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Is the Vaunted 'Asian Miracle' Really Just an Illusion ?
by Urban C. Lehner

Copernicus is one of history's major figures, while Paul Krugman may never rate more than a footnote. Yet in his own modest way, the Stanford University economist has a lot in common with the 16th century Polish scientist, who is famous for challenging the view that the sun revolves around the earth.

Mr. Krugman, too, rejects the received wisdom of his day. In late 1994, Foreign Affairs published his provocatively titled essay, "The Myth of Asia's Miracle," which questions the notion that the world's economic center of gravity is shifting inexorably to Asia.

And just as the 16th century world took Copernicus seriously in its own way - one of his proteges was burned at the stake - late 20th century Asia has given Mr. Krugman a typically 20th-century response: It has picked apart his thesis at conferences and in the op-ed pages of newspapers.

That Asia pays heed is no wonder. All of the hype about the Asian miracle has made even Asians uneasy; in a way, people have been waiting for a debunker. And the 42-year-old Mr. Krugman is an accomplished debunker, an economist of excellent reputation and a writer skilled in communicating with noneconomists. He gains additional credibility from his reliance on mathematical techniques that many people don't understand but assume must be more authoritative than theories without mathematical backing.

Moreover, the potential implications of his theory are enormous. "What if he's right?" says John Onto, a business professor at the University of Melbourne. "I like to bring up Krugman at conferences because he makes people think."

Most experts on Asian economics emphatically don't think he's right. Some normally dispassionate economists become impassioned at the mention of his name. Miron Mushkat, chief economist for Asia of Lehman Brothers, was "offended" by "The Myth." Walt W. Rostow, an economist at the University of Texas, was "outraged." Japanese government economists devoted 18 pages of a recent white paper on Asian economics to a rebuttal of the Krugman thesis.

Yet agree with it or not, the Krugman thesis and the debate it has spawned are well worth taking time to understand. A look at the controversy provides insights into how Asia has grown so rapidly, and whether it's likely to continue to grow so rapidly in the future; and more broadly into the role of technology and the uses of economics.

At the heart of the Krugman thesis are three deceptively simple words: "total factor productivity." Total factor productivity is a measure of an economy's overall efficiency, and a key variable in one of the basic equations of "growth accounting," which uses regression analysis to isolate and quantify contributions to economic growth:

Economic Growth equals Increases in Labor plus Increases in Capital plus Total Factor Productivity.

The rationale for each variable is straightforward:

Labor: The more people who work and the more skills they possess, the more an economy can produce.

Capital: The more tools workers have, the more they can produce. A construction crew can dig up more concrete in an hour with three jackhammers than with only one.

Total factor productivity: Using capital and labor more efficiently increases output, too. In fact, this variable, which includes organizing work more cleverly and making technological improvements and innovations, may be the most important and sustainable source of growth.

But unlike labor and capital, there's no direct way to measure total factor productivity. It can be derived only as the "residual" in the growth equation, what's left after the contributions of labor and capital are determined and subtracted.

Relying on growth-accounting calculations, Mr. Krugman contends that fast-growing Asia has had little or no total-factor-productivity growth in recent decades. Asia grew by putting more people to work and investing heavily - by "perspiration rather than inspiration," as he puts it.

Singapore, notably, had no total-factor-productivity growth between 1966 and 1990, some studies suggest. Its economy grew because it put more people to work (51 percent of the population in 1990, up from 27 percent in 1966), educated them better (two-thirds of the work force had completed secondary school by 1990, while in 1966 half had no formal education) and boosted investment (to 40 percent of output from 11 percent). "Singapore grew through a mobilization of resources that would have done Stalin proud," Mr. Krugman asserts in "The Myth."

What's wrong with growing by mobilizing resources? It isn't sustainable. Big gains in output can be achieved by doubling the proportion of the population working, as Singapore did. But a society can't continue doubling and redoubling its labor-force-participation rate indefinitely.

Similarly, a society that invests heavily in capital equipment will increase its output rapidly at first. But eventually the law of diminishing returns kicks in: The amount of additional output the construction crew can get from adding a 50th jackhammer will be less than it got from adding the fifth.

Sooner or later, a society that isn't becoming more efficient will experience slower economic growth. That's what happened to the Soviet Union, Mr. Krugman says. In the 1950s, the Soviet economy was growing at 8 percent to 9 percent a year and Premier Nikita Khrushchev was threatening to "bury" the West. By the late 1960s, however, it was clear that the Soviet Union wasn't even narrowing the gap with the West, and growth-accounting studies were suggesting that total-factor-productivity gains in the Soviet Union had been virtually nil.

Today, Mr. Krugman says he raised the Soviet parallel "to remind people how wrong conventional wisdom was in the past," not to suggest that Asia faces the same economic fate as the Soviet Union. But the lesson his Foreign Affairs essay drew from the analogy was stark: Prospects for Asian growth "are more limited than almost anyone now imagines."

The anti-Krugman forces divide, with some overlap, into three broad schools. The first rejects growth accounting as an inadequate tool for assessing Asia's growth prospects. The dispute boils down to this: Mr. Krugman believes in what one of his colleagues, Alwyn Young, calls "the tyranny of numbers," while his critics believe in the evidence of their senses as they travel around the region. "I have been visiting Singapore for 15 years, and I don't recognize it" in Mr. Krugman's essay, Mr. Mushkat of Lehman Brothers declares.

As Mr. Mushkat sees it, Mr. Krugman's thesis is "an argument only an economist could make." Economics, especially in the U.S., has become a "very mechanistic science," taught without regard for history, geography or common sense, he complains. (Mr. Krugman readily admits he's no Asia expert, although he has visited the region several times.)

The comparison of contemporary Asia to the Soviet Union of the 1950s strikes the common-sense school as a perfect example of what's wrong with Mr. Krugman's approach. To Mr. Krugman, the critics say, the only thing that matters (because it's the only thing the numbers show) is that both the Soviet Union and Asia grew by mobilizing resources. The critics say it's more important to consider how they mobilized resources. Economies that let freemarket decisions mobilize resources - as do Asia's - are more efficient and have more growth potential, the critics argue. (Krugmanites counter that if Asia were more efficient, it would score better in total factor productivity. And Mr. Krugman says it was precisely those who believed what they saw in the Soviet Union who were wrong in the 1950s, while the growth-accounting analysts were right.)

The second school of critics embraces total factor productivity but achieves higher scores for developing Asia by using a different methodology. Foremost in this category are the authors of the World Bank's 1994 report "The East Asian Miracle ." They found that between 1960 and 1985, total-factor-productivity gains accounted for a third of the economic growth of eight "High Performing Asian Economies" (Hong Kong, Indonesia, Japan, Malaysia, Singapore, South Korea, Taiwan and Thailand).

Mr. Krugman counters that the bank misconstrued its own data by making certain "unreasonable" assumptions. The point in dispute is what return on capital should be assumed. Using a lower rate of return, as the bank does in "The East Asian Miracle ," reduces the capital-input variable in the equation, effectively increasing the contribution to economic growth of total factor productivity. The bank used a low rate because it was studying 113 countries, including many poorly performing economies that have squandered investment funds on white-elephant projects.

The third school of critics argues that even if growth-accounting studies show little or no productivity gains in the past, the future may well be different. Lee Kuan Yew, Singapore's senior minister, is in this school. When he met Mr. Krugman recently at a meeting of J.P. Morgan advisors, he told him: "You're right so far, but our total-factor-productivity growth will be much higher in the future because of the investments we're making in education."

Some in this school believe massive investments in capital and labor simply take time to pay off. By that theory, Asian productivity and growth could rise in the years ahead. Singapore may already be providing evidence: Its total factor productivity through the mid-1980s was abysmal by most accounts. But Yeo Cheow Tong, Singapore's trade and industry minister, noted recently that the state's total factor productivity grew 2.6 percent from 1986 to 1994 after declining 0.8 percent in 1980 to 1986 and falling 2.1 percent from 1974 to 1980.

A variation on this argument focuses on Singapore's high level of investment in airports, roads, housing and other social infrastructure, which "may be dragging down today's productivity-growth figures, even while raising the long-term potential of the economy," notes Jim Rohwer, chief economist for Asia at CS First Boston, in a new book entitled "Asia Rising." Mr. Rohwer adds that this is "precisely opposite to the position of the rest of Asia, which has invested too little in infrastructure during the early stages of growth and may see its productivity performance decline as this shortfall is eventually made up."

At the end of the day a reasonable layman might look at it this way: Growth in many Asian countries will inevitably slow in the years ahead, if only because they will be working off a higher base, but growth in developing Asia is still likely to be faster than growth in more advanced countries.

As it happens, that's not far from where Mr. Krugman himself comes down when asked whether he would bet his own money against Asia. "Even if you take everything I say to be entirely right, you still have these high savings rates, the educational level," Mr. Krugman notes. "So these countries are still going to have growth rates for the next decade a couple of points higher than the Western countries."

So what's all the fuss about? One answer is: roughly a percentage point of growth per year. Optimists like CS First Boston's Mr. Rohwer expect Asian growth over the next decade to be more like three percentage points higher than in the West. That would still represent a slowdown. But a percentage point of extra growth over a decade would make an enormous difference in Asian living standards. And it would enable Asia to catch up to the West just that much faster.

Mr. Krugman, by contrast, believes that at current rates of total-factor-productivity growth, most of Asia will never fully catch up. "Unless there is convergence in total factor productivity," he says, South Korea could only achieve a U.S. standard of living if "every South Korean has two PhDs and works with $500,000 worth of equipment."
