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Taiwan's Urgent Need for Asymmetric Defense

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EXECUTIVE SUMMARY

Amid deteriorating US-China relations, senior US officials have begun suggesting that a Chinese attack against Taiwan could happen soon. The conventional wisdom in Washington is that this urgent threat requires an urgent response, but too much attention has focused on the US-China military balance and too little on Taiwan's military efforts.

Taiwan's future would likely be determined in the opening days, if not hours, of a conflict. Taiwan must prevail in two critical military operations: surviving China's conventional bombardment and preventing the first wave of amphibious ground forces from establishing a beachhead. Taiwan would be fighting these two operations alone, but Taiwan's military does not have the right mix of equipment, manpower, and strategy to mount an effective defense, despite the fact that the results of these operations could prove decisive for the rest of the conflict.

US policymakers must press Taipei to focus on improving Taiwan's ability to execute this narrow set of military missions and to reorient its overall strategy to one of asymmetric defense to counter Chinese advantages. If Taiwan does not or cannot do so, it is unlikely that any amount of potential US assistance or intervention could salvage the island's position in the event of a conflict.

Because these shortfalls are so important, Washington should create a sense of urgency in Taipei through security assistance measures such as conditional arms sales and limited joint training. The United States should also take care not to back Beijing into a corner where it concludes that using force is its only viable option to achieve unification with Taiwan. American assurances to China are a tough sell given Washington's bipartisan hawkishness on China, but keeping time on Taiwan's side is essential for the success of Taipei's self-defense transformation.



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INTRODUCTION

What are the most pressing priorities for improving Taiwan's self-defense, and how can the United States help Taiwan put itself in the best position to deter an invasion by China? Although Taiwan has long been a potential source of US-China conflict, recent developments have made the issue more salient, and there is a palpable sense of urgency in Washington to shore up Taiwan's defenses. Taiwan faces a serious threat to its survival and needs to use its time and resources wisely, and the United States has an interest in improving Taiwan's self-defense capabilities. At the same time, Washington should eschew calls to depart from its long-standing policy of strategic ambiguity. Such a policy shift would do more to increase the risk of conflict instead of improving deterrence.

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Growing fears of an imminent Chinese attack on Taiwan are the result of three developments. First, China's military power has grown considerably in a relatively short period. While China is still behind the United States in terms of overall defense spending and global reach, the People's Liberation Army (PLA) presents a potent challenge to US military dominance in East Asia.¹ Attacking Taiwan would be a very costly proposition for China, but it is becoming an increasingly painful prospect for the United States to come to Taiwan's rescue.² The United States no longer enjoys a clearly favorable balance of power in the Taiwan Strait.

Second, a steadily accelerating downturn in US-China relations over the past decade has both increased the frequency of policy disagreements and made it harder to de-escalate growing tensions. The post-Cold War US policy of incentivizing China's liberalization through economic and diplomatic engagement is now history.³ Increasing repression at home and assertiveness abroad have been the hallmarks of Beijing's policies since Xi Jinping became general secretary of the Chinese Communist Party (CCP) in 2012 (and president of China in 2013). On the US side, the Trump

administration started a trade war with China and blamed Beijing for the COVID-19 pandemic.⁴ The Biden administration has also leaned heavily into strategic competition with China, labeling it the “pacing challenge” for the US military, implementing export controls to restrict Beijing's access to cutting-edge technology, and deepening America's role as security guarantor in East Asia.⁵

Third, Russia's invasion of Ukraine in February 2022 prompted comparisons to Taiwan and created renewed urgency for Taipei to improve its self-defense posture. Both Taiwan and Ukraine have good relations with the United States without a formal treaty commitment and face threats to their survival from powerful neighbors. The war in Ukraine has helped shock Taiwan out of complacency on self-defense. Ukraine has also effectively implemented aspects of an asymmetric defense strategy. For example, Kyiv's mobile, ground-based air defense systems have prevented Russia from achieving air superiority, while ground-based anti-ship missiles and uncrewed boats have harried Russian warships in the Black Sea.⁶ In a report summarizing an unofficial dialogue between US and Taiwanese military analysts, Ralph Cossa of Pacific Forum wrote, “The Russian invasion of Ukraine was a sobering wake up call for Taiwan. . . . As a result, Taiwan is placing increased emphasis on asymmetrical warfare and the development of homeland and territorial defense capabilities.”⁷

The United States and Taiwan should act on this growing sense of urgency. The United States has two primary goals: to push Taiwan to adopt an asymmetric defense strategy to defeat a PLA invasion attempt and to avoid a near-term crisis with China through assurance measures that underscore Washington's adherence to strategic ambiguity. Taken together, this approach should improve Taiwan's self-defense capabilities while reducing the likelihood of a conflict in the near future. Deterring a Chinese invasion of Taiwan will require both a stronger Taiwan and a less acrimonious US-China relationship. Strengthening Taiwan but abandoning strategic ambiguity or adhering to ambiguity without improving Taiwan's defenses would make deterring conflict harder.

To this point, most of Washington's attention has been on the US-China military balance. However, because Taiwan would be fighting on its own at the outset of a conflict even if the United States were to intervene, getting Taiwan's

self-defense right is the more pressing issue. Whether one is a China hawk who would want the United States to intervene on Taiwan's behalf or a dove who would not, Taiwan's performance in the opening days of a war would be hugely consequential. Moreover, whatever their foreign policy views, most Americans agree that democracies have a right to self-defense.

Taiwan's future would likely be determined in the opening days, if not hours, of a conflict. Taiwan must prevail in two critical military operations: surviving China's conventional bombardment and preventing the first wave of amphibious ground forces from establishing a beachhead. These are not the only challenges that Taiwan's military would face, but they are the most important. Success in both areas would greatly boost Taiwan's chances of survival, while defeat—especially rapid defeat—would be devastating and likely doom Taiwan even if the United States intervened. An asymmetric defense strategy would be the best way for Taiwan to prevail in these two critical operations. Taiwan has made some notable progress in recent years, but it has been reluctant to fully embrace asymmetric defense.

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In order to buy Taiwan the time necessary to implement an asymmetric defense strategy, the United States must reduce the likelihood of near-term conflict with China through a combination of assurances toward Beijing and restraining aspects of its support for Taiwan. Additionally, US policymakers must resist proposals for abandoning strategic ambiguity and adopting a clearer commitment to Taiwan's defense. Such proposals carry a strong likelihood of triggering a crisis or even outright conflict with China.

Washington and Taipei should harness the urgency of the current moment and use it to correct decades of Taiwan's underinvestment in asymmetric self-defense capabilities and pursuit of expensive but vulnerable

military platforms like manned fighter aircraft and tanks. However, they must do so carefully to avoid stoking the conflict they seek to prevent.

A STATUS QUO UNDER STRAIN

There is growing concern among US policymakers and foreign policy commentators that the status quo preventing war in the Taiwan Strait is untenable. The United States, China, and Taiwan have avoided war through mutual adherence to a complicated political arrangement under which all parties pursue their interests while trying to avoid crossing one another's red lines. This arrangement, while deliberate in part, is messy and unsatisfying, but it has been a “good enough” solution for over 40 years. However, changing structural factors and growing tensions between the United States and China are putting the status quo under strain.

What the Status Quo Looks Like

The status quo in the Taiwan Strait is the result of interlocking policies and assurances that try to keep the behavior of the United States, China, and Taiwan within certain guardrails. The Republic of China government under Chiang Kai-shek retreated to Taiwan in 1949 after the CCP defeated Chiang's ruling Kuomintang party in China's civil war and took control of the mainland. The Republic of China (referred to as “Taiwan” throughout this paper for simplicity) never formally declared independence despite its defeat in the civil war. Taiwan is thus a de facto independent country, with its own currency, military, and democratic system of government but without a legal declaration of independence.

The CCP regards Taiwan as a province of China that is outside its control. Placing Taiwan under CCP control has been one of Beijing's most important policy goals since winning the civil war. Since 1979, China has framed this task as “reunification” (more accurately described as “unification”) instead of “liberation,” as it did under the leadership of Mao Zedong.⁸ While China would prefer peaceful unification, it has never ruled out using military force to achieve its goal. China's proposal for peaceful unification is known as “One Country, Two Systems,” based on the notion that if Taiwan agreed to unification, it would get to

retain unique political privileges and freedoms. However, China's recent treatment of Hong Kong has effectively killed whatever small shred of support the "One Country, Two Systems" model had in Taiwan.⁹

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The current US role in the Taiwan Strait status quo was established in 1979 when the United States shifted formal diplomatic recognition from Taipei to Beijing. As a result, Washington ended a mutual defense treaty with Taiwan and withdrew military forces deployed on the island.¹⁰ In 1979, Congress, not wanting to completely abandon Taiwan, passed the Taiwan Relations Act (TRA), which included provisions for US arms sales and authorized the president and Congress to determine “appropriate action by the United States” in response to “any threat to the security or the social or economic system of the people on Taiwan and any danger to the interests of the United States arising therefrom.”¹¹ In 1982, to assuage concerns in Taipei that warming US-China relations would lead to less support from Washington, the Reagan administration assured Taiwan that it would continue selling weapons and provide other forms of support.¹² These came to be known as the Six Assurances. The TRA, the Six Assurances, and three US-China communiqués form the basis of Washington’s “one China policy,” which acknowledges but does not fully accept China’s position that there is one China and that Taiwan is part of China.¹³ Officially, the United States opposes both unification through Chinese military action and Taiwan declaring *de jure* independence.

Another important aspect of US policy toward Taiwan is “strategic ambiguity.” Simply stated, strategic ambiguity is the open question of whether the US military would intervene in a China-Taiwan conflict.¹⁴ The United States provides a great deal of security support for Taiwan, but the TRA is not a mutual defense treaty. The TRA pledges to provide Taiwan with defensive weapons and states that the United States would consider “any effort to determine the future of Taiwan

by other than peaceful means, including by boycotts or embargoes, a threat to the peace and security of the Western Pacific area and of grave concern to the United States.”¹⁵ The possibility of US military intervention raises the potential costs to China of attacking Taiwan, while the possibility of US nonintervention restrains Taipei from declaring independence.

Peace in the Taiwan Strait depends on China, Taiwan, and the United States respecting one another’s red lines. The United States has previously used its position to oppose actions by both China and Taiwan that could lead to conflict. In 1995–1996, China conducted large-scale military exercises in response to Taiwan’s president making a speech in the United States. In March 1996, the United States deployed two aircraft carriers close to Taiwan to signal its support for Taipei.¹⁶ Less than 10 years later, in the lead-up to Taiwan’s 2004 presidential election, the George W. Bush administration publicly warned Taiwan’s president against carrying out independence referendums.¹⁷ While the post-1979 status quo in the Taiwan Strait is not without occasional periods of tension and crisis, it has been a valuable tool for preventing war.

China’s Growing Military Power

US military superiority has fortified the status quo. Although the TRA is not a mutual defense treaty, the possibility of US military intervention has long been a potent deterrent against Chinese military action. While China would have the home field advantage, better US weapons systems—especially air and naval forces—and personnel offset China’s much larger but worse equipped and trained forces. The 1995–1996 crisis highlighted US military advantages over China. Per a 2015 RAND Corporation report, “The Chinese military’s inability to locate—much less attack—[two US] aircraft carriers demonstrated its inability to successfully use force against Taiwan should the United States intervene.” After the crisis, China steadily increased defense spending and shifted the PLA’s modernization priorities toward capabilities that would be most relevant in a Taiwan scenario.¹⁸ According to a 2000 examination of the crisis and its aftermath by Robert S. Ross of Harvard University, “Although China’s military modernization program might have led to such deployments anyway, the pace, quantity, and quality of China’s deployments have been affected by the assumption that war with Taiwan means war with the United States.”¹⁹

The modern PLA, while still lagging in some areas, has significantly reduced the gap between itself and the US military. China fields the world's largest conventional cruise and ballistic missile arsenal, which it could use to attack both US air and naval bases in East Asia and large warships, such as aircraft carriers, at sea.²⁰ The PLA Navy has significantly improved its surface fleet with new ships that allow it to operate farther from its coast, thereby pushing the US Navy farther from Taiwan.²¹ China's amphibious warship fleet, which would have primary responsibility for landing ground troops on Taiwan, has also added new ship classes in the past few years. Beijing has a large civilian fleet of roll-on/roll-off cargo ships, ferries, and other vessels that it could use to supplement its amphibious warships, and there is growing evidence that such ships participate in PLA mobilization and logistics exercises.²²

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China is also modernizing its nuclear forces. China has long fielded a much smaller, less technically sophisticated arsenal than the United States. To illustrate the disparity, in 2021 the Federation of American Scientists (FAS) estimated that the United States deployed approximately 1,800 nuclear warheads compared with China's 350.²³ Beijing has historically relied on a nuclear posture of assured retaliation—the ability of its arsenal to survive an attack and strike back—to deter nuclear attack.²⁴ However, China is quickly expanding its nuclear arsenal. In 2022, FAS estimated China's nuclear arsenal at 410 warheads, and the Department of Defense predicted that China will have 1,000 warheads by 2030.²⁵ A year later, the Department of Defense estimated that Beijing possesses 500 operational nuclear warheads.²⁶ Some analysts have posited that a larger Chinese nuclear arsenal closer to parity with the United States could encourage Beijing to take more aggressive actions against Taiwan if Chinese leaders think a larger nuclear arsenal would deter US intervention.²⁷

A Zero-Sum, Competitive US-China Relationship

The shift in Washington's China policy from engagement to competition started gaining steam after Xi Jinping assumed China's top leadership positions.²⁸ Between December 2013 and October 2015, China dredged up approximately 3,000 acres of artificial islands in the South China Sea and stationed military units on them in order to advance its territorial claims.²⁹ Xi announced a series of extensive organizational reforms to the PLA in 2015 and 2016 to improve the military's ability to fight modern wars.³⁰ The Obama administration attempted to “pivot to Asia” and shift greater US attention and resources toward the region, but the pivot was underwhelming in practice.

The Trump administration leaned heavily into US-China competition. The 2017 *National Security Strategy* directly criticized US engagement of China, saying, “Contrary to our hopes, China expanded its power at the expense of the sovereignty of others.”³¹ Seven months after the strategy's release, the Trump administration initiated a trade war, placing tariffs on more than \$550 billion worth of Chinese exports in an attempt to shrink the trade deficit and bring manufacturing jobs back to the United States.³² Beijing and Washington managed to negotiate an agreement to begin backing away from the trade war, but it was relatively limited in scope and took effect in February 2020 as the COVID-19 pandemic spread outside China.³³ Trump dubbed the coronavirus itself the “Chinese virus,” and the pandemic inflicted an estimated \$14 trillion of economic losses on the United States between January 2020 and December 2023, limiting the potential for an improvement in relations.³⁴

The Biden administration, with strong backing from Congress, has been escalating Washington's competitive policies toward China. While the 2020 trade deal reduced some of the Trump administration's tariffs on Chinese goods, most were unaffected.³⁵ The tariffs were set to expire in 2022, but the Biden administration directed the Office of the US Trade Representative to conduct a review, keeping the tariffs in place well into 2023.³⁶ A new front in US-China economic competition opened in October 2022, when the Department of Commerce announced export controls to restrict China's ability to purchase and manufacture advanced computer chips, supercomputers, and semiconductors.³⁷ The 2022 *National Defense Strategy* names China

as the Department of Defense’s “pacing challenge” and “the most comprehensive and serious challenge to US national security.”³⁸ Most members of Congress from both parties view the US-China relationship as essentially zero-sum. Perhaps the clearest indication of the conventional wisdom was the creation of the Select Committee on the Chinese Communist Party in January 2023. Rep. Mike Gallagher (R-WI), in remarks at the subcommittee’s inaugural hearing, stated, “We may call this a ‘strategic competition,’ but this is not a polite tennis match. This is an existential struggle over what life will look like in the 21st century—and the most fundamental freedoms are at stake.”³⁹

The shift in US-China relations from engagement to competition over the past decade provides additional context for growing US perceptions that the post-1979 status quo in the Taiwan Strait is unsustainable. China’s desire to absorb Taiwan and the possibility of that process occurring violently are nothing new, but until recently, the United States and China had more incentives to cooperate and avoid conflict. Additionally, the question of US military dominance over China has stirred fears in Washington that it may no longer be able to deter the PLA, while a more contentious US-China relationship makes a worst-case scenario seem more plausible.

A ROAD MAP FOR IMPROVING TAIWAN’S SELF-DEFENSE

Washington has a great deal of leverage over Taipei, which it should use to push Taiwan to pursue capabilities and strategies that it has been hesitant to fully embrace. Strengthening Taiwan’s self-defense must not be done on either an ad hoc or “more of everything” basis. Instead, the United States and Taiwan should establish and adhere to a road map for prioritization that addresses Taiwan’s most existential military challenges first.

The starting point for this road map is diagnosing Taiwan’s self-defense shortcomings to establish areas where the need for change is greatest. Taiwan must be laser-focused on defeating an amphibious invasion by prevailing in two critical military operations: surviving the PLA’s conventional precision strike capabilities and preventing the first wave of China’s ground forces from capturing an airfield, port, or beachhead.

Taiwan’s Self-Defense Shortcomings

Taiwan needs to get serious about self-defense. Taiwan has chronically underinvested in its military, made bad organizational choices, and resisted disruptive but necessary adjustments that would put it on better footing. Russia’s invasion of Ukraine has been a wake-up call, and to its credit, Taipei has pushed through several helpful defense policy changes in a short amount of time. Taiwan should build upon these steps, but addressing its self-defense shortcomings will require sustained, focused effort.

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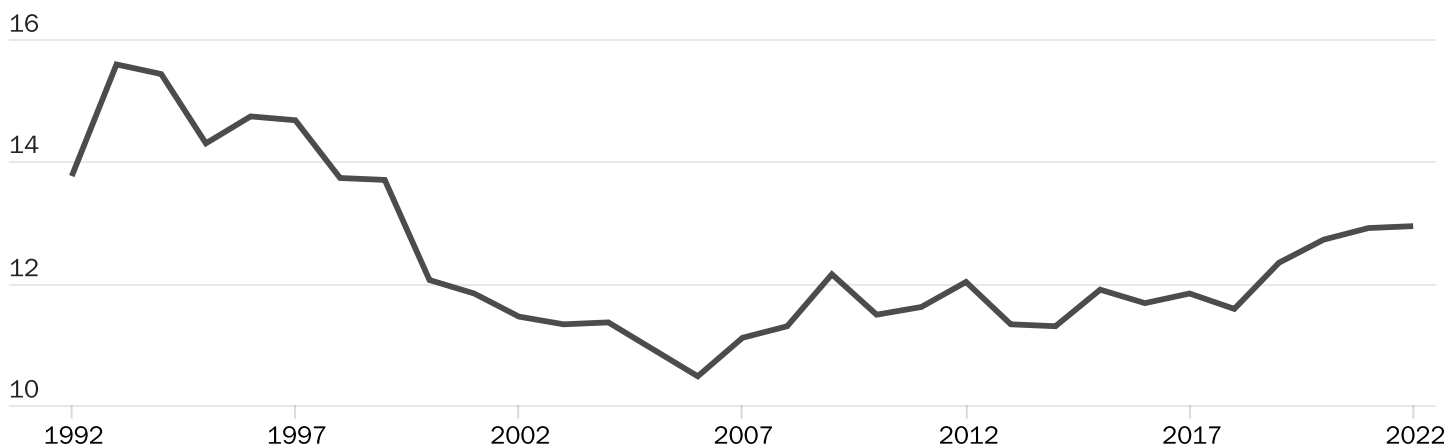
Government spending is a good indicator of priorities, and Taiwan’s history is bad news for its defense. According to data from the Stockholm International Peace Research Institute’s (SIPRI) Military Expenditure Database and as displayed in Figure 1, between 2000 and 2018, Taiwan’s annual defense budget was essentially flat, staying at \$10 billion to \$12 billion in 2021 US dollars.⁴⁰ Defense spending slowly but steadily began increasing in 2018, rising from \$11.57 billion that year to \$12.94 billion in 2022. Occasionally, Taiwan implements supplemental defense spending that is not captured in the SIPRI figures, such as in November 2021, when it allocated \$7.7 billion over five years to purchase a variety of weapons systems.⁴¹ Such supplemental funding is a welcome development, but it is temporary and does not provide a clear sense of Taiwan’s willingness to sustain higher levels of spending over time. The widely reported 2024 budget request for \$19 billion has a core defense budget of approximately \$14 billion, with the remaining amount representing a mix of special procurement (e.g., paying for US weapons sold to Taiwan) and non-operating special funds (e.g., military infrastructure and housing).⁴²

Levels of defense spending, however, do not indicate how Taiwan’s government prioritizes defense relative to other things. To assess prioritization, it’s important to examine

Figure 1

Taiwan's core defense budget beginning to uptick

Taiwan's defense spending, billions of 2021 dollars



Source: SIPRI Military Expenditure Database, Stockholm International Peace Research Institute.

Note: Dollar amounts are for Taiwan's core defense budget and do not include supplemental or special defense spending, which can vary considerably year to year.

defense spending as a percentage of both GDP and overall government spending. These figures show how defense stacks up against other priorities. According to SIPRI's database, and as displayed in Figure 2, between 2000 and 2022, Taiwan's defense spending as a percentage of GDP and overall government spending decreased from 2.7 percent to 1.6 percent and 11 percent to 9.4 percent, respectively. In other words, Taipei devoted a shrinking portion of overall economic output and government spending to defense. Recent upticks in spending will push defense as a percentage of GDP in the right direction. The \$19 billion request for 2024, for example, would amount to 2.5 percent of GDP. This would be a modest improvement, but it includes temporary, supplemental spending.

Taiwan has also struggled with troop quality, especially among reservists. Mandatory military service has never been popular, and during the 2010s, Taiwan's Ministry of National Defense (MND) attempted to create a smaller but better trained all-volunteer force. However, conscripts still make up most of Taiwan's reservists and some of its active-duty units. These conscripts are very poorly trained. The mandatory conscription period came down from two years to only four months during the MND's all-volunteer push.⁴³ According to Taiwanese journalist Paul Huang, "[Conscripts are] more of a burden than an aid, not treated seriously by career or noncommissioned officers as their short stays mean they are seen as guests rather than soldiers."⁴⁴ After

completing four months of service, conscripts register with their local reserve command and, per a 2017 RAND Corporation study, "report for duty only once every two years for a mere five to seven days of refresher training."⁴⁵

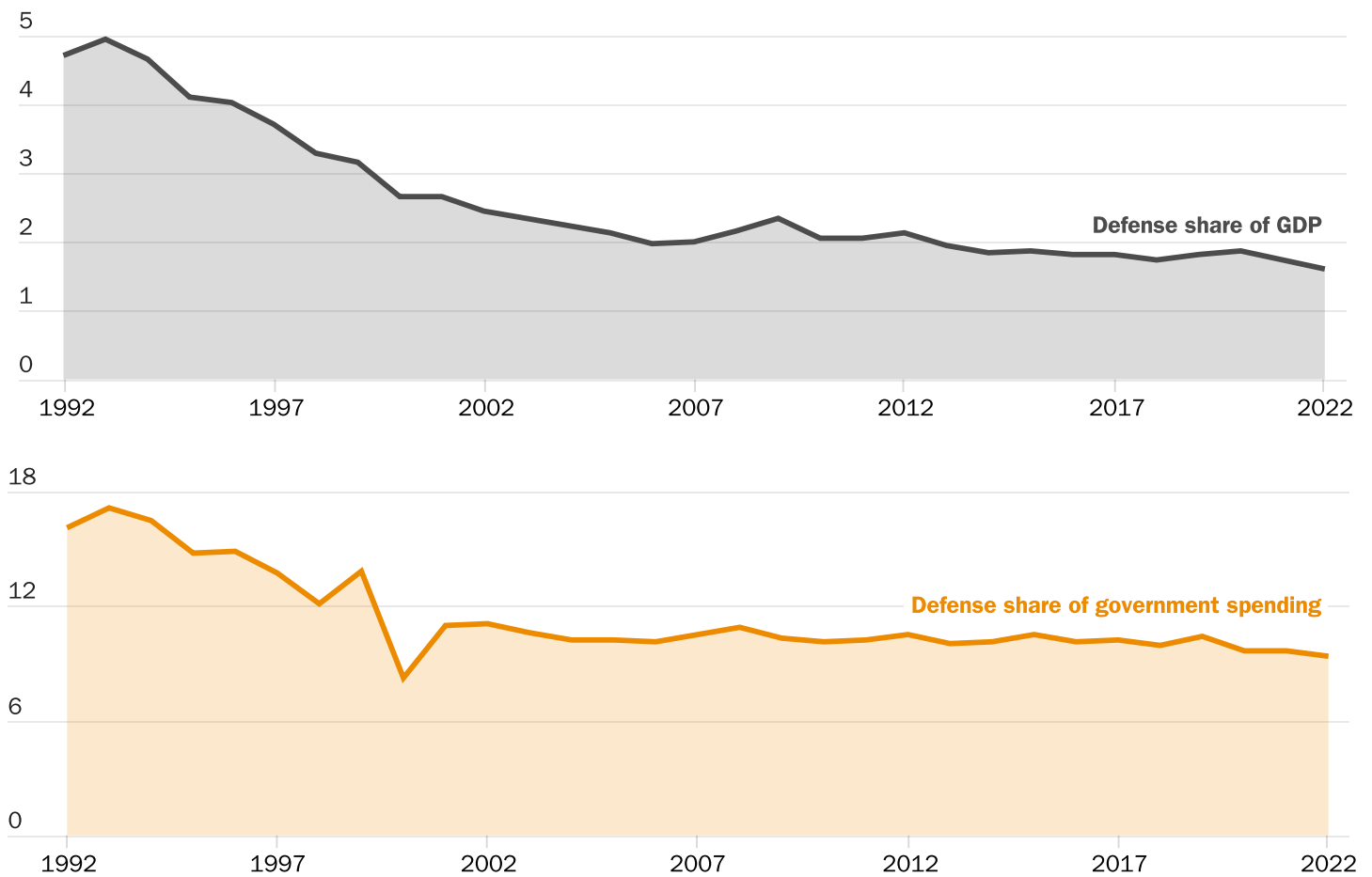
In December 2022, Taiwanese president Tsai Ing-wen announced that mandatory service would increase from four months to one year, conscripts would be better paid, and training would be more rigorous.⁴⁶ Taiwan desperately needs more capable reservists who can support the active-duty force and prevent military collapse as the active-duty force takes casualties. Extending and improving the conscription system is a step in the right direction, but these policy changes will take time to bear fruit.

Another impediment to improving Taiwan's military position is the MND's ambivalence toward asymmetric defense. An asymmetric defense strategy, also called a "porcupine" strategy, uses large numbers of smaller, less complex capabilities to counter a stronger opponent.⁴⁷ For example, instead of building a few large warships to defeat an enemy's ships, an asymmetric defense strategy would field many land-based anti-ship missiles. In the air, a defending country could create a dense network of surface-to-air missiles and deploy drones to deny an opponent control of the skies instead of using manned fighter aircraft.⁴⁸ Asymmetric capabilities should be easy to spread out, difficult to locate and destroy, and relatively inexpensive so that they can be procured in large quantities. Low cost and ease of construction are particularly

Figure 2

Taiwan has chronically underinvested in defense

Defense share of GDP and defense share of government spending, inflation adjusted, percent



Source: SIPRI Military Expenditure Database, Stockholm International Peace Research Institute.

Notes: GDP = gross domestic product. Both defense share of government spending and defense share of GDP are based on Taiwan's core defense budget and do not include supplemental or special defense spending, which can vary considerably year to year.

valuable characteristics for Taiwan because it would not need to massively increase its defense budget to obtain a large quantity of weapons.

Taiwan's military has made some progress toward implementing asymmetric defense, but the MND has resisted a full transformation. Noteworthy asymmetric capabilities that Taiwan has produced in recent years include high-quality air and sea defense missiles, new classes of small missile corvettes and mine-laying ships, and unmanned aircraft.⁴⁹ Between 2017 and 2019, the chief of staff of Taiwan's armed forces, Admiral Lee Hsi-min, championed the "Overall Defense Concept," which placed greater emphasis on asymmetric defense than any previous strategy.⁵⁰ Unfortunately, the Overall Defense Concept went out of vogue after Lee retired.⁵¹ Since Lee's departure,

Taiwan has tried to strike a balance between asymmetric and traditional or "fundamental" capabilities, signaling a reluctance to fully embrace asymmetric defense. The MND's 2021 *Quadrennial Defense Review*, for example, states, "Asymmetric and fundamental capabilities shall complement one another perfectly as a comprehensive and robust power for defense operations."⁵² Taiwan's military has operationalized this guidance by canceling some asymmetric programs and funneling more resources toward traditional platforms. For example, the MND canceled a plan to build 60 small missile boats at a cost of \$1.1 billion (\$18.3 million each) and instead decided to build two 2,000-ton frigates for just under \$294 million (\$147 million each).⁵³ Given Taiwan's low level of defense spending, an approach that mixes asymmetric and traditional

capabilities risks strategic incoherence and a force that does everything poorly instead of doing a few things well.

A common counterargument to focusing exclusively on asymmetric defense is that such capabilities are unsuited for responding to China's coercive activities below the level of armed conflict—commonly called “gray zone” activities—and acts of war that fall short of an invasion, such as a blockade.⁵⁴ In this view, traditional capabilities may be unlikely to survive long in an invasion scenario, but they are useful in peacetime and lower intensity conflict. An asymmetric defense strategy is admittedly less flexible, but Taiwan should pursue it anyway. Taiwan's existing traditional capabilities are sufficient to respond to low-intensity contingencies. Acquiring more asymmetric capabilities does not mean that Taiwan should get rid of its traditional capabilities, though the MND should take care to not let growing maintenance costs of traditional capabilities crowd out funding for new asymmetric ones.⁵⁵ Also, while an invasion would be China's riskiest military option, it is the most likely to succeed. Blockades and coercive bombing campaigns often fail to achieve an attacker's ultimate aims despite inflicting pain on the target.⁵⁶

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Full adoption of an asymmetric defense strategy would limit Taiwan's military options and make it harder to respond to China's day-to-day activities, particularly given Taiwan's anemic defense topline. However, Taiwan's continued existence as a de facto independent state will not hinge on how well it can respond to China's needling gray zone actions or limited uses of force that are unlikely to succeed by themselves, such as a blockade. Taiwan's survival will depend on how well it can fend off an amphibious invasion, and an asymmetric defense strategy is the best option for countering an invasion. Admiral Lee's instincts in devising

the Overall Defense Concept were correct, but the MND's recent behavior shows that more US pressure is needed to keep Taipei on the right path. If Taipei wants to field large numbers of traditional and asymmetric capabilities, then it needs to sustain much higher levels of defense spending to adequately resource both categories of capabilities. This is a worthwhile long-term goal, but in the short term, both Washington and Taipei should focus their attention on asymmetric defense.

Prevailing in Two Critical Military Operations

A Chinese invasion of Taiwan would entail several military operations designed to move a large ground force across the Taiwan Strait by air and sea and sustain that force while it takes control of the island. To deter or defeat such an invasion, Taiwan must focus on its ability to prevail in two critical military operations: surviving conventional bombardment and preventing a first echelon from seizing ports, airfields, and beachheads, which would occur in the opening hours and days of a conflict. While there are additional military operations involved in an amphibious invasion, these two operations should be Taiwan's primary focus for three reasons.

First, even if the United States were to intervene, Taiwan would be fighting these operations largely on its own with what it has immediately at hand. Conventional bombardment and establishing a beachhead would occur in the early stages of an invasion, meaning Taiwan's military would be defending against them from the very beginning of the conflict. Even if the United States were to join the conflict rapidly, it would likely focus on prevailing in its own set of operations before it could bring significant forces to bear in the Taiwan Strait. In other words, even in a scenario of rapid and seamless US intervention, the China-Taiwan military balance would have a greater impact than the US-China military balance on the outcome of these two critical operations.

Second, Taiwan's current military posture is not well suited to these operations. Despite some progress toward fielding more asymmetric capabilities, Taiwan's military is still mostly dependent on traditional capabilities that China would be able to defeat relatively easily and quickly.⁵⁷ Taiwan's traditional air and naval forces and the

bases that they operate from are particularly vulnerable to China's large arsenal of precise conventional weapons. According to a 2023 Center for Strategic and International Studies report on the outcomes of an amphibious invasion war game, "The sheer volume of Chinese missiles makes Taiwan's air and naval forces almost irrelevant. . . . However, the same is not true of Taiwan's ground forces, which become critical to the outcome of the operation."⁵⁸ Taiwan should use surviving a conventional bombardment and denying the first echelon a beachhead as a guide for procurement priorities.

Third, Taiwan's success or failure in these operations will have significant—and potentially decisive—implications for the rest of the conflict. How Taiwan performs in these two operations will set the stage for subsequent operations. Catastrophic defeat would result in a larger Chinese ground presence that could be sustained and expanded, whereas success would keep a military lodgment limited or prevent one altogether. A smaller lodgment would be easier to contain, and higher attrition among China's limited amphibious warship inventory, dedicated amphibious assault brigades, and airborne units in the first echelon would make it harder for China to mount a successful second-wave landing. Taiwan's full or partial success in these two military operations would make all subsequent operations harder for China. Alternatively, defeat in these operations would put Taiwan's survival in jeopardy.

Surviving Conventional Bombardment

Perhaps the most threatening military operation at China's disposal in an amphibious invasion is large-scale bombardment with precise conventional weapons—known in PLA doctrine as a "joint firepower strike campaign."⁵⁹ In an invasion scenario, the joint firepower strike campaign would use weapons from all of China's military services, but primarily the PLA Rocket Force, to attack high-value targets in Taiwan. Chinese military doctrine identifies air bases, command and control centers, and logistics bases as primary targets.⁶⁰ Likely secondary targets include critical infrastructure, such as power plants and fuel storage, and massed military units not already targeted in base attacks. A joint firepower campaign is especially dangerous for Taiwan because of the sheer

volume of missiles that China has.⁶¹ While Taiwan possesses some missile defense systems, China could simply overwhelm them with large volleys of missiles fired from multiple directions.

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Taiwan's traditional military capabilities are particularly vulnerable to the joint firepower strike campaign. Manned aircraft and large surface warships operate from large, fixed bases that are easy targets for precise conventional weapons.⁶² While Taiwan has some hardened aircraft shelters that could reduce the effectiveness of China's missile attacks, these facilities are too few to make an appreciable difference. As stated in the 2023 Center for Strategic and International Studies war-game report, "Chinese short-range ballistic missiles can cover all of Taiwan's military tarmac and [hardened aircraft shelters], destroying all Taiwanese aircraft not in underground shelters. The surviving aircraft would contribute only marginally to the air battle over the island."⁶³ A successful conventional bombardment would devastate Taiwan's ability to use its traditional air and naval forces to fend off subsequent attacks by Chinese aircraft and seaborne and airborne landing attempts by Chinese ground forces. Primary responsibility for fending off those subsequent operations would fall to Taiwan's ground forces and the asymmetric capabilities that survive the bombardment.

Surviving a conventional bombardment is the most challenging of the two critical military operations that Taiwan must prepare for, but there are ways for Taipei to improve its prospects. Increasing survivability against China's joint firepower campaign could be best achieved by making Taiwan's military less dependent on large bases and increasing the mobility of its ground forces, especially its anti-ship and anti-air forces.

Taiwan should also take steps to improve the survivability of its existing traditional forces so that they are less prone to early, rapid destruction. Since these traditional forces are a sunk cost, any effort to improve their survivability should be relatively low-cost, leaving more of Taiwan's limited funds available for new asymmetric capabilities. For example, to keep its manned fighter force operationally viable for a longer period in a conflict, Taipei should build more hardened aircraft shelters instead of buying more costly missile defense systems. The cost of a new US-made Patriot missile defense battery is \$1.1 billion, while South Korea in 2020 was able to build 20 modern hardened aircraft shelters for \$125 million (\$6.25 million per shelter).⁶⁴ Ground-based air defense systems are essential for Taiwan, but it should prioritize systems that are less expensive, more mobile, and optimized for shooting down aircraft instead of ballistic missiles.⁶⁵ Additionally, Taiwan should eschew distributed aircraft operations that would have military aircraft use civilian airports or stretches of highway as makeshift bases.⁶⁶ China could easily shift missile targeting to neutralize less protected civilian airports, while aircraft operating from highways would risk slowing the movement of Taiwan's ground forces.

“Surviving a conventional bombardment is the most challenging of the two critical military operations that Taiwan must prepare for, but there are ways for Taipei to improve its prospects.”

Taipei should also push more reconnaissance and strike capabilities to smaller, lower-level ground force units so that they could operate effectively if a Chinese joint firepower campaign disrupted higher-level command and control. Such a change would require adjustments in Taiwanese military training and capabilities. On the training side, Taiwan should create more realistic, less-scripted exercises and improve small-unit combat skills.⁶⁷ On the capabilities side, Taiwan should emulate aspects of the US Marine Corps' Force Design 2030 reforms, which put more

short-range reconnaissance and strike drones under the control of platoon and company commanders.⁶⁸

Finally, making Taiwan's ground-based anti-ship and anti-air forces more numerous and more mobile would be the best bet for improving survivability against a joint firepower campaign. The war in Ukraine illustrates the value of mobile and distributed air defense. In the first few days of the invasion, Russian missile attacks and airstrikes destroyed much of Ukraine's immobile air defenses and disrupted the country's command and control system.⁶⁹ However, Russian air superiority over Ukraine was short-lived because Ukraine was able to disperse most of its mobile surface-to-air missiles, which survived to fight another day.⁷⁰

Preventing the First Chinese Invasion Wave from Seizing an Airfield, Port, or Beachhead

Preventing the first wave of Chinese ground forces from establishing a foothold that they could use to move follow-on forces onto Taiwan is a manageable problem for Taipei given the inherent difficulties of large amphibious operations and the PLA's limited lift capability. The first echelon would primarily consist of troops from the PLA Army's six amphibious combined arms brigades, with support from the PLA Marines as well as paratroopers and helicopter-borne infantry.⁷¹ The amphibious combined arms brigades have their own artillery, air defense, and other support battalions to give them a better chance of seizing and holding a lodgment, but reinforcement from heavier units would be necessary for breaking out of the initial landing zone. China's growing airborne infantry units provide another option for putting forces ashore, but without air superiority, these forces would be vulnerable to destruction by Taiwan's ground-based air defenses while flying to their drop-off points.⁷²

China's primary limitation is its relatively limited inventory of purpose-built amphibious assault ships that could transport the first echelon across the Taiwan Strait and support them as they established a foothold on the island. While China has modernized and slightly expanded its stock of relevant ships, its overall amphibious lift capacity is likely insufficient in the face of a determined defensive effort.⁷³ According to a 2022 US Naval War College analysis, “Most observers assess that the PLA would need to

land 300,000 or more troops on Taiwan in total and that the PLA [Navy] amphibious fleet can only land around one division, roughly 20,000 troops, in a single lift.”⁷⁴ Another study published by Washington’s National Defense University states, “Overall, amphibious shipping is limited compared with PLA amphibious combat forces,” concluding that “current PLA amphibious lift capacity leaves little room for error or attrition in a joint island landing campaign. . . . Losses to the limited PLA [Navy] and PLA [Army] amphibious fleet by Taiwan’s antiship missiles could prove catastrophic to the entire endeavor.”⁷⁵

“Taipei should prioritize producing and stockpiling large quantities of missiles, drones, ammunition, and survivable sensors that can locate targets for anti-ship missiles at long range.”

Some American analysts contend that Beijing could quickly make up for its amphibious lift shortfall by using civilian ships to transport ground forces.⁷⁶ This is a well-founded concern given the use of large civilian ships in recent troop movement and amphibious assault exercises.⁷⁷ China’s civilian ships would assist the first echelon to a degree, but given their vulnerability to attack, they would be most useful for transporting subsequent invasion waves after the first echelon establishes a beachhead or seizes a port where the civilian ships could safely unload. Therefore, even considering China’s civilian sealift, Taiwan’s primary objective should be to prevent the first wave of an invasion from seizing a port or establishing a beachhead that would allow China’s civilian ships to unload large numbers of troops. The central aim of defeating China’s ground forces is to prevent the first wave from capturing a facility that the PLA could use to flow reinforcements onto Taiwan.⁷⁸ Civilian sealift is not an adequate answer to this question, and almost all of the first echelon would be fighting from purpose-built amphibious warships.

Of the two critical military operations, defeating the first echelon of amphibious ground forces is where Taiwan’s traditional military capabilities would play their biggest

role, though achieving that victory would also require increased asymmetric capabilities. Taiwan’s traditional capabilities would be most relevant for bottling up and destroying any first echelon units that make it ashore. Tanks, mechanized infantry vehicles, artillery, and helicopters would be particularly valuable for these missions.⁷⁹ Asymmetric capabilities would prioritize attacking amphibious warships as they unload ground units offshore and ground units swimming ashore. Mobile surface-to-air missiles should also move with Taiwan’s traditional capabilities to protect them from air attacks.⁸⁰

Road-mobile anti-ship missiles, such as the 400 Harpoons that the United States sold Taiwan in 2020, afford excellent asymmetric capabilities for destroying larger amphibious warships.⁸¹ Swimming infantry fighting vehicles could be countered by large numbers of sea and land mines at likely landing sites and by infantry armed with anti-tank missiles and short-range suicide drones, also known as “loitering munitions.” As previously mentioned, the US Marine Corps’ Force Design 2030 concept provides a blueprint for arming small units with portable reconnaissance and strike drones that could work well in this mission. Taiwan could also use land-attack missiles to interdict ground forces waiting to load onto transport ships, but defeating the invasion force in the strait and closer to Taiwan’s shores should be a higher priority than striking the mainland. Taiwan already possesses many of the asymmetric capabilities previously mentioned but in relatively small quantities. Asymmetric capabilities are more cost-effective for Taiwan, but because Taiwan is an island, the capabilities need to be procured in large quantities because of high rates of ammunition expenditure and the difficulty of foreign resupply once conflict begins. Therefore, Taipei should prioritize producing and stockpiling large quantities of missiles, drones, ammunition, and survivable sensors that can locate targets for anti-ship missiles at long range.⁸²

POLICY RECOMMENDATIONS

US policy toward Taiwan should have two pillars. First, the United States should adjust its security assistance policies in ways that press Taiwan to focus its defense strategy on surviving China’s conventional bombardment

and preventing the first wave of amphibious troops from establishing a lodgment that could be used to flow reinforcements onto the island. Second, to reduce the likelihood of a short-term crisis and buy Taiwan the time it would need to overcome its defense shortcomings, the United States should offer China assurances about the limits of US support for Taipei and the durability of the one China policy.

Policy Recommendations for US Security Assistance

Taiwan's adoption of an asymmetric defense posture should be the primary goal of US security assistance. There are three ways that the United States can advance this goal:

- arms sales of asymmetric weapons that are contingent on greater Taiwanese investment in similar capabilities;
- training activities that improve Taiwan's ability to fight in a mobile, distributed fashion without increasing interoperability with the United States; and
- improving Taiwan's domestic defense industrial base so that it can produce and stockpile asymmetric weapons and munitions.

All these activities would carry some risk of angering China, but such risk is manageable provided the United States takes corresponding actions to assure China that it does not seek to upend the US-China-Taiwan status quo.

Security Assistance Recommendation 1: Conditional Sales of Asymmetric Capabilities

The United States should sell only asymmetric capabilities to Taiwan and condition all arms sales on Taiwan increasing defense spending and adopting an asymmetric defense strategy. Narrowing the types of weapons that the US sells to Taiwan and making arms sales contingent on Taiwan's behavior would maintain US materiel support for Taiwan's defense and push its reluctant Ministry of National Defense toward asymmetric defense.

Washington has made some effort to nudge Taipei in the right direction by turning down requests for traditional capabilities and selling more asymmetric systems, but it has

not gone far enough in this regard. As Figure 3 and Table 1 show, traditional capabilities like tanks, self-propelled artillery, and fighter aircraft make up 63 percent of the \$19 billion worth of US weapons that have been sold but not yet delivered to Taiwan, while asymmetric capabilities and munitions make up 22 percent and 15 percent of the backlog, respectively.⁸³ According to data from SIPRI's Arms Transfers Database, a 2019 sale of 66 F-16 C/D Block 70 fighter aircraft for \$8.2 billion accounts for nearly half of the \$19 billion.⁸⁴ Both the Trump and Biden administrations made significant asymmetric arms sales to Taiwan, but by dollar value, both administrations sold more traditional than asymmetric capabilities. The United States should do more to increase sales of asymmetric capabilities and clear the backlog of weapons for Taiwan.

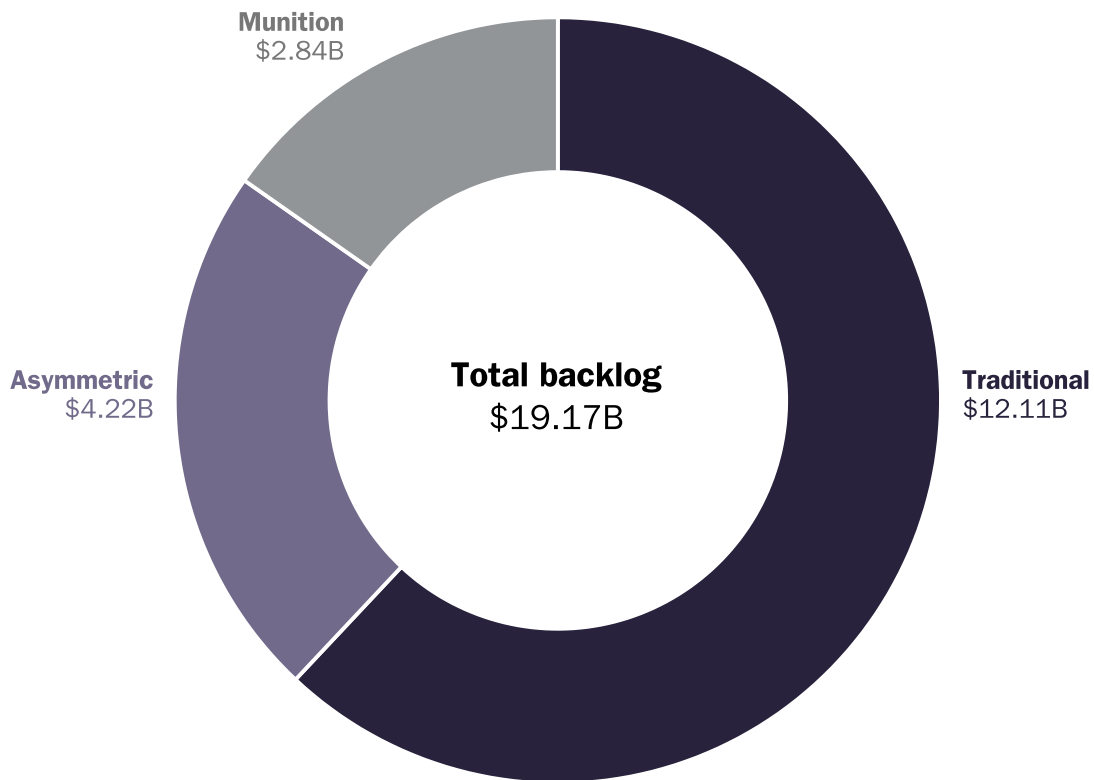
“The United States should sell only asymmetric capabilities to Taiwan and condition all arms sales on Taiwan increasing defense spending and adopting an asymmetric defense strategy.”

Recent US legislation provides a good rule of thumb for determining what weapons the United States should sell to Taiwan, with some exceptions. The Taiwan Enhanced Resilience Act (TERA), passed as part of the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, contains a requirement for the executive branch to send a report to Congress on Taiwan's progress toward acquiring a list of 14 “counter-intervention capabilities,” listed in Table 2.⁸⁵ Of the 14 capabilities mentioned in TERA, the United States should sell Taiwan nine types of capabilities without limitations because they are clearly asymmetric. Three capabilities—integrated air and missile defense, long-range precision fires (artillery, missiles, etc.), and manned and unmanned aerial systems—should be sold with some conditions. Air defense systems are an excellent capability for Taiwan, but missile defense systems are much more expensive and likely to run out of interceptors quickly given China's vast missile arsenal. Long-range precision fires—commonly known as artillery

Figure 3

Breaking down the US arms sales backlog

Arms sales backlog by weapons category, billions of dollars



Sources: SIPRI Arms Transfers Database, Stockholm International Peace Research Institute; and “Major Arms Sales,” Defense Security Cooperation Agency. Notes: Arms sales backlog represents the dollar value of US arms sales announcements made by the Defense Security Cooperation Agency (DSCA), excluding announcements for maintenance of and spare parts for US-supplied weapons. DSCA announcements of arms sales were checked against Stockholm International Peace Research Institute (SIPRI) data on weapon deliveries. Partial weapon deliveries (e.g., 10 out of 100 tanks delivered) are counted in the backlog at their whole dollar value. SIPRI data ends in 2022. All DSCA announcements made in 2023 are assumed to not be delivered as there was no mention in SIPRI data of a weapon sale being announced and delivered in the same year. In rare instances, SIPRI data mentions a weapon transfer that was not mentioned in a DSCA announcement. Such items are not included in the weapons backlog figures, but if they were, they would increase the Asymmetric category by approximately \$360 million and the Traditional category by less than \$100 million. DSCA announcements of maintenance services and spare parts sales for US weapons already delivered to Taiwan are not included in the weapons backlog. DSCA maintenance announcements came to \$3.07 billion between September 2018 and September 2023. Discrepancies in figures are attributable to rounding errors.

outside military parlance—should come with a range limit of 160 kilometers so that Taiwan could not use US-supplied weapons to attack mainland China. Unmanned aircraft are an excellent asymmetric capability, but Taiwan should eschew manned aircraft because of their expense and vulnerability to China’s conventional bombardment. The United States should not sell Taiwan two of the TERA capabilities: land-attack cruise missiles (for the same reason as long-range precision fires) and a loophole category of “other defense capabilities” that could justify the sale of any system.⁸⁶ While the TERA capabilities list is part of a reporting requirement and not official guidance for future US weapons sales, the executive branch should use the

TERA capabilities list as a guide when determining what weapons it will sell to Taiwan.

To further encourage Taiwan to make smarter defense choices, the United States should pair the carrot of US-supplied asymmetric weapons with the stick of conditionality.⁸⁷ Taiwan needs to increase defense spending, improve training, and build more asymmetric weapons.

Conditionality should incentivize Taiwan toward taking these actions. It could take two forms. First, the United States could sell to Taiwan only the capabilities included in the TERA list of asymmetric weapons. Second, Congress could make grants or loans for security assistance contingent on Taiwan’s behavior. Making US arms sales and military financing

Table 1

Backlogged capabilities by weapons category

Weapon category and capability	Dollar value (millions)	Share of total backlog
Traditional total	\$12,113	63.2%
F-16C/D Block 70	\$8,000	41.7%
M1A2T Abrams tanks	\$2,000	10.4%
M109A6 Paladin self-propelled howitzer	\$750	3.9%
F-16 infrared search and track systems	\$500	2.6%
MK 15 Phalanx Close-In Weapon System*	\$416	2.2%
MS-110 reconnaissance pods	\$367	1.9%
AN/SLQ-32 electronic warfare system for Keelung-class destroyer**	\$80	0.4%
Asymmetric total	\$4,221	22.0%
Harpoon Coastal Defense System	\$2,370	12.4%
MQ-9B unmanned aircraft	\$600	3.1%
High Mobility Artillery Rocket System	\$436	2.3%
Air-launched Harpoon missiles	\$355	1.9%
Field Information Communications System	\$280	1.5%
Volcano anti-tank mining system	\$180	0.9%
Munition total	\$2,835	14.8%
AGM-84H SLAM-ER missile	\$1,008	5.3%
F-16 munitions	\$619	3.2%
Mk 48 heavyweight torpedoes***	\$430	2.2%
30mm ammunition	\$332	1.7%
AGM-154C Joint Standoff Weapon	\$186	1.0%
Lightweight torpedoes and conversion kits	\$175	0.9%
AIM-9X Block II missiles	\$86	0.4%

Sources: SIPRI Arms Transfers Database, Stockholm International Peace Research Institute; and “Major Arms Sales,” Defense Security Cooperation Agency. Notes: Arms sales backlog is the dollar value of all capabilities sold minus maintenance. Defense Security Cooperation Agency (DSCA) announcements of arms sales were checked against Stockholm International Peace Research Institute data for weapons delivery. Partial weapon deliveries (e.g., 10 out of 100 tanks delivered) are counted in the backlog at their whole dollar value. SIPRI data ends in 2022. All DSCA announcements made in 2023 are assumed to not be delivered, as there was no mention in SIPRI data of a weapon sale being announced and delivered in the same year. In rare instances, SIPRI data mentions a weapon transfer that was not mentioned in a DSCA announcement. Such items are not included in the weapons backlog figures, but if they were, they would increase the Asymmetric category by approximately \$360 million and the Traditional category by less than \$100 million. DSCA announcements of maintenance services and spare parts sales for US weapons already delivered to Taiwan are not included in the weapons backlog. DSCA maintenance announcements come to \$3.07 billion between September 2018 and September 2023.

*DSCA announced the Phalanx sale in 2015, but according to SIPRI’s data, only 1 of 15 units has been delivered.

**This electronic warfare system will equip a class of Taiwan’s large crewed surface warships, which are traditional capabilities.

***This combines two Mk 48 sales—a \$250 million sale in June 2017 and a \$180 million sale in May 2020. According to SIPRI’s data, neither sale has been fully delivered.

conditional on Taiwan’s movement toward an asymmetric defense strategy and increases in Taiwan’s core defense budget (excluding supplemental spending) would be a sensible way to incentivize smarter decisions from Taipei. TERA, for example, authorizes up to \$2 billion per fiscal year in foreign military financing grant assistance, but it does not contain any conditions that Taiwan must meet to receive this support.

Security Assistance Recommendation 2: Training Improvements without Interoperability

The United States has an interest in improving the quality of Taiwan’s military training, but Washington should tread carefully. A growing number of policymakers and defense analysts have called for the United States and Taiwan to

Table 2

Taiwan Enhanced Resilience Act (TERA) “counter-intervention capabilities” as a guide for US weapon sales

Should the United States sell?	Rationale
Yes	
Anti-armor	Asymmetric capability
Anti-ship cruise missiles	Asymmetric capability
Coastal defense	Asymmetric capability
Command and control systems	Asymmetric capability
Defensive cybersecurity capabilities	Asymmetric capability
Intelligence, surveillance, and reconnaissance capabilities	Asymmetric capability
Mining and countermining capabilities	Asymmetric capability
Swarming maritime assets	Asymmetric capability
Undersea warfare systems	Asymmetric capability
Maybe	
Integrated air and missile defense systems	The high cost of missile defense systems reduces their value as an asymmetric capability, which should be relatively inexpensive and numerous. Air defense capabilities are asymmetric.
Long-range precision fires	As part of the assurance measures proposed in this report, the United States should not sell weapons in this category that can reach China from the main island of Taiwan.
Manned and unmanned aerial systems	Manned aircraft are not asymmetric systems, and have both high upfront and maintenance costs. Unmanned aircraft are asymmetric systems and should be sold in large numbers.
No	
Land-attack cruise missiles	As part of assurance measures proposed in this report, the United States should not sell Taiwan this capability. But Taiwan is free to develop its own.
Other defense capabilities that the United States determines are crucial to the defense of Taiwan	This category creates a loophole that Washington could use to justify the sale of virtually any military capability to Taiwan.

Source: James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, Pub. L. 117-263, 136 Stat. 2418 § 5502 (2022).
 Note: TERA mentions these capabilities as part of a reporting requirement. It specifically states that the secretaries of the Defense and State departments must issue a report to Congress on “efforts of Taiwan to acquire and employ within its forces counter-intervention capabilities.”

train together with the aim of becoming more interoperable—capable of fighting side by side on the battlefield. This is a bad idea for two reasons.

First, the process of creating interoperability would look like the United States was abandoning strategic ambiguity, which would increase the risk of a confrontation with China. The United States and Taiwan have sent military personnel to train together before, but these have tended to be very small in scope. Getting to interoperability would require regular rotations of larger military units through training ranges either in the United States or Taiwan. While China already anticipates US military intervention in a Taiwan conflict, increased US-Taiwan interoperability

would move intervention further toward certainty than possibility, signaling a US abandonment of strategic ambiguity. Some supporters of greater interoperability argue for sending Taiwanese units to the United States for training instead of sending large US troop deployments to Taiwan.⁸⁸ That could be somewhat less provocative, but it would not likely mollify China’s fear that Washington is hollowing out the one China policy.

Beyond potentially provoking China, interoperability is unnecessary. Even if the United States did intervene in a Taiwan scenario, it would not be fighting alongside Taiwan’s military. US military operations would primarily involve long-range or “over the horizon” operations to destroy

China's air and naval power. Taiwan's military would be operating close to home and its ground forces would have primary responsibility for foiling an amphibious invasion.⁸⁹ In other words, the United States and Taiwan would be using their armed forces in fundamentally different ways and in different geographic areas, thereby reducing the benefits of interoperability.

“Resupplying Taiwan after a war starts would be much more difficult than resupplying Ukraine because Taiwan is an island and does not share a border with friendly countries. Therefore, Taiwan needs to have large stockpiles built up before an invasion starts.”

Instead of pursuing US-Taiwan interoperability, the United States should focus its efforts on improving the ability of Taiwan's military to conduct mobile and distributed operations, especially its ground forces. This training should primarily occur on Taiwan's territory, with a relatively small number of US military personnel involved. The US military already deploys trainers to Taiwan, reportedly increasing from 30 to between 100 and 200 troops.⁹⁰ US and NATO training efforts with Ukraine's military between 2014 and 2022 provide some examples of the kinds of skills on which US training in Taiwan should focus, though with the provision that exercises involving large US military formations coming to Taiwan are off limits.⁹¹

US trainers in Taiwan should focus on improving small-unit tactics, effective use of US-provided asymmetric weapons, and Taiwan's ability to coordinate across different service branches. A small number of Taiwanese officers could also come to the United States to observe US military exercises, rotate through US training programs (especially those related to the Marine Corps' Force Design 2030 effort), and bring lessons and best practices back to their home units. Keeping the training presence small should reduce the risk of an aggressive Chinese reaction while still improving the quality of Taiwan's armed forces.

Security Assistance Recommendation 3: Improving Taiwan's Defense Industrial Base

The United States should help expand Taiwan's ability to produce weapons for asymmetric defense domestically. Taiwan's defense industry has already demonstrated that it can build high-quality asymmetric weapons, but it has struggled to produce capabilities at scale. Taiwan is also waiting for US-made ammunition and missiles that take years to deliver due to competing demands from both the US military and other foreign purchasers.⁹²

While the war in Ukraine has demonstrated the value of asymmetric capabilities, it has also underscored the fast pace of munitions consumption in modern warfare. Taiwan may have excellent anti-ship and anti-aircraft missiles, but without a substantial reloading capability, it risks running out of missiles faster than China runs out of ships and aircraft. Resupplying Taiwan after a war starts would be much more difficult than resupplying Ukraine because Taiwan is an island and does not share a border with friendly countries. Wartime aid or weapons for Taiwan would have to come from long distances, and it would be easier for China to interdict those shipments than it is for Russia to stop NATO countries from supplying Ukraine. Therefore, Taiwan needs to have large stockpiles of munitions, drones, and other asymmetric capabilities built up before an invasion starts.⁹³ The ability of the United States to build up these stockpiles is strained, so Taiwan needs to develop a stronger defense industry of its own to make up the difference.

The United States can help expand Taiwan's defense industrial capacity through coproduction of asymmetric capabilities. Coproduction entails US and Taiwanese defense companies partnering to produce weapons in Taiwan instead of the United States.⁹⁴ Washington has traditionally been hesitant to approve coproduction, since it could expose sensitive technology to theft.⁹⁵ One way to address this concern is to approve coproduction of weapons that are no longer at the cutting edge of US capabilities. For example, Taiwan needs large quantities of Harpoon, Javelin, and Stinger missiles for an asymmetric defense strategy. None of these capabilities represent the latest and greatest in US weaponry, so the consequences of the technology behind these weapons falling into the wrong hands would not be dire.

Taiwan should build large stockpiles of the asymmetric weapons that are best suited for defeating a Chinese

invasion and would be used up quickly in a conflict. Expanding coproduction with Taiwan would take some pressure off the US defense industrial base while improving Taiwan's capacity to expand production of its domestic weapons industry.

Policy Recommendations for Assuring China

Providing security assistance to improve Taiwan's ability to implement an asymmetric defense strategy is only half the solution. The United States also needs to provide assurances to China that Washington's support to Taiwan is not indicative of American abandonment of strategic ambiguity or the one China policy. Effective assurances to China would reduce the risk of a short-term crisis in the Taiwan Strait and buy Taiwan the time it needs to complete its defense transformation.

“Deterrence is a threat that an adversary should not do something lest it suffer costs that are higher than the benefits of the action. Assurance is the pledge to not inflict costs on the adversary if it complies and does not take the action.”

Assurance is an essential but often-overlooked aspect of deterrence. Deterrence is a threat that an adversary should not do something lest it suffer costs that are higher than the benefits of the action. Assurance is the pledge to not inflict costs on the adversary if it complies and does not take the action.⁹⁶ Most policymakers and foreign policy commentators are eager to enhance deterrence by funneling weapons to Taiwan, taking other actions to demonstrate US support, and abandoning strategic ambiguity in favor of a clear US military commitment to Taiwan. This has made Beijing understandably concerned that the United States is no longer committed to strategic ambiguity and the one China policy. As a group of US experts on China writing in *Foreign Affairs* put it, “The growing rhetoric in Washington to support Taiwan's permanent separation from mainland

China or restore something akin to an alliance relationship with the island increases fears in Beijing that waiting for a peaceful resolution of cross-strait differences will only result in the permanent loss of Taiwan.”⁹⁷ The problem with current US and Chinese policy in the Taiwan Strait is that both parties are leaning heavily on actions that raise costs for the other side without taking any measures to offer assurances.

It will take Taiwan time to procure the weapons it needs for an asymmetric defense strategy and train its forces to use them effectively. US assurances toward China will mean setting some limits on US support for Taiwan, which will be unpopular given Washington's current bipartisan hawkishness on China. Such assurances are vital, however, for strengthening the US commitment to the political arrangement undergirding peace and stability in the Taiwan Strait. Assurances could help buy Taiwan the time it needs to put itself in the best possible position to defend itself.

Assurance Recommendation 1: Limitations on US Weapons Sales

The United States should make a political commitment to China that it will only sell asymmetric capabilities to Taiwan. Washington has never previously specified what kinds of weapons it will and will not sell to Taipei. Communicating to both China and Taiwan that the United States will refrain from future sales of traditional capabilities would have two benefits. To China, it would underscore the defensive nature of US weapons sales. To Taiwan, it would signal Washington's commitment to an asymmetric defense strategy by taking additional traditional military capabilities off the table. China likely would not be pleased that the United States would continue to sell arms to Taiwan, but it would gain a US assurance that weapons aid is not open-ended. Taiwan would likely chafe at the loss of traditional US capabilities, but it would gain a degree of predictability that future weapon sales would enhance its asymmetric defense strategy.

The United States should apply two standards when determining what categories of weapons to sell to Taiwan. First, nearly every item on the TERA “counter-intervention capabilities” list in Table 2 should be sold to Taiwan. The TERA list covers capabilities that improve Taiwan's survivability against conventional bombardment and prevent

the PLA's first echelon of amphibious units from establishing a foothold on Taiwan. It is an excellent guidepost for what should be considered an asymmetric capability, and Washington should issue an official statement of policy committing itself to only selling weapons off the TERA list with the exceptions of land-attack cruise missiles, manned aircraft, missile defense systems, and precise land-attack fires with a range greater than 160 kilometers.

“The United States should cease symbolic actions that do nothing to improve Taiwan’s defense but stoke backlash from Beijing.”

Second, the United States should explicitly state that it will not sell Taiwan any weapon capable of striking ground targets in mainland China from the main island of Taiwan. This limitation would exclude TERA's land-attack cruise missiles and long-range precision fires with ranges greater than 160 kilometers (the narrowest part of the Taiwan Strait). US weapons aid to Ukraine has adhered to a similar, albeit not formal, restriction out of US concerns of conflict escalation caused by Ukraine using American weapons to strike Russian territory. For Taiwan, the range restriction should only apply to land-attack weapons. Some variants of the Harpoon anti-ship missile, for example, have a range greater than 160 kilometers and could land on Chinese territory if it were to miss its intended target, but the United States has a clear interest in selling Harpoons to Taiwan to defeat an amphibious landing.

Declining to sell Taiwan long-range, land-attack weapons would be marginally relevant for the two critical operations discussed here. These weapons are not essential for Taiwan to prevail in surviving a precision strike campaign and preventing China from landing ground forces on the island. China's ground-based missile forces are vulnerable to attack while in garrison, but they can quickly disperse and would likely do so before the start of hostilities. Taiwan does not have the long-range reconnaissance capabilities necessary to target China's missile forces in the field. Taiwan could also target Chinese air force bases, but China's large number of bases in range of Taiwan and hardening of aircraft parking spaces would reduce the effectiveness of a Taiwanese

missile campaign. Taiwanese land-attack weapons would be most useful for attacking embarkation points where Chinese ground forces gather and load into ships. Taiwan already possesses the long-range, ground-launched missiles to attack these embarkation points and is capable of building more of these weapons on its own, but the United States should not sell them. A range limitation for land-attack weapons would underscore the defensive nature of US arms sales to Taiwan and send a credible signal to both China and Taiwan that the United States' primary interest is in asymmetric defense.

Assurance Recommendation 2: No Symbolism, All Substance

The second assurance effort the United States should implement is to cease policies and actions that are mostly symbolic and not relevant for Taiwan's ability to implement asymmetric defense. The past few years have seen many symbolic US actions that have done nothing to improve Taiwan's defense but have succeeded in stoking backlash from Beijing.⁹⁸ The then Speaker of the House Nancy Pelosi's visit to Taipei in August 2022 and the then speaker Kevin McCarthy's meeting with Taiwanese president Tsai Ing-wen in California in April 2023 are quintessential examples of counterproductive US symbolic actions. Neither exchange produced any substantive improvement in Taiwan's ability to defend itself or change in US policy toward Taiwan, but China used the visits to justify large military exercises and a higher day-to-day military presence in the sea and air around the island.

The United States should refrain from future symbolic actions that do nothing to improve Taiwan's defense strategy or serve as rationales for an aggressive Chinese reaction. Examples of such policies that the United States should avoid that have either already occurred or are under debate include expanding Taiwan's inclusion in international government organizations, holding meetings between high-ranking elected officials from both the United States and Taiwan, requiring Senate confirmation of the head of the American Institute in Taiwan (a de facto embassy), and officially designating Taiwan as a major non-NATO ally.⁹⁹ Non-NATO ally status is relevant to Taiwan's defense, but the 2002 Foreign Relations Authorization Act already states

that “Taiwan shall be treated as though it were designated a major non-NATO ally” for arms sale purposes.¹⁰⁰ Otherwise, none of these actions have any bearing on Taiwan’s ability to implement an asymmetric defense strategy or the United States’ ability to assist in that effort. However, they would indicate growing political closeness between the United States and Taiwan, a situation that China could interpret as a move away from strategic ambiguity.

Both the United States and China face an assurance problem, and both should take steps to assure one another and break out of the downward spiral they are in. A US move to a “no symbolism, all substance” approach to pushing Taiwan toward an asymmetric defense strategy would be a good policy shift on its own merits. Corresponding assurance measures from China would improve the political prospects for “no symbolism, all substance,” but a lack of Chinese reciprocity would not diminish the value of American assurances.

CONCLUSION

After decades of self-defense lethargy, Taiwan has finally started taking steps toward adopting an effective posture for fending off a Chinese invasion. That is good news, but it is imperative for Washington to keep up the pressure and push Taipei toward asymmetric defense. While the United States should not directly go to war with China if deterrence fails, Washington has an interest in supporting Taiwan’s development of asymmetric capabilities that could improve Taiwan’s ability to deter a war in the first place and advance Washington’s interest of preventing China from achieving regional hegemony.

Washington has a great deal of leverage that it should be more willing to employ to push Taiwan toward asymmetric capabilities to repel an invasion through highly conditional arms sales, limited training, and increased coproduction of weapons systems. At the same time, the United States should assure China that it does not seek an end to strategic ambiguity or the one China policy, both of which have

helped prevent war in the Taiwan Strait and are more sustainable than their naysayers assert. The United States could assure China by committing itself to sell only asymmetric capabilities, refusing to provide Taiwan with weapons capable of reaching the Chinese mainland, and halting symbolic policies and actions that enrage China without contributing anything to Taiwan’s ability to defend itself.

“Washington has a great deal of leverage that it should be more willing to employ to push Taiwan toward asymmetric capabilities to repel an invasion through highly conditional arms sales, limited training, and increased coproduction of weapons systems.”

Taiwan needs to take its self-defense seriously if it wants to continue existing as a de facto independent country. The United States needs to tamp down its impulse for rash policies and actions that are more likely to provoke a war with China than deter one while applying the considerable leverage it has over Taiwan to accelerate a thorough transformation toward asymmetric defense.

Finally, it is important to note that US materiel support for Taiwan can only go so far. In 2015, Secretary of Defense Ash Carter said of the post-Saddam Iraqi Army, “We can give them training, we can give them equipment—we obviously can’t give them the will to fight.”¹⁰¹ Only Taiwan’s government, military, and people can create the willpower and cohesion to stand firm and resist if deterrence fails and China mounts an invasion. The United States should do what it can to help Taiwan field the best mix of capabilities to make an invasion painful for China, but the question of Taiwan’s long-term survival will ultimately hinge on its willingness to use those capabilities if China tries to invade.

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