Comments and Discussion

Warwick McKibbin: The key findings of Jong-il Kim's paper are (1) TFP growth in East Asia has not been as high as that of major developed countries over the recent past; (2) economic growth in East Asia over the last 40 years has been based largely on capital accumulation and has occurred with low TFP growth; (3) this pattern was very similar to that of the United States and Japan at the same stage of these countries' economic development, although it occurred in East Asia over a much shorter time; (4) TFP growth in East Asia has been much higher than TFP growth in other developing economies at the same stage of development; (5) growth depends on macroeconomic stability; and (6) future growth prospects in East Asia are good because of current investment in intangible capital but are not necessarily assured because of institutional rigidities (e.g., in Japan).

The paper is wide ranging and raises several very interesting issues. A more analytical framework at the start of the paper, however, would have helped clarify some important issues. For example, the sources of growth in the aggregate models—sectoral TFP growth; input growth, such as physical capital accumulation, human capital accumulation, and demographic shifts; and shifts in resources between sectors (i.e., structural change)—should have been identified more clearly. At any time, aggregate growth can be driven by some or all of these factors, but it can be interrupted by rigidities with respect to each factor. Why do we expect countries to follow the same growth paths in all respects, given their different institutional structures and historical experience?

Perhaps there are different constraints within countries at the same time or different constraints in countries across time that would change the nature of the underlying growth process, even though aggregate growth may look similar.

Another set of issues relates to Kim's underlying conception of which variables converge across countries. Is it TFP growth by sector, capital/labor ratios, output per worker, or aggregate income per person? It is not clear from some of the comparisons presented in the paper what Kim believes in this regard. For example, what does it mean to compare the gaps between capital/labor ratios across countries? I would not expect convergence in capital/labor ratios across countries or across sectors, because such ratios are determined by the individual countries' endowments.

The policy implications of the paper are a bit worrying and need to be evaluated more explicitly. Kim appears to suggest that governments in Asia should encourage growth of services but discourage physical capital accumulation, because this has been the growth pattern in industrialized economies. The paper does not clearly say, however, whether governments should directly intervene to create this transition or whether an undistorted environment should be created in which fundamentals of the growth process can emerge. Surely the latter is a better development strategy, just in case the mechanical stages-of-growth story of the paper is wrong for whatever reason.

Sheng-Cheng Hu: The starting point of Jong-il Kim's paper is Paul Krugman's argument that rapid economic growth in East Asia is not sustainable because it primarily results from factor accumulation and therefore is subject to the law of diminishing returns. Kim suggests that Krugman was too pessimistic about the future of East Asia because the economic development of East Asia resembles the compressed history of developed countries, which relied on factor accumulation in the early stage of development and productivity growth in the later stage. Kim also argues that macroeconomic stability is the main reason for the more rapid growth in East Asia compared with the growth of other developing countries; therefore, maintaining a stable economic system is more important than rapid capital accumulation.

I am in general agreement with Kim in arguing against Krugman's pessimistic view of the growth potential of East Asian economies. The similarity between recent East Asian economic history and the early stages of developed economies suggests a future of satisfactory economic growth in East Asian countries, but it does not ensure the sustainability of such growth. In this sense, Kim has not gone far beyond Krugman.

Kim should look more carefully into the "mobility" of intangible capital to explain why there is a potential for rapid growth in East Asian countries. In the 1960s and 1970s, Korea and Taiwan (as well as other East Asian countries) invested heavily in higher education, only to see their college graduates go abroad to study and remain there to work. Because of the brain drain, investment in intangible capital does not show up in the production function (a measurement problem!). Without the necessary manpower, the R&D effort could not succeed. In the late 1970s, Korea and Taiwan began the process of democratization and their living conditions improved. As a result, the brain drain began to reverse, leading to a rapid expansion of intangible capital and growth of the high-tech sector. My view is supported by recent work by Lawrence Lau, who found that if the sample period is restricted to begin in the 1980s, then intangible capital plays an important role in Taiwan's economic growth. In light of this case, we can be confident about the potential for continued rapid growth in the region.

Kim suggests that macroeconomic stability is responsible for the more rapid growth of Asia relative to other developing economies. In view of the Asian financial crisis, the author needs to define "macroeconomic stability" more precisely. Although East Asian countries in general have maintained conservative fiscal policies and practiced sound exchange rate management, they have suffered from weak financial sectors that were largely responsible for the Asian financial crisis. Finally, if Kim thinks that the Asian financial crisis portends the end of rapid growth in the region, the timing of the financial crisis should be discussed.

If macroeconomic stability contributes to sustained economic growth, Kim should determine whether the increasing globalization of the Asian economies and the rapid short-term capital flows will contribute to macroeconomic stability and what impacts these factors will have on economic growth. A more detailed discussion of the role of the financial sector in the growth of East Asia would also be valuable.

General Discussion

During the discussion of Kim's paper, much attention was focused on the framework used in the growth accounting analysis. Pranee Tinakorn emphasized the importance of correctly measuring the input variables and the factor income shares when making cross-country comparisons. Tinakorn questioned the assumption that 0.35 was an appropriate figure for the capital income share in each country. According to Tinakorn, the capital income share for Thailand was closer to 0.5. Wang Xiaolu remarked that a further decomposition of TFP would give more insightful results. He commented that the following factors had been important to raising TFP growth in China: (1) reallocation of labor from low-productivity agriculture to high-productivity industry and (2) the externalities of foreign direct investment. Tan Kong Yam suggested that a study of TFP growth within various sectors might be more relevant than a study of aggregate TFP. He stated that manufacturing was the key sector and claimed that Taiwan and Singapore were countries that exemplified how to move up the value-added chain. Design, R&D, and the development of international brands were important to the manufacturing sectors of these countries. Richard Cooper warned against overinterpreting the TFP data because gross measurement is a constant problem. For instance, the United States did a poor job of measuring the size of its service sector and the movements of consumer prices in the country.

Several panel members discussed the problem of R&D expenditure allocation and the relationship between education, R&D, and TFP. Jong-Wha Lee observed that TFP had increased in the postwar period in the United States, when there were large increases in expenditure for R&D and education. He asked whether East Asian countries would be able to allocate R&D expenditure in the appropriate sectors and industries, given that physical capital had been invested in several wrong areas in the past. Lee felt that the state should allow the financial market to allocate R&D funds. Fan Gang concurred with Lee and asked what would be considered a satisfactory level of R&D in East Asia. In Fan's opinion, most of East Asia should not fund basic scientific research: East Asia should leave basic scientific research to advanced economies. Fan stated that a close look at Japanese R&D strategies would prove very useful to other Asian countries.

In Anwar Nasution's view, the backwardness of the banking and corporate sectors in East Asia has made it difficult to finance capital accumulation and R&D. Nasution also pointed out that labor unions play an increasingly important role in East Asia, which can hurt economic growth in the future. Kim agreed with Nasution's first point and cited a McKinsey study of Korea that concluded that services were more backward than manufacturing. In his opinion, Korea and Taiwan should make the reform of their service sectors a first priority.