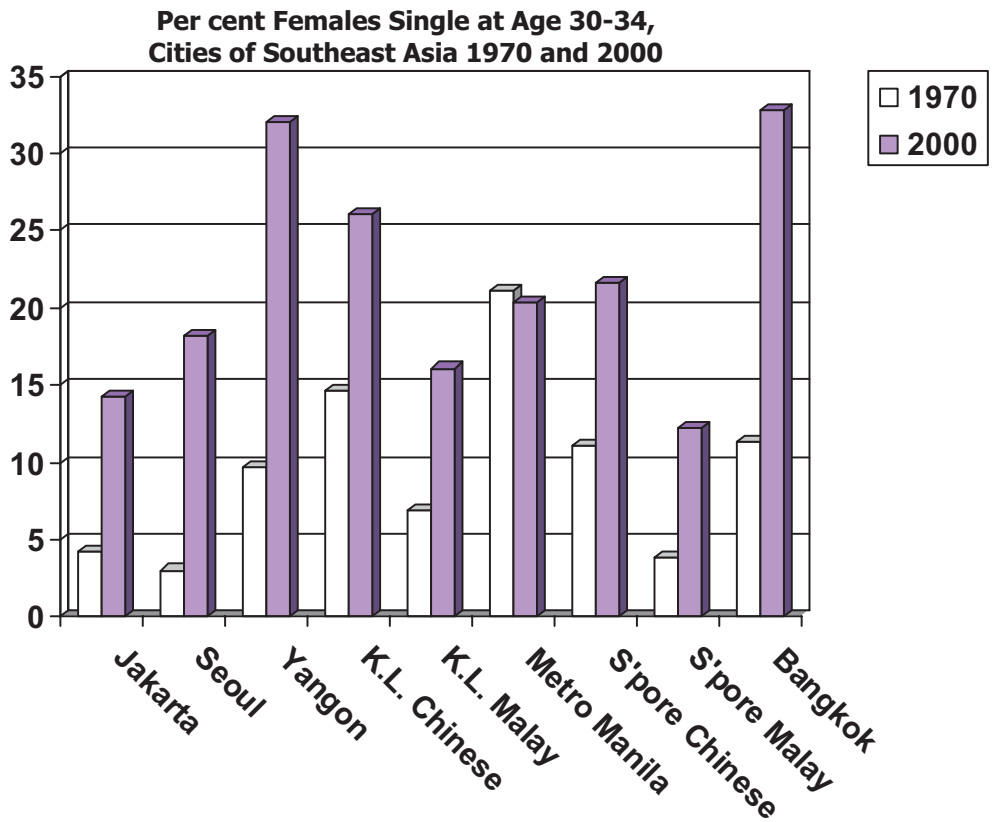
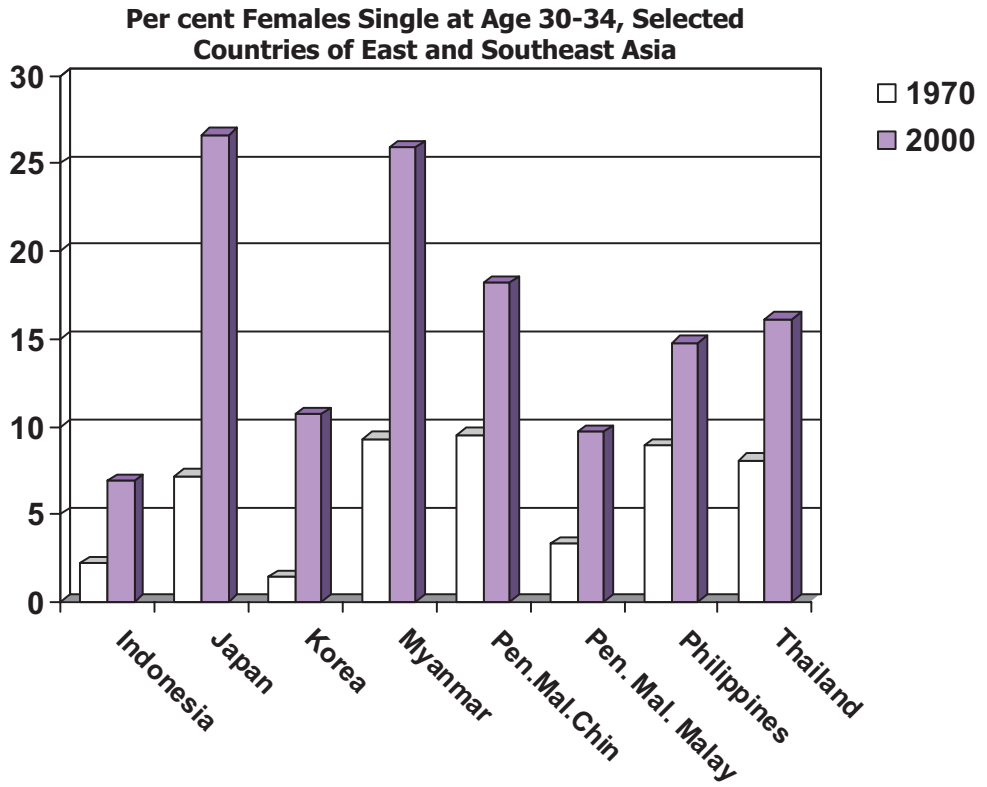
TFR has hit a low of 1.2), Japan and South Korea, great attention is being given to policy to raise birth rates. The South Korean government in 2006 announced new policies to boost birth rates, including monetary incentives such as greater pension payouts for families with two or more children, picking up the cost of three months' maternity leave for working women (employers were previously required to pay for the second and third month, making them reluctant to hire female workers), and working with the Planned Parenthood Federation of Korea and the private sector (Lee, 2006).

One element in the sinking of fertility rates to very low levels in some East and South-East Asian countries is the "flight from marriage", because in these societies children are rarely born outside of wedlock. The proportion of men and women who are still single when they reach their 30s and even 40s has risen sharply. This represents one of the most revolutionary social changes in the late 20<sup>th</sup> century (Jones, 2004). In the space of less than 2 generations, Asia moved from a tradition of universal marriage to a situation where non-marriage rates in some countries are amongst the highest in the world. Concurrent trends were rapidly rising levels of female education in the region, sharp increases in the proportion of women in the formal labour market and abandonment by parents of their traditional role in matchmaking, which, from the bride's perspective, had in reality frequently amounted to arranged marriage without her consent.

Figure 4 shows the trend – for women aged 30-34. The increases at ages 40-44, from a lower base, were almost as sharp. Although there were major differences between countries, the general trend in proportions remaining single is sharply upwards. Delayed marriage and non-marriage has gone furthest in the big cities, and is also more common among the better-educated. But non-marriage was not confined *just* to the highly educated. In Bangkok – and even in the much less wealthy population of Myanmar – quite a high proportion of the less educated were *also* remaining unmarried.

The factors responsible for increasing non-marriage are a matter of controversy. (For more detailed discussion, see Jones, 2004). Greatest attention is given by most commentators to the motivations and constraints affecting women. Priority to career, dissatisfaction with the institution of marriage, reluctance to have children, prioritization of self-actualization, etc. are all part of the picture. But for men in the region, too, the uncertainties of the labour market and the perception that women are increasingly demanding change in traditional gender relations may be adding to the hesitancy about entering marriage.

Figure 4





In relation to the current discussion, the key point about trends toward delayed marriage in the region is that to some extent it is caused by the same factors that are leading to lowered fertility within marriage, and in any case it reinforces the trend toward very low fertility in the major labour-scarce countries. .

## **6. Trends in educational composition of the labour force**

The potential labour flows between countries will be greatly influenced by educational trends in both advanced and poorer countries. For example, Indian migration to countries such as the United States, Canada and Australia is highly selective by education. It is skilled migrants, including IT workers and those in the health sector, who are of special interest to these countries. The same can be expected of evolving patterns of migration, either permanent or short-term, to countries such as Japan and South Korea. Thus trends in educational expansion in the main migrant-sending countries of Asia need to be studied carefully, as they will affect the “stock” of potential migrants with greater chance of acceptance in international labour markets.

Although a detailed projection of the educational composition of the labour force in the various Asian countries is beyond the scope of the present chapter, some relevant observations can be made.

- Although formal educational credentials rarely improve much for a given cohort once it has completed formal schooling (despite the lip service paid to out-of-school education), on-the-job-training can be very important in enhancing the job-related skills and employability of such a cohort. In this sense, the skill levels of any cohort are not totally determined by the amount of formal education received.
- There has been a tendency since about 1990 for educational attainment of adolescents in countries such as Thailand, Indonesia and Bangladesh to increase more rapidly than is the case in mature Western economies or in Japan and South Korea, both because educational attainment levels were already high in these mature economies, and because the lagging countries have been putting increased effort into raising educational levels. In Asia, secondary school enrolment ratios have increased much faster in East Asia (which includes Southeast Asia) than in West Asia (which includes the Indian subcontinent) (see Unesco Institute of Statistics, 2005, Figure 7). Table 8 shows that sharply increasing enrolment ratios at the secondary school ages in Indonesia, Thailand, and Bangladesh raised such enrollments over the 1990s, and in India and the Philippines, where increases in enrolment ratios were more modest, this modest rise, along with increasing numbers in the adolescent age groups, still produced a substantial increase in the numbers enrolled in high school. These larger numbers of young people with secondary education were then, of course, joining the workforce, whereas in Japan and South Korea the numbers enrolled in secondary school were falling, because “saturation enrolment” had already

been reached at this level of education, and the numbers in these age groups were also falling.

**Table 8. Rise in secondary school enrolments 1990-2000, various Asian countries**

Country	Enrollment rate 1990	Enrollment rate 2000	Enrollments 1990 (million)	Enrollments 2000 (million)	Ratio of enrollments 2000/1990
Indonesia	45	57	11.7	14.9	1.27
Thailand	32	82	2.3	5.6	2.37
Philippines	73	77	6.4	7.9	1.23
India	44	49	47.0	61.8	1.31
Bangladesh	19	46	3.1	8.9	2.90
Japan	96	100	9.4	8.4	.90
S. Korea	87	91	4.3	3.8	.89

Source: Computed from data in World Bank Indicators and UN 2003.

- Notwithstanding the point made above about on-the-job training, it takes time to raise the educational attainment of any country's workforce as a whole, because more poorly educated older cohorts are only gradually replaced in the workforce by better-educated younger cohorts. Examples for China and Pakistan make this point (Lutz and Goujon, 2001; Jones, 2000).
- However, the "bottom line" is that the more rapid growth of numbers in the younger segments of the workforce in the "labour supply countries" such as the Philippines, Bangladesh and Indonesia than in the "labour receiving" countries such as Japan, South Korea and Singapore will be even more pronounced if we restrict the comparison to the better educated among these segments of the workforce, because of the more rapid educational expansion in the labour supply countries as they attempt to narrow the educational distance between themselves and the advanced countries.
- In this sense, the potential supply of highly educated and skilled workers from the "labour supply" countries (including, of course, the giant countries – China and India) would seem to be almost unlimited. There is an important qualification, however, and that is that more years of secondary and tertiary education will not necessarily suffice; the quality and relevance of their education systems to the rather demanding requirements of the labour importing countries has to be nurtured.

### **7. Growth and decline of labour force, changing employment structure and the incentive to migrate.**

In considering the potential for international labour migration in the region, the growth of employment opportunities in non-agricultural employment is a key variable, because throughout the region there is a tendency for young people in rural areas to turn their backs on agriculture, either by seeking employment in non-agricultural work in rural areas or by migrating to towns and cities. This is hardly surprising, as the agriculture sector is characterized by low productivity and low

earnings. Typically, in Asian countries, value added in agriculture is only between 10 per cent and 40 per cent of value added in the industry and services sectors, and wages or earnings are typically only about half as great (Asian Development Bank, 2005: Tables 2.4 and 2.5). Table 9 shows that agricultural employment now provides a very small proportion of total employment in Japan and South Korea, and less than a quarter in Malaysia. In China, Thailand, Philippines and Indonesia, its share has generally fallen well below half, whereas in India and Bangladesh it remains close to two thirds.

**Table 9. Agricultural employment as % of total employment, various countries**

Country	1995 male	2004 male	1995 female	2004 female
Japan	5.2	4.4	6.5	4.7
South Korea	10.9	7.3	14.6	9.3
Taipei, China	10	7	Included in male	Included in male
China	48.5	44.1	Included in male	Included in male
Malaysia	25.8	n.a.	21.6	n.a.
Thailand	50.8	43.9	53.4	40.3
Philippines	51.7	44.6	31.1	24.7
Indonesia	44.1	43.3*	43.8	43.1*
India	n.a.	66.7**	n.a.	Included in male
Bangladesh	n.a.	62.1**	n.a.	Included in male

Source: ILO Yearbook of Labour Statistics.

\* 1999 \*\* Latest available year; source is ILO, 2005, Table 1.6.

Earnings of those in employment do not fully reveal the pressures on those in the workforce to seek better opportunities. Unemployment is a major concern throughout the region, and unemployment rates in several East and Southeast Asian countries remain considerably higher than they were in 1996, prior to the economic crisis (Asian Development Bank, 2005: 23). The share of informal sector employment has also increased since the crisis in countries such as Indonesia, Philippines and Thailand, and remains very high in India despite improved economic growth there.

To summarize, then, the problem for labour markets throughout the Asian region is not that they have failed to create jobs; but that the growth in number of entrants to the labour market is outpacing job creation, particularly in the modern sector of the economy.

The potential for international labour migration has much to do with the rate of increase in employment opportunities in sectors where young people want to work, in relation to the rate of growth of the labour force. Stahl (2003, Table 2.5) conducted an exercise where he compared the growth of non-agricultural wage employment in various countries with the projected rate of growth of their labour force to estimate

the number of non-agricultural wage jobs per 100 extra members of the labour force.<sup>3</sup> Assuming that the growth rate of non-agricultural wage employment from the mid-1980s to the mid-1990s would continue unchanged, he found that this would be rapid enough to absorb only 56 per cent of the extra labour force in Bangladesh, 30 per cent in Indonesia and 75 per cent in the Philippines, though in China and Thailand it could more than absorb all additional workers. I attempted a similar approach, and updated Stahl's calculations using more recent data and adding an additional country (India). Unfortunately, data on non-agricultural wage employment was available for only a few countries. For these countries, the results were startling. In China and India, non-agricultural wage employment actually *fell* over the period 1995-2003, reinforcing Stahl's conclusion that strong pressures exist to migrate overseas, because few opportunities exist in the kinds of employment most desired by labour force entrants. In the Philippines, however, non-agricultural wage employment did rise substantially over the period (by 41 per cent).

Both because of the unavailability of data on non-agricultural wage employment for most countries in the ILO database, and because the China and India trends differed so radically from those in the Philippines, I took a broader approach than Stahl to what constitutes acceptable jobs, and compared trends in *total* non-agricultural employment, on the assumption that it was non-agricultural employment in general that was desired by most labour force entrants, even though much of it would be in less desirable informal sector jobs. The key point about this simple exercise is that it is based on recent past performance in one variable: the annual growth rate of non-agricultural employment of all kinds, and projection of the annual growth of the labour force, to estimate, on the basis of past performance, what proportion of projected additions to the labour force might reasonably be expected to find non-agricultural employment.

Table 10 shows the results. Column E shows that of the countries with available data, only in Indonesia did the growth rate of non-agricultural employment fall well short of the projected increase in the size of the labour force, and in China and the Philippines just short of it. In all three countries, however, we know that a substantial share of non-agricultural employment is in the kind of work that is not at all desired by new workers. Therefore the data serve to support the conclusion that there will continue to be strong pressures for outmigration, as workers seek better opportunities elsewhere.

One key to reducing emigration pressures would be a reduction in labour force growth rates in combination with an effective development strategy, yielding greater gains in domestic employment opportunities. Even this, however, would not necessarily stem the flow of workers overseas. The data presented earlier on wage differentials indicated the enormous attraction of the economies of the wealthier Asian countries for ambitious workers from the poorer economies.

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<sup>3</sup> Stahl actually uses the expression "per 100 new labour force entrants", but I would prefer to use the term "per 100 extra members of the labour force", because those taking these non-agricultural wage jobs will not necessarily all be new labour force entrants.

**Table 10. Projected growth of non-agricultural employment in selected labour-exporting countries,**

Country	Non-agricultural employment (per cent of total employment) 2003	Annual growth of non-agricultural employment (1995-2003)	Annual growth of labour force 2000-2005 (per cent)	Projected non-agricultural jobs per 100 additions to labour force
A	B	C	D	E
China	55.9	2.4	1.4	96
Indonesia	55.7	1.9	1.8	59
Philippines	62.8	4.1	2.6	99
Thailand	55.1	2.5	1.2	115
Vietnam	43.6	5.5	2.3	104

Notes: Column E: Column B x C, and this result is divided by Column D.

Source: International Labour Organization, LABOURSTA Statistics Database, Geneva, 2006

## 8. Japan as the prime destination for intra-Asian labour migration

Of all the countries in the world with very low fertility, Japan faces some of the most intractable problems of declining labour supply (McDonald and Kippen, 2001). Raising fertility rates would have little effect on the size of Japan's labour force over the next 20 years. Nor is Japan likely to be able to raise male participation rates very much, as these are already high by world standards. This leaves Japan with only two options if it wants to substantially increase its labour supply: increasing the labour force participation rates of Japanese women and increasing immigration. On the latter, Japan is a very homogeneous society and has difficulty coming to terms with the need for an increase in permanent migration. On the former, as noted in Section 4, participation rates of Japanese women are already reasonably high, and a declining proportion of Japanese women are quitting the workforce at the time of marriage (Retherford, Ogawa and Matsukura, 2001: 78-83). By increasing the proportion of women in full-time rather than part-time work, there is scope for increasing the equivalent full-time LFPRs for women. But this would require painful adjustment in Japanese family systems, otherwise this increase in equivalent full-time work could perhaps only be achieved at the expense of further declines in Japan's fertility rates, thus exacerbating the problem of future declines in the size of the labour force.

Japan, then, will clearly be a prime target for future migration from other Asian countries, whether permanent or temporary. Bolstering the demographic realities underlying this conclusion is the extreme attractiveness of Japan to potential labour migrants from many other Asian countries, where earnings in equivalent occupations are so much less.

## 9. The special situation of China and India

Containing as they do 62 per cent of Asia's total population, the situation of the population "giants", China and India, deserves special mention. Neither country has so far contributed to international migration streams in anywhere near the proportion they share of the region's population. Neighbouring countries such as the Philippines and Bangladesh are overrepresented in such migration streams. But will this continue to be the case in future? The answer to this question is critical, because even quite modest increases in the prevalence of labour migration from China and India could impact massively on the overall extent of international labour migration in the Asian region.

It has been argued that formerly, India and China were effectively not part of the global workforce, but that with India's turn from autarchy, the PRC's shift to market capitalism and the collapse of communism in the Soviet bloc, the global workforce effectively doubled (Asian Development Bank, 2005: 22). This has happened at precisely the moment technology has made geographical location less important. One could expect that eventually, Indian and Chinese workers would become increasingly mobile in the global labour market. The key uncertainty is how quickly this eventuality will come to pass.

Internal population mobility is not particularly low for either country, though it certainly was low in China, for policy reasons, before the freeing up of the economy beginning in 1978. International migration from China has also increased since these economic reforms, and especially since the liberalization of migration with the emigration law of 1985 (Pieke, 1998). International migration from India is also building up. Thus the considerable internal migration in both countries certainly could translate into high levels of international migration, under favourable conditions.

Still, it can be argued that China and India are likely to remain underrepresented in international migration flows, relative to their populations, for the following reasons. First, both countries are vast geographically, with varied economic situations in different regions; therefore employment opportunities can be sought within-country. Secondly, both countries have been experiencing very rapid economic growth, which is likely to continue for some time. Thus employment opportunities are opening up domestically. Thirdly, both countries are facing relatively slow growth in numbers in the potential labour force (see Table 5). This is especially the case in China, where growth in numbers aged 15-24 has already ceased and will soon decline.

This is not to deny that there is still a good deal of surplus labour in both countries (symbolized by the so-called "floating population" in China) and barriers in both countries to gaining employment by migrating domestically – barriers of legal status of the "floating population" in the case of China, barriers of language and ethnic differences in both countries, and barriers posed by "sons of the soil" policies in India (Weiner, 1978). Changes in the domestic situation in both countries – in particular, slowdowns in their impressive rates of economic growth – could certainly release vast

numbers of workers onto the international labour market. Movement of Chinese workers to Singapore - a relatively attractive destination, to be sure, because of its high wages and Mandarin-speaking population – provides an illustration of what could happen elsewhere. Tourism is building up rapidly from China to other parts of Asia, thus exposing Chinese to the opportunities that are available elsewhere. Moreover, when a country such as China in which economic and social development had been held back and international movement was restricted by government policy enter an unprecedented period of rapid growth, even the fact that employment opportunities are increasing rapidly domestically will not necessarily prevent a large flow of young workers, enticed by previously unavailable opportunities, abroad. Thus the situation needs to be monitored carefully.

## **10. Other factors influencing migration patterns**

### *International marriage migration*

This is influenced by “marriage squeeze” (relative shortage of one sex compared with the other among the age and socio-economic groups that typically marry each other) in different countries. In many countries of East and Southeast Asia, non-marriage is especially prevalent among highly educated women and lesser educated men (Jones, 2004: 11). Female education has been expanding rapidly in Asian countries, and the proportion of girls proceeding into higher education is much higher than in the past, and in some cases (Philippines, Singapore) higher than for males. The reality is that educated females generally want to marry educated males – and less educated males are reluctant to marry females who are better educated than they are. Also, males tend to marry women younger than they are, and will sometimes choose beauty over brains. This means that the relatively restricted pool of potential husbands for the 30-something educated women will not necessarily choose the 30-something educated woman for marriage.

For males, the group having difficulty finding brides tends to be the less educated with relatively poor employment prospects. High percentages remaining single for this group have been observed in a number of countries in East and Southeast Asia. Their problems are exacerbated in countries such as China, Taiwan and South Korea by the increasing sex ratios at birth, and therefore an overall shortage of females in the cohorts moving into the marriageable ages (Hudson and Boer, 2004).

The search overseas for wives by men disadvantaged in the local marriage market – or dissatisfied with the product available in local marriage markets - is an increasing phenomenon in Taiwan (Tsay 2004), but it is also evident in South Korea and Singapore (where there are a number of companies organizing matchmaking tours to Vietnam). From studies on the distorted sex ratios at birth in some East Asian countries, as well as in India, we can infer that the imbalance in the male/female ratios in the marriageable ages in these countries will worsen over the next decade or two (Riley, 2004: 17-20). In the case of China, the gender imbalances were actually marked around 2000, but have now disappeared, only to re-emerge in extreme form

over the 2015-2025 period, not only because of imbalances in sex ratios at birth, but even more importantly because of age structure changes consequent on earlier fluctuations in fertility rates (Goodkind, 2006).

In countries where large numbers of single people are abroad as labour migrants – the Philippines is a prime example – the local marriage markets are likely to be significantly affected. Overseas labour migration in this case is likely to further delay marriage in many cases, as well as leading to greater instability in marriage due to the strains of long absences.

For the purposes of the present discussion, one important point to note is that in the case of women moving from countries such as Vietnam and the Philippines to countries in East Asia, it is not always possible to separate marriage migration from labour migration (Piper and Roces, 2003). Overall, we can expect the pressures for international marriage migration (from both the male side in countries such as Korea and Taiwan and the female side in countries such as the Philippines and Vietnam) to increase. It is unlikely that the ambivalent situation (wife or worker) of many of these women, documented by Piper and Roces, will change. Female marriage migration must therefore be considered as in some sense a component part of the pattern of labour migration occurring in the region.

### *Cohort succession*

One other point having a bearing on the demand and supply of labour in Asian countries is that in cases where fertility has not declined smoothly, effects on the size of age groups in successive periods can be quite dramatic. In some cases there have been ‘pauses’ in fertility decline and in others, even a rise followed by a renewal of decline. Examples of such rises include Japan immediately after World War II, China from 1962 onwards, following the low fertility of the famine years 1959-61, Iran in the late 1970s to late 1980s, Singapore from 1986 to 1993 and Malays in Malaysia from 1978 to 1986.

Cohort succession can lead to sharply differing growth rates of different age groups within the population. For example, in Japan, the cohort born between 1947 and 1949 is 30 to 50 per cent larger than those born in the 3-year periods immediately before and after that. This cohort will be retiring en masse from 2007 onwards, as it begins to reach the retirement age of 60, sharply raising the number of pension recipients, and exacerbating the shortage of workers and the possibility of “mismatch” between the skills and experience of those leaving and the job seekers replacing them. Another example is Singapore, where the age group 5-14 declined between 1980 and 1990, rose by almost 30 per cent between 1990 and 2000, and is expected to decline again over both of the following two decades. Moreover, while numbers in this age group were increasing sharply over the 1990-2000 period, those in age group 15-24 were declining sharply. Temporary rises in fertility can lead to “echo effects” in age structure caused by an increase in births when these larger birth cohorts enter the main reproductive ages. These “echo effects” can be amplified or dampened,



depending on the particular trajectory followed by fertility rates over the course of cohort transition.

Planners, and academic economists, frequently ignore age structure effects (for example, some influential economic growth models assume the rate of growth of the labour force is the same as the rate of growth of the population). But the scale of the shifts is large enough to be taken seriously into account in the planning process (see Pool, 1994; Tuljapurkar et al, 2005). Both the initial fluctuations in numbers in given age groups as different sized cohorts succeed each other in the age structure, and any subsequent “echo effects” can have important implications for educational and employment planning, and for changing needs for foreign workers over fairly short periods of time.

## **12. Conclusions**

Nothing can be more certain than that flows of labour migrants – both highly skilled and unskilled – will continue to increase in the Asian region. The economic and demographic realities outlined early in this paper ensure this. The only question then becomes whether these flows will be able to occur legally – through the freeing up of labour markets in the region – or will increasingly be undocumented and – from the point of view of receiving countries – illegal. These points will be expanded in the following, final paragraphs of this paper.

Population dynamics remain important variables influencing economic growth (Birdsall et al., 2001). In the Asian region, diversity in population trends has meant that some countries have benefited more than others from the “demographic bonus” (the decades-long decline in the ratio of dependants to workers following decline in fertility from high levels). The diversity in economic and demographic conditions in Asian countries at the present time lies at the heart of the issue of projecting future migratory movements in the region. Labour migration is intimately linked to labour shortages occasioned by fertility trends in the wealthy countries, and to the glaring gap between income levels in countries such as Bangladesh and Japan (an extreme comparison) or Indonesia and Malaysia.

Labour migration is increasingly an issue in the Asian region. Its scale is increasing, and it influences the *de facto* population situation in the recipient countries. Singapore, Taiwan and the state of Sabah in Malaysia are good examples. However, migration of all kinds – labour migration, skilled temporary migration and migration for permanent settlement – are all likely to increase in the region in the near future. The chasm separating earnings between countries of the region will ensure a steady flow of labour migrants. The imminent decline in the labour force in a number of East Asian countries (Japan, South Korea, Taiwan, Singapore) will require increasing reliance on overseas workers, at both ends of the skill spectrum, and the European debates on ‘replacement migration’ will have increasing resonance in the region (Demeny, 2003).

Population mobility in the region raises important issues for human welfare. Given that large-scale flows of people are certain to be taking place, the key issue is the conditions under which these flows will occur. Most importantly, the question is the extent to which labour regulations and agreements can be brought about to enable these flows to occur in a monitored and regulated way, rather than occurring irregularly (“illegally”) and in conditions assisting the role of labour brokers and (in extreme cases) traffickers.

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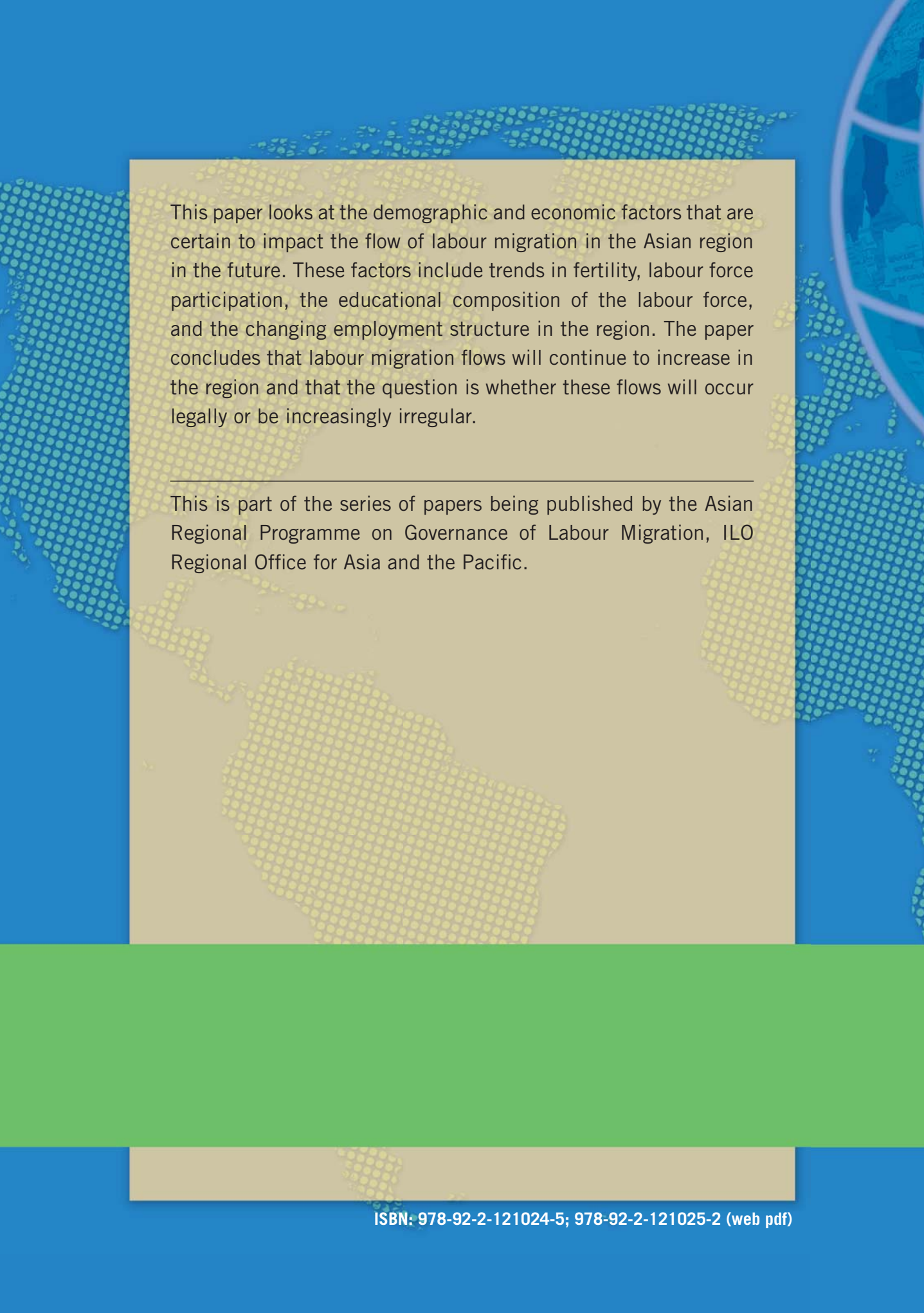
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This paper looks at the demographic and economic factors that are certain to impact the flow of labour migration in the Asian region in the future. These factors include trends in fertility, labour force participation, the educational composition of the labour force, and the changing employment structure in the region. The paper concludes that labour migration flows will continue to increase in the region and that the question is whether these flows will occur legally or be increasingly irregular.

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