The Global Airpower Balance
Is U.S. Dominance Open to Challenge?

Influenced by the prominent role of airpower in the coalition victory in the 1991 Gulf War, current U.S. national security strategy emphasizes the use of airpower in possible future conflicts with regional powers. One obvious response that potential adversaries could make would be to build or modernize their own airpower capabilities in order to stalemate U.S. airpower.

How effective might such efforts be? A recent RAND study analyzes the capabilities of various regional powers to challenge the United States in terms of airpower over the next ten to twenty years. The study, based on an examination of inventories of airpower systems maintained by the world’s powers, concludes that other nations will find it difficult to match U.S. airpower; potential adversaries may, however, try to offset the U.S. air advantage through other means.

AIRPOWER ECONOMICS

While acknowledging that an inventory is an imperfect metric of airpower capability, the authors point out that airpower is equipment intensive—without the appropriate vehicles, a nation does not possess airpower forces. Furthermore, advanced and capable airpower forces are expensive. Attempts by a regional power to shift the airpower balance would require massive investment made possible only by a robust economy and considerable wealth. An inventory of the current airpower forces around the globe, therefore, seen in the context of national economies, becomes a valuable tool in determining the likelihood that any given state could bear the economic burden of developing highly effective airpower forces in the near future.

THE FIXED-WING BALANCE

Most of the world’s powers have spent more resources on fixed-wing aviation than on other forms of airpower. Fixed-wing aviation will remain the combat backbone of U.S. airpower forces for many years to come. But planners must also consider other forms of airpower as they look at the future balance, and the report offers the following observations:

- Surface-to-air missiles (SAMs) can dispute control of the air to some extent. Improved, these systems could come to affect the airpower balance.
- For sustained conventional operations, ballistic and cruise missiles are not as cost-effective as fixed-wing aircraft. Moreover, they suffer from operational constraints especially against mobile targets, such as maneuvering ground forces.
- Helicopters are important in military operations but are ill-suited to dispute control of the air.

In terms of the all-important fixed-wing balance, the United States currently enjoys a commanding global position. In the 1970s and 1980s the United States made a massive investment in airpower. As a result, U.S. land-based and sea-based airpower forces of the post–Cold War era are large and modern and have a high ratio of support aircraft to combat aircraft. This combination provides U.S. forces with a mix of range, reach, flexibility, and effectiveness that no other power can match.

THE FUTURE BALANCE

The study indicates that U.S. prospects for keeping its current fixed-wing advantage are good. Airpower is a capital-intensive form of military power, and the current U.S. capability can be maintained and improved at a moderate cost (at least in relative terms compared to regional powers) due to the size of the U.S. economy and to the force structure already in place.

The ability of the United States to hold its lead becomes more apparent when one examines the prospects of other airpower forces. The writers first focus on the two other largest airpowers—the former Soviet Union
(FSU) and China—and then turn to the airpower prospects of smaller regional powers. They conclude the following:

- The airpower forces of the FSU have fragmented and their recovery would take many years. Poor economic prospects will severely limit airpower growth.
- China’s large air force is old, and the country would need at least a decade to develop the capability to manufacture advanced aircraft.
- Other regional airpower forces, particularly those of potential adversaries, are small and aging.

Economic constraints, above all, will make it difficult for these various powers to challenge the U.S. air dominant strategy “in kind.” If U.S. forces are sustained at planned levels and product modernization is continued, the United States will be able to hold a decisive fixed-wing advantage over the next decade or two.

U.S. AIRPOWER: DOMINANT ENOUGH?

To prepare for new challenges, planners must consider the U.S. position in the airpower balance in terms of three issues: (1) the need to fight expeditionary campaigns; (2) the need to employ airpower forces for multiple operational objectives; and (3) the need to maintain forces capable of handling two concurrent major regional conflicts.

In expeditionary wars, the need to deploy personnel and equipment over great distances means that U.S. forces must build up over time. By contrast, adversaries will typically be close to home—and can thus draw on their total forces quickly. In the early stages of a fast-breaking conflict, the small airpower force of an adversary could well outnumber the initial U.S. airpower presence and therefore disrupt the process of deployment, creating delays and losses that might affect U.S. public opinion about the wisdom of continuing the conflict.

The need for U.S. airpower to achieve multiple and often concurrent operational objectives complicates the analysis. It is not enough for the United States simply to possess sufficient airpower to defeat enemy airpower: this is a crucial job, but only one of many. By contrast, opposing airpower forces could focus their limited resources on the air defense role. If an adversary were able to disrupt control of the air even for a limited period, his prospects for success would markedly improve.

Furthermore, evaluations of airpower balance must consider current U.S. strategy, which requires the capability to deal with two concurrent major regional conflicts. This requirement calls for the United States to maintain a larger force structure overall and to respond to airpower developments in other nations so that it can maintain its dominance in the global airpower balance.

ASYMMETRIC STRATEGIES

Current U.S. strategy may be called “asymmetric” because in most cases it pits U.S. air strength against an adversary’s land power strength. Since this situation typically creates poor prospects for potential adversaries, the United States must keep a careful eye on the ability of opponents to develop “asymmetric” strategies of their own. Such strategies could include:

- Developing weapons of mass destruction to deter U.S. intervention
- Developing a more lethal surface-based defense network
- Implementing massive dispersal of strategic and military targets
- Collocating key military targets with civilian structures
- Employing special forces attacks against key U.S. air bases and ports
- Burying facilities deep underground (as North Korea has done).

Such strategies will not be easy to implement in the face of the airpower advantage that the United States will continue to enjoy. But U.S. planners cannot become complacent. Maintaining the current advantage will require continued investment in a diverse and flexible airpower force. The Gulf War was played out on a global stage and has spawned a growth industry of lessons to be learned. The United States must assume that various regional powers are assessing that war to discover ways to counter U.S. strengths and take advantage of U.S. weaknesses.