
SUMMARY

In 1995, RAND issued a report on long-term economic and military trends in Asia, covering the period from 1994 to 2015.¹ The principal aim of the present report is to review, revise, and update our previous estimates in light of the new economic conditions prevailing in the region, and to draw appropriate inferences from the new estimates with respect to security issues in the region. The earlier report mainly used data from the 1980s and early 1990s, which were periods of high and sustained growth throughout Asia. In Japan, annual economic growth in the 1980s was about 4 percent. China's growth was estimated at nearly double-digit annual rates. India's growth was almost 5 percent per year. High as well as dramatically rising annual rates of gross domestic product (GDP) growth were experienced by the rest of East Asia (including both the initial set of "tigers": South Korea, Taiwan, Hong Kong, and Singapore; and the second cohort of aspiring tigers in Southeast Asia: Indonesia, Thailand, and Malaysia). (All future references to "Korea" are to "South Korea," except where otherwise noted in the text.)

¹See Charles Wolf, Jr., K. C. Yeh, Anil Bamezai, Donald P. Henry, and Michael Kennedy, *Long-Term Economic and Military Trends 1994-2015: The United States and Asia*, Santa Monica, Calif.: RAND, MR-627-OSD, 1995; see also unpublished RAND research by Charles Wolf, Jr. and Michael Kennedy on long-term economic and military trends in Russia, Germany, and Indonesia. These 1995 documents followed earlier work on the same general subject produced for the National Commission on Integrated Long-Term Strategy in 1988 and 1989, and reported in Charles Wolf, Jr., K. C. Yeh, Anil Bamezai, Benjamin Zycher, et al., *Long-Term Economic and Military Trends, 1950-2010*, Santa Monica, Calif.: RAND, N-2757-USDP, 1989.

In July of 1997, Asia experienced sharp economic reversals that have been variously described as a financial “meltdown,” a spreading economic “contagion,” or simply as serious economic turmoil.

Following the collapse of the Thai baht in July 1997, asset values in the four Asian “crisis” countries—Thailand, Korea, Indonesia, and Malaysia—plummeted by about 75 percent as a result of the combined effects of currency depreciation and deflated property and equity markets. Economic growth in the four countries fell to substantial negative rates.

This report begins by briefly considering previous RAND forecasts for Asia and the sharp economic reversals experienced in the region in 1997 and 1998.

We then consider in more detail Asia’s economic turmoil triggered by the collapse of the Thai baht in mid-1997. We examine the varied record of recovery from that turmoil achieved by the “crisis” countries—Korea, Thailand, Malaysia, and Indonesia. We also consider the quite different circumstances and economic problems of Japan and China, both of which have been only modestly affected by the sharp economic reversals in the crisis countries, although each is afflicted with serious economic problems predating and transcending those reversals. This assessment is based on data up to and including September 1999.

With this as background, we summarize the forecasting model we have used and present new estimates for GDP, per-capita GDP, military spending, and military capital in Japan, China, India, Korea, and Indonesia. In all cases, we present results for each of the four key variables in terms of both “nominal” exchange rates (XR), and “real” purchasing-power-parity (PPP) rates. For military capital, the purchasing-power equivalent used in making conversions from constant-price local currencies to U.S. dollars is a purchasing-power-parity measure applying to investment goods (PI), rather than to the GDP of each country as a whole. We explain the differing concepts, purposes, and relevance underlying the use of nominal and real exchange rates, respectively.

Furthermore, we identify and explain instances in which there are significant differences between our current estimates and those made

in previous RAND studies in 1995 and 1989 of long-term economic and military trends.

The estimates presented in this report are intended as reasonable forecasts based on explicit assumptions about certain key parameters as explained fully in the text and in Appendix B. This does not preclude other reasonable forecasts, nor does it imply that the ones presented here are the most likely ones.

Among the major points of the new trend estimates are the following (all of the dollar figures are in 1998 U.S. dollars converted from constant-price national currency values):

JAPAN

- The estimated GDP growth rate varies from 1 percent to 1.6 percent per annum over the period from 2000 to 2015.
- Between 2000 and 2015, per-capita GDP rises from about \$44 thousand to about \$54 thousand in XR terms, or from about \$23 thousand to \$29 thousand in PPP terms.
- For military spending, the estimate for 2000 is approximately \$61 billion, rising to \$75 billion in 2015 in XR terms, and from \$33 billion in 2000 to \$40 billion in 2015 in PPP terms.
- Japan's military capital stock increases from about \$112 billion in 2000 to \$119 billion in 2015 in PI terms, and from \$154 billion to \$166 billion in XR terms, based on annual military investment in the 15-year period, and depreciation of previously accumulated military capital.

CHINA

Two scenarios are used in making the forecasts for China: Scenario A is the sustained growth scenario, and Scenario B is a disrupted growth scenario.

- In Scenario A, China's GDP approximately doubles by 2015; it increases by only 50 percent in Scenario B.

- The growth rate for Scenario A over the period is slightly above 5 percent annually, while in Scenario B the corresponding growth rate is below 3 percent.
- By 2015, China's GDP in Scenario A is more than 3 times that of Japan in PPP terms, but only 36 percent of Japan's if nominal exchange rates are used for the conversions. In Scenario B, the China GDP forecasts are more than 30 percent below those in Scenario A. Scenario B reduces China's relative GDP estimates by about one-third.
- China's per-capita GDP doubles between 2000 and 2015, but still remains below \$10 thousand in 2015, in the favorable Scenario A.
- China's military spending and military capital rise substantially in Scenario A, as a consequence of forecasted GDP growth and military investment, respectively. By 2015, in Scenario A, China's military capital is more than 4 times that of Japan in terms of the PPP value of the yuan for investment goods (PI), and about the same as Japan's military capital in terms of nominal exchange rates.
- In Scenario B, China's military spending and military capital are, respectively, 45 percent and 30 percent below those in Scenario A. China's Scenario B would reduce the estimates for China by about one-third, relative to those of Japan.

INDIA

- India's GDP more than doubles between 2000 and 2015, reaching about 54 percent of China's GDP—about 5 percent greater than its present GDP relative to China's.
- Per-capita GDP reaches \$5.1 thousand, about 60 percent of China's.
- Military spending increases more than two-and-one-half times from the present level by 2015.
- By 2015, India's military capital reaches \$314 billion, which is about 62 percent of China's (\$666 billion), compared with only 48 percent of China's military capital in 2000.

KOREA

- GDP and per-capita GDP more than double between 2000 and 2015. Korea's GDP rises during this 15-year period, from about one-quarter of Japan's GDP to nearly one-half by 2015 (in PPP dollars).
- Military spending increases substantially, from \$25 billion in 1998 PPP dollars in 2000 to \$54 billion in 2015.
- Military capital increases by 85 percent from 2000 to 2015, from \$61 billion to \$114 billion in 2015. Thus, by 2015, Korea's military capital would be approximately equal to that of Japan, whereas Korea's current military capital is less than 60 percent of Japan's.

INDONESIA

- GDP will probably regain its 1995 level by 2005.
- Military spending in PPP terms will be about half that of Korea.
- Although Indonesia's military capital rises sharply over the period from 2000 to 2015, it falls appreciably relative to the military capital stock of the other four countries.

We also consider the question of how to link the separate country forecasts, and we propose two methods: (1) regional indexing and (2) formulating alternative security environments for the Asian region.

The first method uses the respective GDPs of the five countries and their military capital stocks as rough proxy indicators of relative economic and military power, respectively. While acknowledging that each of these indicators is only partial and suggestive rather than definitive, their use contributes to an assessment of changes in the balance of forces in the region. These two indicators are indexed for the five countries, using Korea's GDP and military capital in 2000 as the base and expressing the other four countries' indexes in relation to this base. Several significant points emerge from these indexes:

- Japan's relative economic and military power in the region diminishes appreciably from 2000 to 2015, vis-à-vis those of both China and Korea.

- As a consequence, the value that Japan will place on its security alliance with the United States is likely to rise, and/or Japanese efforts to reform and liberalize its economy and to enhance its military capabilities may also grow.
- China's economic and military power does not rise relative to that of Korea's, and diminishes somewhat relative to India's. However, the absolute gap between China's GDP and military capital, on the one hand, and those of the other principal countries, on the other, grows substantially.
- Indonesia's relative and absolute stature in the region recedes.

For the second approach to the question of how to link the forecasts, we formulate two sharply different scenarios to bracket a wide range of future possibilities. These contrasting alternatives use as building blocks aspects of our forecasts for the five countries, while introducing other considerations not addressed in these forecasts, such as conjectures about the status of alliance relationships in the region, as well as possible regional conflicts. The two bracketing scenarios are Scenario A, which we term "Chinese Preponderance," and Scenario B, characterized as "Sustained Intra-regional Balance."

In Scenario A, China sustains a high annual GDP growth rate, and its aggregate military share of its growing GDP moves toward the higher end of the 2–3 percent range used in our forecasts. However, Japan, Korea, and other countries in the region maintain low defense shares of their slower-growing economies, and India's economic growth and defense modernization progress slowly. Also in this scenario, we consider that U.S. alliances with Japan and Korea are attenuated, and forward-based U.S. forces are reduced. Under these circumstances, it is not implausible that the preponderance of Chinese power in the region might be asserted by enforcing its national claims in the Paracels, the Spratlys, and Taiwan.

In Scenario B, China's growth slows to that reflected in our past "disrupted-growth" forecasts, and its military spending and military modernization progress slowly. Japan resumes appreciable economic growth within two or three years and maintains or raises its defense spending as a share of GDP. Also, Japan's military modernization is further enhanced by growing concerns about the unpredictable behavior of North Korea's long-range missile testing. South Korea

resumes substantial economic growth and maintains its defense spending and military investment because of continued uncertainty about the North Korean threat. At the same time, India's economic growth and defense modernization progress significantly, and U.S. alliances and forward-based forces are sustained.

The resulting balance of forces implied by Scenario B, including an implicit assumption that Taiwan's own military and its economic capabilities are maintained, would provide a constraining security environment, although not one that would assure regional stability.

In our final analysis, we address several questions raised at the inception of this study by U.S. Army planners and decisionmakers. These questions and our abbreviated responses to them are summarized below:

- Will Asia's economic problems make the region more bellicose or more peaceful? We suggest that a middle position is more likely—namely, attitudes of “caution” and “restraint” are likely to prevail—rather than either bellicosity or amity in the region.
- Will prospects for multilateral security cooperation in the region be encouraged or set back? We believe that the economic problems experienced in the Asian region are likely to impede rather than encourage efforts toward multilateral security cooperation in the Asia-Pacific region.
- How will and should alliance burden-sharing agreements related to forward-based U.S. forces be affected in Korea and Japan? We distinguish between the two countries: In Japan there may be a political argument, but there is not an economic one, for some reduction in burden sharing; in Korea, there is both an economic and political argument for such an adjustment.
- Will Asia's economic problems undermine or support the U.S. Army's presence in the region in general, and in Korea in particular? We suggest that, while the situations in Korea and Japan differ, endorsement and support of U.S. forward-based forces are likely to remain strong in both countries. In Korea, this support might be significantly reduced if and when unification between North and South is achieved.