EAST ASIA: 'New Tigers' confront middle-income trap

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Abstract (summary)

East Asian economies.

East and South-east Asia's economic growth deserved to be called a 'miracle' by the World Bank in 1993 -- but time has not looked favourably upon all of the region's economies in the years since. The high-income economies in East and South-east Asia have transitioned successfully to highly developed status and exhibit world-class educational and governmental institutions -- but further down the ladder, in South-east Asia, growth slowed long before reaching high-income status.

Full text

SUBJECT:East Asian economies.

SIGNIFICANCE:East and South-east Asia's economic growth deserved to be called a 'miracle' by the World Bank in 1993 -- but time has not looked favourably upon all of the region's economies in the years since. The high-income economies in East and South-east Asia have transitioned successfully to highly developed status and exhibit world-class educational and governmental institutions -- but further down the ladder, in South-east Asia, growth slowed long before reaching high-income status.

ANALYSIS: Impacts.

Finding a complementary niche to China's economy will be key for sustained growth.

Higher rates of currency appreciation and other steps will be needed to prod these economies up the value chain.

Slower speeds of growth will sharpen political conflicts in the lagging economies.

Consistent growth in most of the non-developed (ie, non-OECD) world has been elusive for most of the post-Second World War period:

In 1960, per capita GDP in Latin America, at purchasing-power-parity levels, was one-third that in the OECD. By 1995, this had fallen to 27%.

Sub-Saharan Africa's average income had slipped from 18% of the OECD's to 11% over that period.

These results contradict the predictions of basic economic theory, which holds that the fastest growth should be found in the poorest economies.

Asia 'Tigers'.

In contrast to these disappointments, a group of East and South-east Asian economies by 1995 had posted two decades of reliable growth. These came to be known as the Asian 'Tigers', and a rich macroeconomic literature at that time sought to understand their success.

Asia 'miracle'.

The World Bank published a multi-volume report on East Asia in 1993 called "The East Asian Miracle: Economic Growth and Public Policy". This focused on Hong Kong, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Thailand. It documented their progress in lifting populations from sometimes abject poverty to a position of middle-income status or better. By 1995, several Asian economies had clearly pulled away from other countries with which they shared a similar per capita GDP in 1960.

Around 50 countries had per capita GDP in the region of the Tigers in 1960. By 1995, the Tigers dominated the top-ten list of the fastest-growing of these 50 economies, joined only by Cyprus, Romania and Tunisia. As the 1993 report put it, if growth were randomly distributed, there was roughly one chance in ten thousand that success would be so regionally concentrated.

Poor initial conditions.

In 1960, many Tiger economies had low rates of saving and investment, heavy dependence on foreign aid, and were thought by external observers to have much weaker prospects than Latin America and Africa. Life expectancy in the Tigers was 55 years in 1960, less than that in Latin America.

South Korea is the quintessential example:

The 1950-53 war destroyed two-thirds of its industrial base.

Population density was high.

There were no natural resources of which to speak.

By 1960, an export promotion policy was nearing fruition, based on importation of raw materials, value-added processing and re-export. South Korea's compound real annual growth rate between 1960-95 was 8%, higher than any of the aforementioned group of 50 economies.

World Bank view.

The 1993 World Bank report acknowledged that there was no template for East Asian growth. Development models ranged from highly laissez-faire (Hong Kong) to highly interventionist (South Korea). Nevertheless, it pointed to what it saw as key common themes:

Economic policies were overall market-friendly. Where there were interventions, they were pursued in the form of 'contests' between private players.

Policymakers sought -- and mainly achieved -- a high degree of macroeconomic stability. Inflation was often high but was never allowed to reach the levels that doomed many Latin American economies.

Educational investment was prioritised, was broader-based, and included both genders much more quickly than in many developing economies.

The Bank's report gave rise to wider celebration of the Tigers, but also some critical appraisal. The stylised view of the 1990s 'debate' over East Asia is that the World Bank and others held these economies up as exemplars of 'smart' interventions in the free market, or that they were especially open to international trade and therefore developed efficient export sectors, when there was a mundane explanation for their growth: higher absorption of human and physical resources.

A 'Soviet' future?.

Growth accounting attempts to de-compose GDP growth into:

growth in inputs; and

the efficiency of their use.

Typically, these inputs are:

physical capital;

labour quantity; and

labour quality (education).

Such an accounting was done widely for the Tigers, notably by Alwyn Young -- and publicised by Paul Krugman in his 1994 Foreign Affairs article, "The Myth of Asia's Miracle".

The Tigers' growth could largely be explained by rapid mobilisation of resources. For example, Singapore's investment rate -- the share of national output dedicated to investment purposes -- increased from 11% to 40% between 1966-90. The employed portion of the population leapt from 27% to 51%, and educational levels increased from a majority with no formal education to a majority holding secondary educational degrees.

As Krugman noted, this kind of resource mobilisation was no different to the Soviet Union's in the 1950s. Soviet growth then impressed the 'free world' and stoked an anxiety about the ability of capitalist economies to keep up.

Krugman noted there was a danger of being overly impressed with high rates of factor mobilisation. An economy can only employ a certain maximum proportion of the population, after which demographics and migration determine the rate of labour force growth. This cannot for long be compensated by adding more capital: the law of diminishing returns ensures that for each additional quantity added, the gain in output is ever-smaller.

Given that the Tigers' growth in efficiency ('total factor productivity', or TFP) was unremarkable, the reader was left to surmise that spectacular East Asian growth would be short-lived.

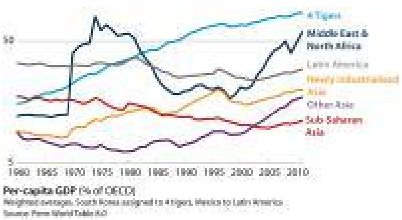
It was.

Four Tigers.

The 1997-98 Asian financial crisis put a stop to the Tigers' growth, and in the years since, growth has slowed markedly. For the richer economies -- Hong Kong, Singapore, South Korea and Taiwan -- it is relatively un-troubling. Even if they now manage to grow only at the rate of TFP growth, these 'Four Tigers' have already reached or exceeded developed-world income levels.

Where the TFP point matters is for Malaysia, Indonesia and Thailand -- the 'Newly Industrialised Economies' (NIEs), as the World Bank called them. If they are constrained to grow at the rate of TFP growth, they will be 'stuck' much further down the income ladder than the Four Tigers.

The NIEs' growth has indeed slowed to the sub-3% range during 1999-2011; only Malaysia's exceeded this, averaging 3.0%. (This is not a reflection of the 2008-10 crisis; growth was no different for the 1999-2008 period.) By contrast, during 1960-95, annual average growth in these economies was 4.7%.



Middle-income trap.

Per capita income of the three NIEs relative to the OECD peaked in 1996 at 20%, a level they have only just recovered. It is well behind Latin America and will soon be overtaken by a group including the combined average of China, India and Bangladesh.

The worry is that the NIEs have fallen into a 'middle-income trap' -- the phenomenon of growth decelerations among formerly high-performing emerging markets. Recent work by the Cal-Berkeley economist Barry Eichengreen and co-authors finds that such decelerations are more likely where:

the workforce has a relatively low incidence of secondary and higher education;

high-tech production comprises a relatively low share of exports;

old-age dependency ratios are high;

investment rates have been unusually high; and

exchange rates have been unusually under-valued.

The integrating narrative is that a country needs to move up the value chain lest it perennially face new entrants to the low-cost competition game (see CHINA: China will 'rise' as a high-end manufacturer - June 18, 2014; and (see SOUTH-EAST ASIA: Competitiveness faces rising risks - April 18, 2013).

Education and high-tech production are correlated with movement up the value chain for obvious reasons.

Under-valued exchange rates discourage movement up the value chain because they encourage firms to compete on price, rather than higher up the ladder on sophistication or quality.

Trapped.

Some of the NIEs appear in danger of being trapped:

The average schooling is 8.1 years (at age 25). By contrast, average schooling in the Four Tigers is nearly 12 years. Given a typical distribution around this mean, this implies a high incidence of tertiary completers.

Real exchange rates in Malaysia and Indonesia have been kept lower than in the Four Tigers (barring Taiwan), when comparing today's real-effective exchange rate to the level prevailing in 1995.

Technology indicators are mixed. The share of technology-intensive products in manufactured exports ranges from 7% in Indonesia to around 45% in Singapore and Malaysia, with Thailand and South Korea in the middle at around 20-25%.

Input deceleration.

Whatever the merits of the 'middle income' story, the reality for the NIEs is an appreciable slowdown in the growth of inputs:

In Indonesia, the rate of growth of the economically engaged population (the population either employed or in contact with the job market in some way) has fallen from 2.7% per year on average during 1965-95 to 1.6% during 1999-2011.

In Malaysia, the average increase in the educational quality of the workforce has fallen from 1.7% per year during 1965-95 to 0.7% per year during 1999-2011.

Meanwhile, growth in the real capital stock in Malaysia has fallen, from 7.4% to 4.4% between those periods.

Real capital stock growth has fallen even more sharply in Thailand, from 10% per year on average during 1965-95 to 2% during 1999-2011.

Rodrik contribution.

In a small contribution to the 'Asia miracle'/TFP debate in the mid-1990s, Harvard economist Dani Rodrik pointed out some important correlates of the high growth of East and South-East Asian economies from 1960-1994. Controlling for the level of per capita income in 1960, he found support for both the World Bank and Young-Krugman stories:

'Good' macro policy. Growth was significantly associated with the government's inter-temporal budget balance (the budget balance average over 1960-94).

Institutions. Higher values in an index of institutional quality were significantly associated with higher growth -- chiming with the Bank's emphasis on market-friendly bureaucracies.

Education. The 1960 level of education relative to the 1960 capital stock was important. A more highly skilled workforce relative to capital stock raised returns to capital, which in turn explained higher rates of capital accumulation.

Reprising Rodrik.

The passage of time allows a review of these correlates of growth more recently:

Budget balance. For the 1999-2013 period, 'Four Tigers' governments ran inter-temporal surpluses and the NIEs deficits. (An exception was Taiwan, which ran an average deficit of 3.9% of GDP.) In any case, the 1997-98 crisis undermined the Tigers' credentials for fiscal prudence, as their governments' debts were shown to be off-balance-sheet in the form of contingent liabilities in the financial sector.

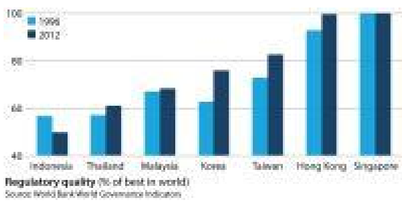
Institutions.Rodrik's measure of institutional quality is not available for recent years. However, using a measure of regulatory quality from the World Bank's World Governance Indicators, average institutional quality of the Four Tigers in 1999-2012 is more than double that of the NIEs.

Education. Relative to per capita income (Rodrik's proxy for the capital stock), labour skills (measured as the average number of years of schooling at age 25, as in Rodrik's data) in the NIEs in 2000 were above the Four Tigers. If measured as a ratio to the log of per capita income (to match the non-linear increase in importance of schooling years), the NIEs are on a par with the Four Tigers, except for South Korea, which was head-and-shoulders above both groups.

The next 20 years.

On the basis of this last measure -- human capital to physical capital -- the most appealing economies might at first appear to be the NIEs, whose ratios of schooling to per capita income exceed those of the Four Tigers.

However, in terms of education relative to the log of per capita income, only Malaysia exceeds the Four Tigers. Moreover, a much better measure of skills is available today in the form of OECD-sponsored international test scores. Scores for math relative to per capita income suggest the Four Tigers today offer a clearly superior return to capital.



Institutional quality is another wedge between these groups. The 1997-98 crisis seems to have hit the NIEs particularly hard in this respect. Not only is institutional quality in the Four Tigers currently superior to that of the NIEs, it is converging much more quickly on world-class. In Thailand and Malaysia, institutional quality has barely improved since 1996, and in Indonesia it has fallen outright.

The status of the NIEs in regard to many of the correlates of the 'middle-income' trap is also not encouraging -- again barring Malaysia.

For Malaysia, along with Indonesia, there is also hope in demography. Their old-age populations are only 8% of the working-age population, a ratio which has changed little since 1995. This contrasts with South Korea, Singapore and Thailand, where the ratio has jumped from 8% in 1995 to 17%, 14% and 13% respectively today, and with Hong Kong's increase from 14% to 19%.

CONCLUSION: The 'Four Tigers' that have already become rich -- Hong Kong, Singapore, South Korea and Taiwan -- will probably see continued growth at the rate of productivity improvement. However, the Newly Industrialised Economies (NIEs) of Malaysia, Indonesia and Thailand face the looming danger of a 'middle-income trap'. Among these economies, Malaysia's appears best placed to post the sustained higher rates of growth necessary to achieve transition to developed-country status.

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