Special Feature C

The Changing Labour Landscape In Emerging Asia: Challenges And Opportunities

Introduction

Over the past five decades, labour has been a key determinant of growth in the Emerging Asia (EM Asia) economies. In India, Singapore, and most of the low- and middle-income countries in ASEAN[1] (except Thailand), additions to the labour force have contributed 40–65% of GDP growth, which averaged 4.5–7.1% annually. In China, Hong Kong, Korea, Taiwan and Thailand, the increase in labour supply accounted for a smaller share (27–37%) of these countries' average growth of 6.2–7.4% p.a. over the same period. However, the tide is turning, and in the next decade, working-age population growth is expected to slow markedly or even turn negative in many parts of EM Asia. This supply-side headwind, unless offset by strong productivity gains, would mean a slower pace of overall output growth going forward. In light of these developments, this Special Feature examines the demographic transition in EM Asia, assesses the possible pathways to economic development given evolving relative factor endowments, and considers some of the policy changes that may be needed to ensure sustainable growth over the medium term.

EM Asia's Demographic Transition

Strong population growth after World War II, alongside lower mortality rates and rising life expectancy, led to a baby boom generation that worked its way up the population pyramids across Asia. The East Asian economies of Hong Kong, Korea, Singapore and Taiwan (or EA-4) experienced some of the fastest demographic transitions in history, moving from high fertility and high mortality, to low fertility and low mortality over a 50- to 75-year period, compared with a similar process that took nearly 150 years in Western Europe (Bloom *et al.*, 2001). The EA-3 economies (excluding Taiwan)[2] enjoyed robust working-age population growth of 2.7–3.6% p.a. from the 1950s through to the 1970s, and actively pursued industrialisation policies that enabled them to reap their demographic dividends. (Table 1)

In China, the expansion of its pool of labour in the cities and key industrial belts, resulting from rural-urban migration and rising labour participation rates, powered the phenomenal growth that followed the opening up of China's economy in the late 1970s. The rapid growth of the working-age population, averaging 2.7% p.a. in the 1980s and a smaller 1.5% in the 1990s and 2000s, enabled firms to keep wage costs competitive and to dominate the global market for labour-intensive manufactures.

[1] Excluding Lao PDR and Myanmar, for which long-dated GDP data is not available.

[2] Taiwan is excluded here and in other places where EA-3 rather than EA-4 data is reported, as detailed population statistics and projections are not provided by the UN. Nevertheless, trends in Taiwan are likely to have been quite similar to the EA-3's. Census data shows, for example, that the population grew by a robust 3.2% p.a. in the 1960s and 2.0% p.a. in the 1970s.

India and the ASEAN-4 countries also saw rapid working-age population growth averaging around 2–3% p.a. between the 1970s and the 1990s, and slower, but still strong growth of about 1.1–2.7% in the 2000s. However, many of these countries did not seem to have fully captured the benefits accruing from the expansion in labour supply, as may be seen from their low employment rates *vis-à-vis* other middle-income countries in the region. Indeed, India's employment rate fell to a regional low of 53.6% in 2010–11, as a result of the country's inability to industrialise sufficiently rapidly to provide employment for the swelling ranks of its workers.

Table 1
EM Asia Working-age Population Growth

Country/ Region	Peak	Working-age Population Growth (% p.a.)										
		1951 to 1959	1960 to 1969	1970 to 1979	1980 to 1989	1990 to 1999	2000 to 2009	2010 to 2013F	2014F to 2019F	2020F to 2029F	2030F to 2039F	2040F to 2049F
EM Asia	**2035**	**1.3**	**2.0**	**2.7**	**2.7**	**1.9**	**1.8**	**1.1**	**0.7**	**0.5**	**0.0**	**–0.1**
China	2015	1.0	2.0	2.6	2.7	1.4	1.5	0.5	–0.1	–0.1	–0.8	–0.6
India	2050	1.3	1.8	2.6	2.5	2.3	2.1	1.8	1.5	1.1	0.7	0.3
EA-4	**2013**				**2.3**	**1.4**	**0.8**	**0.8**				
Taiwan	2012				1.9	1.5	0.9	0.7				
EA-3	**2017**	**3.0**	**2.3**	**3.2**	**2.5**	**1.3**	**0.8**	**0.8**	**0.1**	**–0.7**	**–0.9**	**–0.8**
Hong Kong	2015	2.6	3.2	3.8	1.8	1.9	0.9	0.4	–0.2	–0.9	–0.5	–0.7
Korea	2016	2.9	2.1	3.1	2.6	1.1	0.6	0.7	0.1	–0.8	–1.0	–0.9
Singapore	2021	4.4	3.0	3.3	2.9	2.4	3.0	2.3	1.3	0.0	–0.1	–0.1
ASEAN-4	**2059**	**2.3**	**2.3**	**3.0**	**3.0**	**2.4**	**1.7**	**1.6**	**1.4**	**0.9**	**0.5**	**0.2**
Indonesia	2057	2.0	1.9	2.8	2.9	2.4	1.6	1.6	1.5	1.0	0.4	0.1
Malaysia	2047	2.3	3.1	3.4	3.1	3.2	2.7	2.3	1.7	1.0	0.8	0.3
Philippines	2085	2.9	3.3	3.4	3.2	2.7	2.4	2.2	2.1	1.7	1.4	1.1
Thailand	2017	2.7	2.7	3.3	3.3	1.7	1.1	0.5	0.1	–0.6	–1.2	–1.3
CLMV	**2036**	**1.3**	**1.9**	**2.6**	**2.7**	**2.6**	**2.1**	**1.5**	**1.0**	**0.6**	**0.1**	**–0.4**
Cambodia	2069	1.9	2.1	0.7	2.1	3.3	3.2	2.1	1.5	1.5	1.1	0.5
Lao PDR	2056	1.9	2.3	1.6	2.5	2.6	2.9	2.9	2.1	2.0	1.5	0.8
Myanmar	2035	1.1	1.8	2.6	2.6	2.5	1.4	1.3	0.9	0.5	0.0	–0.5
Vietnam	2033	1.3	1.9	2.9	2.9	2.5	2.3	1.4	0.8	0.4	–0.1	–0.7

–2.0 < % < –1.0	–1.0 < % < –0.5	–0.5 < % < 0.5	0.5 < % < 2.0	2.0 < % < 3.0	> 3.0%

Source: United Nations and EPG, MAS estimates

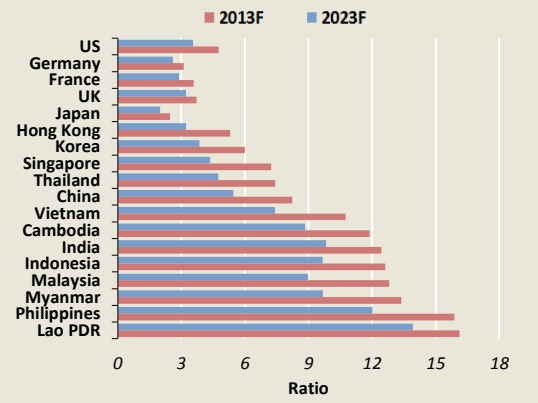
Demographic Projections

The Growing Demographic Divide

As the demographic transition continues to unfold, a more discernible divide will emerge across Asia, largely split by income levels. The high-income economies in the region are facing ageing, and even declining, populations over the next decade, while the low- and middle-income economies will mostly see continued additions to their workforce. The swiftness of the demographic transition occurring in the region implies that its impact could be stronger compared with earlier transitions in the high-income advanced countries.

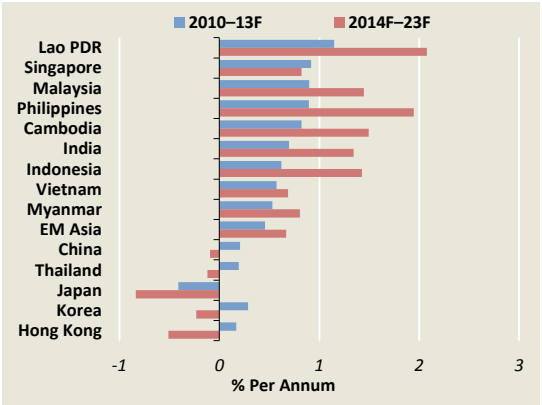
The EA-3 economies are witnessing a steady decline in the old-age support ratio (computed as the ratio of the working-age population aged 15 to 64 to the elderly population aged 65 and over), from around 5–7 persons currently, to about 3–4 persons in 10 years' time. (Chart 1) Working-age population growth in Hong Kong and Korea, for instance, has slowed to a crawl, and is expected to turn negative within a decade. (Chart 2)

Chart 1
Old-age Support Ratio



Source: United Nations and EPG, MAS estimates

Chart 2
Working-age Population Growth



Source: United Nations and EPG, MAS estimates

Although China is at a less advanced stage of economic development compared to EA-4, its old-age support ratio of about 8 is much closer to the latter than other countries at a similar developmental stage such as Peru and South Africa. China's strict population control policies implemented in the late 1970s have led to a precipitous drop in birth rates, from 39.3 per 1,000 persons in 1964 to 13.3 in 2013. Consequently, the growth of its working-age population is expected to fall from an average of 1.3% p.a. in 2000–13 to about zero in 2014–19, with the labour force starting to contract around the middle of this decade.

Meanwhile, in the other middle- and low-income countries, the supply of labour will continue to increase, albeit at a progressively slower rate. In the ASEAN-4, CLMV economies and India, working-age population growth will moderate from an average of 1.8% p.a. in 2010–13 to 1.3% in 2014–19, and further to 0.9% in 2020–29.

Among this group of countries, Lao PDR and the Philippines will see the strongest working-age population growth over the next two decades, while Malaysia stands out as an upper middle-income country that is still experiencing relatively strong rates of population growth. However, Thailand's demographic transition suggests that its labour force will peak in 2017.

Divergence in Educational Profiles

The looming demographic constraint to growth in EM Asia has put the spotlight on the importance of raising labour productivity. Besides capital deepening, the quality of labour input is a key factor that supports labour productivity, facilitates technological innovation, boosts the returns to capital and underpins sustained economic growth.

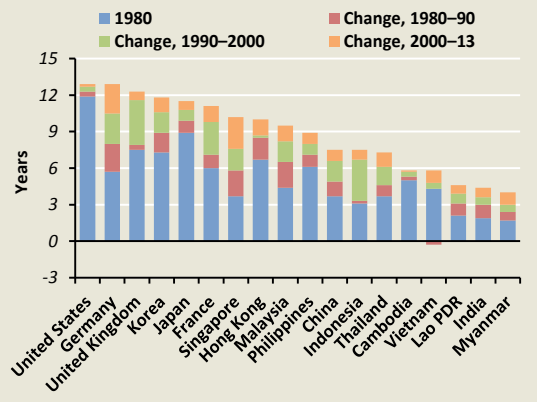
Asian countries have continued to commit resources to raising educational standards. Although the average number of years of schooling has steadily risen over the past three decades, the pace of improvement in educational attainment has varied considerably. The EA-3 economies, in particular, achieved significant gains, raising the mean years of schooling among adults by an average of 1.5 years per decade. As a result, EA-3 economies now have a workforce with 10–12 years of schooling on average, close to that in the advanced economies. (Chart 3)

In comparison, China and the ASEAN-4 countries have yet to catch up with the EA-3 and the advanced economies, with their labour forces having undergone only 7.3–9.5 years of education on average. Lastly, while the educational profile in the CLMV countries has improved over the past three decades, the rate of improvement has lagged behind most of EM Asia. These countries currently have workforces with relatively low educational attainment, averaging just 4–6 years of schooling.

In terms of educational quality, the EA-4 economies have also done well. Scores from the OECD's Programme for International Student Assessment (PISA), which provides a common

platform for comparing the basic competencies of 15-year olds in mathematics, science and reading across countries, suggest that students in the EA-4 economies have significantly outperformed the average for high-income countries. Notably, scores for China (Shanghai) and Vietnam are also higher than the average for high-income countries, despite their middle-income status.

Chart 3
Mean Years of Schooling, Adult



Source: United Nations and EPG, MAS estimates

Pathways To Growth

Ongoing changes in a country's supply and quality of labour have a slow-moving, but profound, impact on its comparative advantage. To achieve sustainable growth, Lin (2011) proposes that developing countries imitate the successful approaches that have allowed countries with similar factor endowments to move from low- to high-income status. Latecomers to the development process can benefit from the "advantage of backwardness" by following the "flying geese" pattern and borrowing technology from more advanced economies.[3]

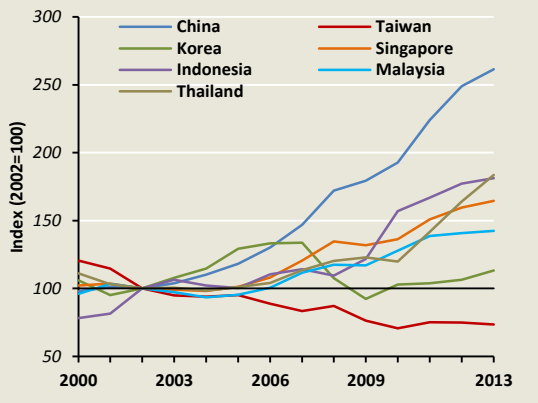
Labour-surplus, Low-income Countries: Attracting Labour-intensive Foreign Direct Investment (FDI)

For the labour-surplus CLMV countries, the well-trodden path of industrialisation would be the natural one to take. Shifting workers from the low-productivity agricultural sector into manufacturing would help raise productivity, incomes and growth. In India, the services sector has grown more rapidly than in many other emerging economies, led by sophisticated business process outsourcing. Nevertheless, India may also have to industrialise in order to generate adequate jobs for its growing pool of workers.

Over the last decade or so, labour costs in China have increased rapidly, outpacing the gains in productivity. (Charts 4 and 5) Consequently, some multinational companies, including those in China, are looking to relocate plants in lower-cost countries in the region. The CLMV countries, in particular, are well-placed to benefit from this. Over the past several years, these countries, especially Cambodia and Vietnam, have seen increasing inflows into their manufacturing sectors. FDI into Myanmar has risen as well, although it has largely flowed into the natural resource sector.

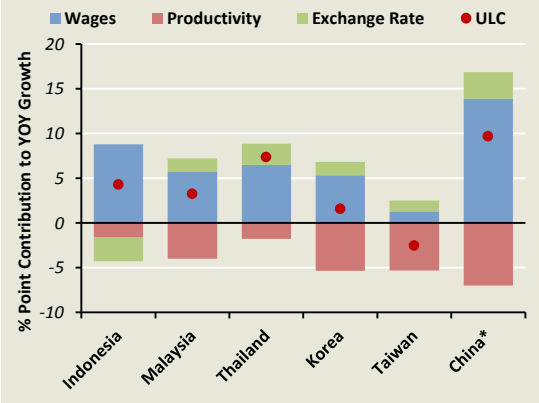
[3] The "flying geese" model of economic development was popularised by Akamatsu (1962). It envisaged a pattern of development within a region whereby the production of goods will continuously move from the more advanced economies to the less developed ones. The less developed countries in the region could be considered to be aligned behind the more advanced countries according to their level of development.

Chart 4
Unit Labour Cost (ULC) in Manufacturing



Source: CEIC and EPG, MAS estimates

Chart 5
Decomposition of Manufacturing ULC Growth, 2004–14



Source: CEIC and EPG, MAS estimates

* Data from 2004–13 was used.

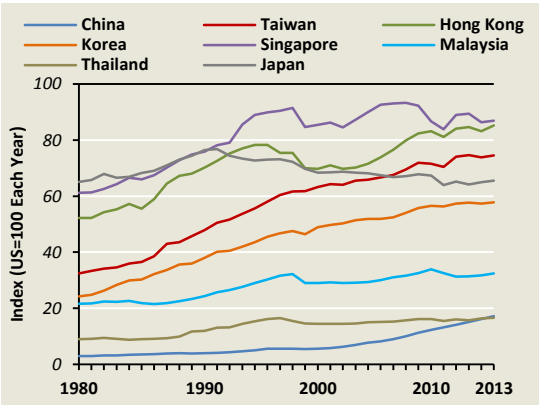
ASEAN-4 and China: Moving up the Value-added Ladder

While the ASEAN-4 economies have done well in developing labour-intensive industries, continued progress may prove to be more challenging given that they are no longer relatively low-cost, but at the same time have not quite developed the domestic capabilities and skilled manpower resources needed to compete at the higher end of the market. Structural and institutional reforms, as well as increased efforts to raise the educational and skills level of the workforce, are needed in order to progress up the value-added ladder. After a period of strong gains in the 1980s and 1990s, labour productivity growth has slowed in middle-income Asian countries such as Malaysia and Thailand. As a result, their productivity differentials *vis-à-vis* the US have not narrowed appreciably over the past decade. (Chart 6)

The quality of infrastructure and human capital in the ASEAN-4 countries needs to be significantly upgraded for these economies to compete effectively in the global marketplace. Although most of the ASEAN-4 have managed to raise the share of high- and medium-tech activities in their manufacturing sectors, the gap between them and the EA-3 has, in fact, widened further. (Chart 7) Nonetheless, there has recently been an encouraging resurgence of FDI inflows into most of the ASEAN-4 economies. (Chart 8)

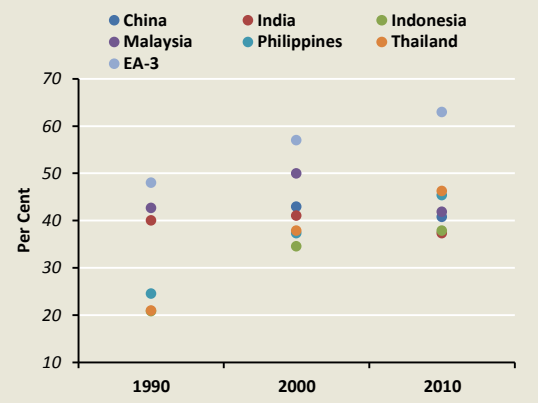
Relatively higher value-added activities, such as electronics and motor vehicle production, are increasingly being located in ASEAN rather than China. This reflects not just China's higher labour

Chart 6
Productivity Levels



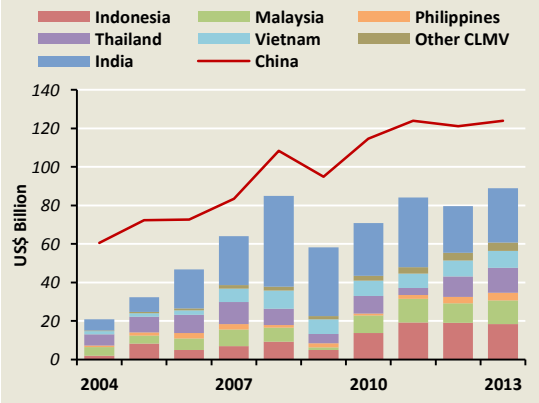
Source: The Conference Board Total Economy Database and EPG, MAS estimates

Chart 7
Share of Medium- and High-tech Activities in Manufacturing Value Added



Source: United Nations Industrial Development Organisation and EPG, MAS estimates

Chart 8
FDI into Selected Asian Countries



Source: United Nations Conference on Trade and Development and EPG, MAS estimates

costs, but also other factors, including the desire of manufacturers to diversify their production locations to minimise political risks and supply chain disruptions, as well as to tap into the growing markets in ASEAN.

Labour-deficient, High-income Countries: Towards a Knowledge-based Economy

The high-income EA-4 economies have moved out of labour-intensive production activities as labour became increasingly scarce, and into modern industrial and service activities. The challenge for them is to further develop their knowledge-based industries, such as high-quality services and innovation-driven manufacturing.

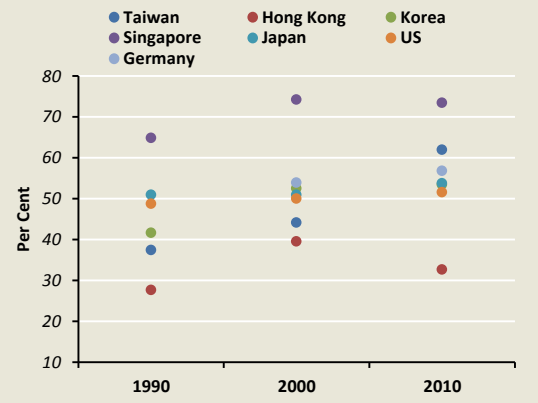
Over the years, Korea, Singapore and Taiwan have successfully moved up the industrial value-added ladder. Medium- and high-tech activities now comprise 50–75% of total manufacturing value added, which is close to, and in some cases, exceeds that in advanced economies such as the Germany and US. (Chart 9) Nevertheless, there may be limits to an economy's ability to exploit further gains from industrialisation, especially for small city-states such as Singapore and Hong Kong.[4] (Chart 10)

It is thus imperative for these small, high-income economies to shift into modern services, where size is less of a handicap. Both Singapore and Hong Kong have sought to nurture such industries. Their financial and insurance services sectors, for instance, have expanded significantly, growing by more than 8% p.a. over the past 10 years, and presently account for around 12% and 17% of GDP respectively, compared with 6.8% in the US and 5.4% in the EU. Other modern services industries are at present somewhat smaller, and should offer good growth opportunities. For example, the information and communications industry accounts for 3.5–4% of GDP in Hong Kong and Singapore in 2014, just a notch below the US and EU shares of about 5%. Singapore has also seen a steady rise in modern services' share of total goods and services exports, from 6.8% in 2000 to 14.4% in 2013.[5] This is higher than in advanced economies such as Japan (4.7%), Germany (8.6%) and the US (12.9%), but still markedly lower than the UK (25.7%). Financial and insurance services account for a significant 10.9% share of Hong Kong's total exports (excluding re-exports), similar to that in the UK. At around 6%, Singapore's share is much lower than these two economies, though higher than other comparator countries. (Chart 11)

[4] Haraguchi and Rezonja (2011) noted that when small countries achieve an income level of between US$7,000 and US$12,000 per capita, they tend to lose comparative advantage in many manufacturing industries, with limited scope for further development.

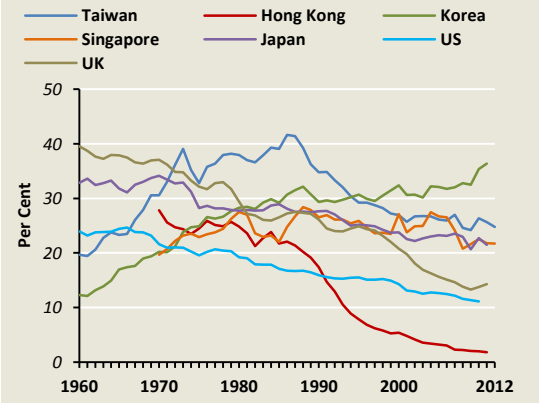
[5] We have excluded re-exports of goods from the measure of total goods and services exports.

Chart 9
Share of Medium- and High-tech Activities in Manufacturing Value Added



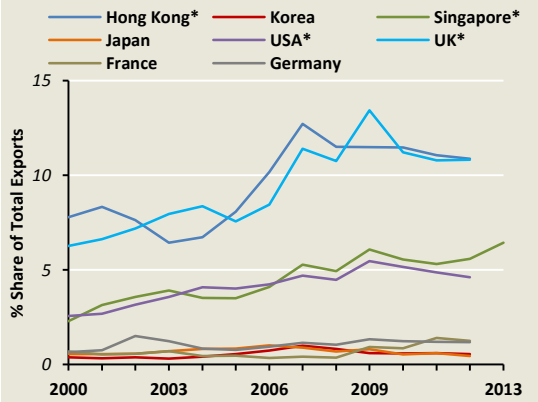
Source: United Nations Industrial Development Organisation and EPG, MAS estimates

Chart 10
Share of Manufacturing Value Added in GDP



Source: Groningen Growth and Development Centre and EPG, MAS estimates

Chart 11
Financial & Insurance Services Exports



Source: CEIC, UN Comtrade Database, UN Services Trade and EPG, MAS estimates

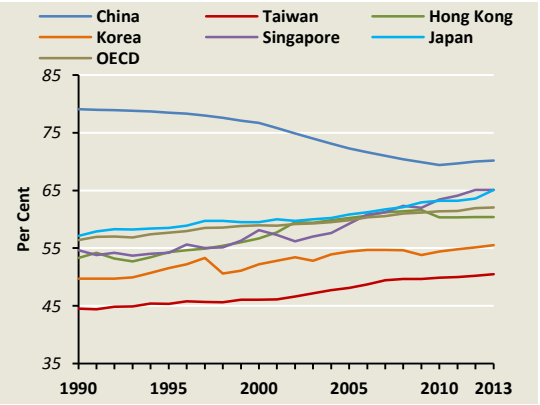
* Excluding re-exports.

Policy Implications

While changes in a country's demographic profile can alter its supply of labour and hence labour comparative advantage, the ultimate impact hinges crucially on policy responses. For the surplus countries, a growing workforce will not necessarily translate into more rapid economic growth unless there are increased employment opportunities. Similarly, for the labour-deficient countries, the impact of labour scarcity can be offset if workers are successfully shifted into more productive activities, or if behavioural adaptations are effected.

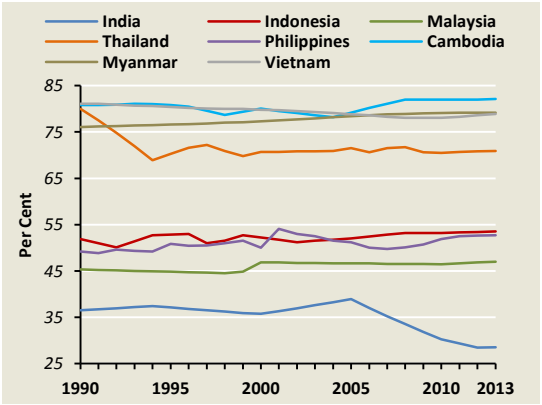
Labour-deficient countries can seek to augment their workforce by raising the labour force participation rate, increasing the retirement age, or encouraging net migration. The flexibility to do so, however, varies. The EA-4's labour force participation rates are already quite close to the OECD average of 71%, although there is scope to raise the female participation rate in Korea and Taiwan. Female participation rates are already elevated in other labour-deficient economies, such as China and Thailand, and further increases are likely to be limited. (Charts 12 and 13)

Chart 12
Female Labour Force Participation Rate: EA-4 and China



Source: CEIC and International Labour Organisation

Chart 13
Female Labour Force Participation Rate: ASEAN and India



Source: International Labour Organisation

Among the EA-4 economies, some measures that have been taken include raising the retirement age and boosting female participation in the labour force. In Hong Kong, the government has increased the retirement age for public servants from 60 to 65 years, while Korea is increasing the provision of subsidised childcare services to boost the female participation rate.

China is also trying to raise its labour supply. First, it relaxed its one-child policy in 2014, though the effects will only be felt around two decades later. Second, it has hiked the retirement age, which will have a more immediate and substantial impact on easing the labour supply constraint and is estimated to increase the overall labour force participation rate to average 77% (for all persons above age 15) in 2014–20, from 75% under a "no-reform" scenario. Third, Chinese authorities have announced reforms to the *hukou* system, which aim to convert the majority of China's 174 million rural migrants to urban-registered residents and, in the process, encourage fresh rural-urban migration.

While the quality of a country's human capital matters less in the earlier stages of development, when it is seeking mainly to establish labour-intensive industries, India, the ASEAN-4 and the CLMV countries should, nonetheless, continue to enhance human capital. Recent research by the ADB has found that education helps to facilitate industrial upgrading, because a well-educated workforce is quicker to assimilate the knowledge necessary to transit from lower to higher value-added activities (ADB, 2013).

Other research confirms the role of education in raising wage levels. Patrinos *et al.* (2006), for instance, found that, on average, an additional year of schooling for males resulted in an average return of 11.1% in East Asia (excluding Cambodia). (Table 2) Psacharopoulos and Patrinos (2004) found that the social returns to education are generally higher for the low-income countries, especially for basic education. In Asia, the rate of social return is about 16% for primary education, and 11% for secondary and tertiary education. (Table 3)

In general, more effort can be made to improve the quality of higher education in the CLMV countries. In this regard, Vietnam has embarked on education reforms that will provide greater institutional autonomy and result in more merit-based admission criteria by 2020.

In India, the fundamental obstacle to the further reallocation of labour from low-productivity agriculture to higher-productivity industry and services has been an incompatibility of skills. To develop skills in the workforce, the government formulated a national skills development strategy in 2009, which aimed to equip 500 million people with better skills by 2022. Cognisant of the importance of human capital in economic development, some ASEAN economies have also stepped up public spending on education, and implemented measures to up-skill the workforce. For instance, the Malaysian government has engaged industry players and educational institutions to develop sustainable, industry-led, approaches in key sectors, such as oil and gas.

Table 2
Returns to Education in East Asia (Male Wage Earners, Aged 25–65 years)

Country	Average Return (%)
Cambodia	38.3
China	12.1
Indonesia	11.4
Mongolia	8.5
Philippines	11.6
Singapore	11.9
Thailand	15.2
Vietnam	7.2
East Asia mean	**14.5**
East Asia mean, excluding Cambodia	**11.1**

Source: Patrinos, Ridao-Cano and Sakellariou (2006)

Table 3
Returns to Investment in Education by Level

(%)

	Social Returns			Private Returns		
	Primary	Secondary	Higher	Primary	Secondary	Higher
World	18.9	13.1	10.8	26.6	17.0	19.0
Asia*	16.2	11.1	11.0	20.0	15.8	18.2
Industrialised Countries	8.5	9.4	8.5	13.4	11.3	11.6

Source: Psacharopoulos and Patrinos (2004)
Note: Industrialised countries include Japan and exclude Korea.
* Non-OECD.

In the Philippines, two additional compulsory senior high school years have been added to a 10-year mandatory education curriculum. In Indonesia, the government has raised its spending on education to 20% of its annual budget since 2002.

As part of the Third Plenum reforms announced by China in November 2013, there are plans to widen the reach of quality compulsory education, which will ensure that the existing disparities in public education standards between rural and urban areas, as well as between inland and coastal provinces, are bridged. Additionally, China's education reform is also targeted at better matching the content of higher education with industry demands.

Conclusion

Over the next decade, countries will need to plan ahead and move nimbly to gain a foothold further up the development ladder. Labour-surplus, low-income countries can tap into labour-intensive manufacturing opportunities, while middle-income countries need to shift into higher value-added activities or risk losing competitiveness. The high-income EA-4 economies need to invest further in human capital and both hard and soft infrastructure, to build up their comparative advantage in knowledge-based activities.

Increasing automation is adding to the urgency by significantly lowering the cost of production, such that gains in market share might be achieved only at more depressed wage rates. In the years ahead, developing countries following in the footsteps of the EA-4 and China might reap relatively less rewards in their initial stages of industrialisation, and find it difficult to unseat incumbents higher up the value-added ladder, as cheaper labour-saving technologies help to preserve cost competitiveness.

Nonetheless, the strengthening of trade and production linkages within Asia, alongside the rise of a burgeoning middle class, could provide a positive impetus to long-term growth. Established manufacturing supply chains in Asia are being enhanced by improving transportation networks and connectivity, as well as the increasing integration of the CLMV countries within the region. The ADB estimates that by 2030, the ten member countries of ASEAN, China and India will together account for almost half of the middle-class population in the world, which means that poorer countries are in a good position to ride on the region's growing demand. At the same time, stronger investment and financial linkages will help to channel funds and know-how to less developed economies, while households and corporations in high-income economies, which tend to have a slower growth trajectory, are provided with higher returns and more diversified investment opportunities.

References

Akamatsu, K (1962), "A Historical Pattern of Economic Growth in Developing Countries", *The Developing Economies*, Vol. 1(1), pp. 3–25.

Asian Development Bank (2013), "Asia's Economic Transformation: Where to, How and How Fast?", *Key Indicators for Asia and the Pacific 2013*.

Bloom, D E, Canning, D and Sevilla, J (2001), "Economic Growth and the Demographic Transition", *NBER Working Paper* No. 8685, December.

Haraguchi, N and Rezonja, G (2011), "Emerging Patterns of Manufacturing Structural Change", *United Nations University World Institute for Development Economics Research Working Paper* No. 2011/43, August.

Lin, J Y (2011), "From Flying Geese to Leading Dragons: New Opportunities and Strategies for Structural Transformation in Developing Countries", *World Bank Policy Research Working Paper* No. 5702, June.

Patrinos, H A, Ridao-Cano, C and Sakellariou, C (2006), "Estimating the Returns to Education: Accounting for Heterogeneity in Ability", *World Bank Policy Research Working Paper* No. 4040, October.

Psacharopoulos, G and Patrinos, H A (2004), "Returns to Investment in Education: A Further Update", *Education Economics,* Vol. 12(2), pp. 111–135, August.