



NATIONAL SECURITY RESEARCH DIVISION

THE ARTS
CHILD POLICY
CIVIL JUSTICE
EDUCATION
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INTERNATIONAL AFFAIRS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
SUBSTANCE ABUSE
TERRORISM AND
HOMELAND SECURITY
TRANSPORTATION AND
INFRASTRUCTURE
WORKFORCE AND WORKPLACE

This PDF document was made available from www.rand.org as a public service of the RAND Corporation.

[Jump down to document](#) ▼

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

[Purchase this document](#)

[Browse Books & Publications](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore the [RAND National Security Research Division](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND PDFs to a non-RAND Web site is prohibited. RAND PDFs are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).

This product is part of the RAND Corporation monograph series. RAND monographs present major research findings that address the challenges facing the public and private sectors. All RAND monographs undergo rigorous peer review to ensure high standards for research quality and objectivity.

A Question of Balance

Political Context and Military Aspects
of the China-Taiwan Dispute

David A. Shlapak, David T. Orletsky, Toy I. Reid,
Murray Scot Tanner, Barry Wilson

Prepared for the Smith Richardson Foundation



RAND

NATIONAL SECURITY RESEARCH DIVISION

The research described in this report was sponsored by the Smith Richardson Foundation and was conducted under the auspices of the International Security and Defense Policy Center within the RAND National Security Research Division (NSRD). NSRD conducts research and analysis for the Office of the Secretary of Defense, the Joint Staff, the Unified Commands, the defense agencies, the Department of the Navy, the Marine Corps, the U.S. Coast Guard, the U.S. Intelligence Community, allied foreign governments, and foundations.

Library of Congress Cataloging-in-Publication Data

A question of balance : political context and military aspects of the China-Taiwan dispute / David A. Shlapak ... [et al.].

p. cm.

Includes bibliographical references.

ISBN 978-0-8330-4746-5 (pbk. : alk. paper)

1. Taiwan—Military policy. 2. China—Military policy. 3. Taiwan—Military relations—China. 4. China—Military relations—Taiwan. I. Shlapak, David A.

II. Rand Corporation. National Security Research Division.

UA853:T28A2 2009

355'.033051249—dc22

2009022233

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

RAND® is a registered trademark.

© Copyright 2009 RAND Corporation

Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Copies may not be duplicated for commercial purposes. Unauthorized posting of RAND documents to a non-RAND Web site is prohibited. RAND documents are protected under copyright law. For information on reprint and linking permissions, please visit the RAND permissions page (<http://www.rand.org/publications/permissions.html>).

Published 2009 by the RAND Corporation

1776 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138

1200 South Hayes Street, Arlington, VA 22202-5050

4570 Fifth Avenue, Suite 600, Pittsburgh, PA 15213-2665

RAND URL: <http://www.rand.org>

To order RAND documents or to obtain additional information, contact

Distribution Services: Telephone: (310) 451-7002;

Fax: (310) 451-6915; Email: order@rand.org

Summary

The military balance across the Taiwan Strait is changing in ways that make more complex both the set of operational challenges associated with defending Taiwan against a possible Chinese attack and the strategic imperative of shaping Chinese behavior so that no such attack ever occurs.

This report documents a follow-on effort to one published in 2000 (Shlapak, Orletsky, and Wilson, 2000), reassessing and expanding that earlier study's snapshot of the cross-strait balance, looking ahead to the 2010–2015 period. As in the 2000 study, we employed a mix of theater-level combat modeling, simpler mathematical models, historical analysis, interviews with experts, and qualitative judgment. The conclusions of the present work have proven to be substantially less optimistic for the Taiwan (and U.S.) side.

The Evolving Cross-Strait Dispute

Ma Ying-jeou's election in 2008 as Taiwan's president and the further consolidation of the Kuomintang's (KMT's) hold on Taiwan's national legislature (the Legislative Yuan, or LY) has led to a reassuring break from 12 years of cross-strait frictions, during the last eight of which (2000–2008) Beijing struggled to keep independence-minded Taiwan president Chen Shui-bian "contained." This period featured the use of economic harassment as a politically satisfying—though not always successful—short-term method of signaling Chinese displeasure. But Beijing's difficulty translating economic leverage into political leverage

is not necessarily good news for either Taiwan or the United States. If China comes to believe that nonviolent tools have lost efficacy, it might be inclined to ratchet up military pressure in the event of a crisis, if only because of a perceived lack of effective alternatives.

Among the more profound changes to affect the political balance between Beijing and Taipei has been the growth of a widespread independent Taiwan identity, a sense of distinct “Taiwanese-ness.” By December 2008, survey data indicated that the overwhelming majority of the island’s citizens identified themselves as *exclusively* Taiwanese (51 percent) or both Taiwanese and Chinese (41 percent). By far the most troubling statistic, from Beijing’s perspective, must be that fewer than 5 percent described themselves as exclusively Chinese. However, the rise of this Taiwanese identity has not yet produced a pro-independence majority on the island.

Chen’s troubled administration, beset by slow economic growth and tormented by a fractious KMT majority in the LY, proved unable to build consensus in a number of areas, most prominently in defense policy and military procurement. Defense appropriations and purchases of important systems were frozen by the partisan bickering that gripped Taiwan’s government.

With a solidly entrenched KMT government, as of summer 2009, controlling both Taiwan’s executive and legislative branches, even the most paranoid of Chinese leaders must have some confidence that no one on Taiwan will be inclined to “push the envelope” on independence or related issues any time soon. However, it is in these very expectations of a new and more accommodating Taiwan government that the seeds of disappointment and future crisis may lie. Although independence remains a distant dream for the relatively small proportion of Taiwan’s citizens who support it, the changes in the political, social, and cultural identity of the island’s population are genuine, significant, and enduring, and these realities strongly suggest that even the most flexible Taipei government will reach its limits of possible accommodation well short of Beijing’s desired position. The unbridgeable distance between these two positions is not likely to shrink in the coming decade; the opposite may indeed be the case, regardless of which party rules Taiwan.

Further, China's growing military power may convince its leaders that the mainland possesses credible options that go beyond rhetoric and economic harassment if—more likely, when—the next cross-strait crisis erupts. Finally, even after the recent LY reforms, Taiwan remains a “young” and fractious democracy; while Beijing (and Washington!) may hope that the volatility of politics in Taipei will be reduced, it is not unlikely that island politics will retain an eccentric and erratic edge that from time to time will prove irritating to Beijing.

Missiles over the Strait

China's arsenal of short-range ballistic missiles (SRBMs) is growing in both size and quality. Modern variants of the CSS-6 and CSS-7 SRBMs are being deployed in large numbers; these are missiles with sufficient accuracy and possibly the necessary variety of warheads to pose a serious threat to a wide range of targets on Taiwan.

We assessed the potential impacts of these weapons against Taiwan's air bases. Using Monte Carlo techniques to model these attacks, we found that, depending on missile accuracy, between 90 and 240 SRBMs—a number well within the range of estimates of the number of launchers China will field in the near future—could, with proper warheads, cut every runway at Taiwan's half-dozen main fighter bases and destroy essentially all of the aircraft parked on ramps in the open at those installations. By so doing, China could knock the Republic of China Air Force (ROCAF) out of the war for long enough to launch large-scale air raids on Taiwan intended to destroy any aircraft parked in shelters, as well as other hardened targets. Success in this gambit would suppress ROCAF operations indefinitely and lay Taiwan open to further Chinese air attacks.

Assessing the Air War

Chinese military capabilities have advanced rapidly over the past decade. In addition to the progress the People's Liberation Army (PLA)

has made with its stockpile of SRBMs, China has deployed or is deploying modern fighter aircraft, such as the Su-27/J-11, Su-30, and J-10, in sizable numbers. To understand the consequences of these changes, we assessed a cross-strait battle for air superiority in the 2013 time frame. Our analysis indicates that China's ability to suppress or close the ROCAF's bases could give the PLA Air Force (PLAAF) an almost overwhelming numerical advantage that—coupled with the rough qualitative parity that now exists between the two sides—could allow China to attain air superiority over Taiwan and the strait. This in turn would permit the PLAAF to pound Taiwan with air-delivered precision-guided munitions (PGMs) in preparation for an invasion attempt or as a coercive bombardment.

Further, the missile threat to the U.S. Air Force (USAF) base at Kadena and the U.S. Marine Corps (USMC) base at Iwakuni on Okinawa poses the same kind of danger as that faced by Taiwan's air bases; combined with the lack of good bases for land-based fighters in the area around Taiwan, the United States is unlikely to be able to compensate for the hundreds of ROCAF fighters burning on their parking ramps, trapped behind cratered runways, or hiding in underground shelters. The danger to both ROCAF and USAF operations in the Taiwan Strait is sufficiently grave that a credible case can be made that the air war for Taiwan could essentially be over before much of the Blue air forces have even fired a shot.

The Ultimate Roll of the Dice: A Chinese Invasion of Taiwan

Only one military course of action guarantees China control of Taiwan: a successful invasion and occupation of the island. But amphibious operations are dauntingly difficult, and for years analysts and scholars have assessed China's ability to conduct an invasion as limited, at best. Our analysis of the air war indicates that China's growing military power has changed the nature of the fight for air superiority; have the PLA's burgeoning capabilities also changed the calculus for an invasion attempt?

The Falklands campaign of 1982 is illustrative of many of the challenges that will confront any amphibious attacker in the era of the antiship missile. Nearly half of the surface combatants committed to the South Atlantic by Great Britain were damaged, and 15 percent were sunk by an enemy possessing a literal handful of modern antiship cruise missiles (ASCMs). The British task force also lost 29 percent of its Harrier fighters, while the Argentine air force and naval air arm lost 45 percent of the combat aircraft they sent into action.

The Falklands war illustrated three important characteristics of modern amphibious warfare:

- First, there is no place to hide in amphibious warfare. Ultimately, the attacker's ships must approach the hostile coastline to land troops and supplies; a properly equipped defender should be able to create a lethal engagement zone stretching from the shore to the visual horizon without needing to rely on complex kill chains.
- Second, modern weapons are deadly to warships. Even damage that does not sink the ship can cause a "mission kill" that renders the vessel operationally useless until repaired. There would seem to be special dangers for amphibious assault ships that, packed with combat-loaded tanks, fighting vehicles, and trucks, must at some point approach the beach.
- Third, distance matters. Had the British and Argentine militaries squared off on neutral ground or in European skies and waters, the outcome would have been a rout for the UK. The geographical advantage enjoyed by Argentina allowed its otherwise outnumbered and outclassed armed forces to make a go of it against the British.

To take these lessons forward, we performed a simple quantitative assessment of China's ability to move assault troops across the strait and explored concepts for defeating the attack. This analysis suggested that Taiwan might be able to defend against a Chinese invasion attempt by employing a "four rings" strategy:

- “Thinning the herd” of approaching ships using what amounts to unordered fire of longer-range ASCMs.
- Slowing the approach to the beach with modern sea and surf mines.
- Engaging assault vessels, whether large ships or small craft, on their final run to the beach with concealed or very mobile short-range missiles, such as Hellfire.
- Combining air-delivered weapons with direct and indirect fires to damage or destroy Chinese ships or craft while they are unloading ashore.

Because this concept does not rely on exquisite targeting or complicated kill chains, it could prove fairly robust even in circumstances in which the defender lacked control of the skies over the beachhead.

Conclusions

While the relationship between Beijing and Taipei is more stable in 2009 than it has been in years, it is not clear that this honeymoon will last forever. China has not renounced its “right” to use force to forestall Taiwan’s “independence,” nor discussed amending its anti-secession law, nor withdrawn any missiles from the hundreds it points at Taiwan. Just as President Ma is constrained by the limits of the possible within the Taiwan polity, so too are President Hu Jintao and his colleagues atop the Communist hierarchy. The goal of “reunification” has become a core tenet of China’s own politics, and any movement away from it could spell trouble for any leadership in Beijing, just as growing too accommodating toward China would be dangerous for Ma or any other leader on Taiwan. Given this reality, what can be said about the cross-strait military balance?

In the near-to-mid-term we conclude the following:

- China’s ability to suppress Taiwan and local U.S. air bases with ballistic and cruise missiles seriously threatens the defense’s ability to maintain control of the air over the strait.

- Restructuring Taiwan's air defenses to "ride out" heavy strikes on its bases and other installations can complicate Chinese planning and reduce the leverage that Beijing can derive from its offensive forces.
- Regaining the initiative in the air may require that the United States and/or Taiwan field a new, expensive, and politically problematic suite of strike capabilities (e.g., hundreds of medium-range ballistic missiles) aimed at China's own air base infrastructure.
- Making clear to Beijing the consequences of attacking U.S. bases and forces in East Asia in terms of counterstrikes on the Chinese mainland has the potential to enhance deterrence.
- A reasonably robust "four rings" defense against a large-scale Chinese invasion should be possible even with a degree of PLA control of the air, but it will require new capabilities and concepts to be put in place.

In the longer term, the United States and Taiwan may confront an even more fundamental strategic dilemma, one inherent in the basic geography of the situation. This geographic asymmetry—Taiwan lies close to China and very far from the United States—combined with China's growing capabilities and the lack of basing options for U.S. forces in the vicinity of the strait, call into question Washington's ability to credibly serve as guarantor of Taiwan's security in the future.

The situation in the Taiwan Strait can be seen as a possible prelude to a broader challenge to the United States in East Asia that might emerge in the next 10–20 years. What roles can and should the United States seek to play in an East Asian landscape that includes an economically vibrant, militarily powerful, politically unified, and self-confident China? Looking at Taiwan and beyond, what is the new equilibrium in East Asia, and how can the forces at work there be managed to make that equilibrium tolerable to the United States? That, indeed, is the ultimate "question of balance" posed by any examination of the growing imbalance of military power across the Taiwan Strait.