Beyond the Arms Race: Explaining the Modernization of Naval and Associated Air Capabilities in the Asia-Pacific (2001-2016)

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Declaration

This is to certify that:

i. The thesis comprises only my original work towards the PhD except where indicated in the Preface,

ii. Due acknowledgement has been made in the text to all other material used,

iii. The thesis is fewer than 100 000 words in length, exclusive of tables, maps, bibliographies and appendices.

Sheryn Jiaron Lee

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Abstract

This thesis addresses the question of whether it is possible to construct a generic explanation for the current modernization of many armed forces in the Asia-Pacific, specifically in the naval domain. It argues that the concept of "arms race or arms racing," although widely employed and the subject of a voluminous literature, is in fact a rather weak analytical device for explaining these armament dynamics. Consequently, the thesis sets out to explain the factors driving the modernization of naval and associated air capabilities in key Asia-Pacific countries between 2001 and 2016. The primary motivations behind these armament dynamics ranged from a fear of US withdrawal from the region, the rise of China, enhancing self-defense requirements, and maritime territorial disputes. Due to the assumption that these armament dynamics are competitive it has become tempting for scholars and the media to label such strategic behavior of the use of force as an "arms race," broadly understood as a progressive and competitive increase in armaments by two or more states resulting from conflicting purposes or mutual fears.

The analysis of the case studies demonstrates that "arms race" theories are of limited utility as they strip states of any purposeful involvement in the armament process. The dissertation argues that a new set of propositions to understand interactive armament dynamics is needed. Responding and interacting to one or more opponents' armaments implies that decision-makers have deemed an armaments policy necessary to secure state survival in response to a perceived threat. As states are reacting to their broader strategic environment rather than a single adversary, interactive arming must involve two or more actors, and both qualitative and quantitative changes must be present. Interactive arming dynamics also exhibits highly competitive security behavior that does not directly involve the armed forces. This can take the form of enhanced strategic partnerships, intelligence-sharing, and defense technology transfers. This is often a response to a perceived asymmetry in a relationship, in which a country acknowledges that its armed forces will never be equal to a potential opponent's.

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Abbreviations

A2/AD	Anti-access and area-denial
AAV	Assault amphibious vehicles
AI	Artificial intelligence
AIIB	Asia Infrastructure Investment Bank
AIP	Air independent propulsion
ACSA	Acquisition and Cross-Servicing Agreement
ADIZ	Air Defense Identification Zone
AESA	Active electronically scanned array
AEW&C	Airborne early warning and control
ANZUS	Australia, New Zealand, United States Security Treaty
ASAT	Anti-satellite
ASBM	Anti-ship ballistic missile
ASCM	Anti-ship cruise missile
ASEAN	Association of Southeast Asian Nations
ASW	Anti-submarine warfare
ATT	Anti-torpedo torpedoes
BCA	Budget Control Act (2011)
BMD	Ballistic Missile Defense
C3	Command, control and communications
C3I	Command, control, communications and intelligence
C4ISR	Command, control, communications, computers, intelligence, surveillance and reconnaissance
CAT	Countermeasure Anti-Torpedo
CATOBAR	Catapult Assisted Takeoff But Arrested Recovery
CBO	Congressional Budgetary Office
CCG	Chinese Coast Guard
CCP	Chinese Communist Party
CGN	China General Nuclear
CIRO	Japan Cabinet Intelligence and Research Office
CIWS	Close-in weapon systems
CMC	Central Military Commission, China
COCOM	Unified Combatant Commands
COP-CIP	Common Operating Picture and Common Intelligence Picture

CPV	Communist Party of Vietnam
CRS	Congressional Research Service
CSBA	Center for Strategic and Budgetary Assessments
CSIS	Center for Strategic and International Studies
DARPA	US Defense Advanced Research Projects Agency
DAPA	ROK Defense Acquisition and Procurement Administration
DDG	Guided missile destroyer
DE&T	Development, evaluating and testing
DMZ	Demilitarized Zone
DOD	US Department of Defense
DPJ	Department Party of Japan
DSCA	Defense Security Cooperation Agency
EDCA	Enhanced Defense Co-operation Agreement
EEZ	Exclusive Economic Zone
FMS	Foreign Military Sales
GDP	Gross Domestic Product
GSOMIA	General Security of Military Information Agreement
HALE	High-altitude long-endurance
HNS	Host-nation support
ICBM	Intercontinental ballistic missile
IISS	International Institute for Strategic Studies
IMF	International Monetary Fund
INF	Intermediate-Range Nuclear Forces
IOC	Initial operating capability
ISR	Intelligence, surveillance and reconnaissance
JAM-GC	Joint Concept for Access and Maneuver in the Global Commons
JDAM	Joint Direct Attack Munition
JCG	Japan Coast Guard
JHV	Joint High Speed Vessel
JMSDF	Japan Maritime Self-Defense Force
JSDF	Japan Self-Defense Force
JSF	Joint Strike Fighter
JWCA	Joint Warfighting Capabilities Assessment
KAI	Korea Aerospace Industries

KAMD	Korea Air and Missile Defense
KCG	Korean Coast Guard
KMPR	Korea Massive Punishment and Retaliation
LCAC	Landing Craft Air Cushion
LCS	Littoral Combat Ships
LDP	Liberal Democratic Party, Japan
MaRV	Maneuverable re-entry vehicle
MIRV	Multiple independently targetable re-entry vehicles
MOKV	Multi-Object Kill Vehicle
MTT	Multi Role Tanker Transport
NATO	North Atlantic Treaty Organization
NBR	National Bureau of Asian Research
NIDS	National Institute for Defense Studies, Japan
NDPG	Japan National Defense Program Guidelines
NDRS	PRC National Development and Reform Commission
NLL	Northern Limit Line
NRC	US National Research Council
NSA	US National Security Agency
NSSN	New nuclear-powered attack submarine
O&M	Operations and maintenance
OED	OSIS (Ocean Surveillance Information System) Baseline Upgrade Evolutionary Development
OPCON	Operational control
PLA	People's Liberation Army
PLAN	People's Liberation Army Navy
PLARF	People's Liberation Army Rocket Force
QDR	Quadrennial Defense Review
R&D	Research and development
RD&TE	Research and development, testing and evaluating
RMA	Revolution in Military Affairs
RSIS	S. Rajaratnam School of International Studies, Singapore
S&T	Science and technology
SAF	Singapore Armed Forces
SAM	Surface-to-air missile
SCO	Strategic Capabilities Office

SIPRI	Stockholm International Peace Research Institute
SLEP	Service Life Extension Programs
SLBM	Submarine-launched ballistic missile
SLOC	Sea Lines of Communication
SMF	ROK Navy Strategic Mobile Fleet
SOE	State-owned enterprise
SSBN	Nuclear-powered ballistic missile submarine
SSGN	Nuclear-powered cruise missile submarine
SSN	Nuclear-powered general-purpose attack submarine
SSTD	Surface Ship Torpedo Defense
STAR	System Threat Assessment Report
STOBAR	Short Takeoff But Arrested Recovery
THAAD	Terminal High Altitude Area Defense
TWS	Torpedo Warning System
UAV	Unmanned aerial vehicles
UNCLOS	United Nations Conference on Law of the Sea
USFK	US Forces Korea
USPACOM	US Pacific Command
VPA	Vietnam People's Army
VPN	Vietnam People's Navy
WMD	Weapons of Mass Destruction
WMEAT	World Military Expenditures and Arms Transfers

Chapter 1:
Introduction

This dissertation addresses the question of whether it is possible to construct a generic explanation for the current modernization of many armed forces in the Asia-Pacific, specifically in the naval domain. It argues that the concept of "arms race or arms racing," although widely employed and the subject of a voluminous literature, is in fact a rather weak analytical device for explaining these armament dynamics. Consequently, the thesis sets out to explain the factors driving the modernization of naval and associated air capabilities in key Asia-Pacific countries between 2001 and 2016. This is relevant since around 2000 a sustained and rapid build-up of naval and associated air platforms has been underway in the Asia-Pacific, particularly in Northeast Asia. Due to the assumption that these armament dynamics are competitive, the scholarly debate has intensified around whether the region was subject to a destabilizing "arms race."

The notion of an "arms race" has remained a constant and vivid narrative in the current debate since the mid-1990s. In 1993, Michael Klare in *Foreign Affairs,* declared the "next great arms race" was underway in Asia. In 1995, Amitav Acharya advised that Southeast Asia was already undergoing an "arms race." Much of this commentary reflected the "astonishment at the rapid increase in Asian defence expenditure, anxiety about China's growing capabilities, and bewilderment about some of the major acquisitions in the region."[1] By the 2000s, this narrative continued. In 2005, Robert Hartfiel and Brian Jobs argued that the Asian arms build-up was not just a process of military modernization, but that there existed evidence of deep security imperatives.[2] The Stockholm International Peace Research Institute (SIPRI) has also repeatedly warned of an "arms race" when describing the extensive

[1] Desmond Ball, "Arms Modernization in Asia: An Emerging Complex Arms Race," in *The Global Arms Trade: A Handbook,* ed. Andrew T. H. Tan (London and New York: Routledge, 2010), 31.
[2] Robert Hartfiel and Brian Jobs, "Raising the Risks of War: Defence Spending Trends and Competitive Arms Processes in East Asia," Working Paper 44 (Institute of International Relations, University of British Columbia, Vancouver, March 2005), 3-4.

and on-going modernization of capabilities in the region.[3] In 2012, Geoffrey Till's *Asia's Naval Expansion: An Arms Race in the Making?*, argued that there clearly was an interactive element in the naval modernization of China, India, Japan and the United States, and that this could potentially evolve into an "arms race."[4]

In early 2014, the then-Commander of United States Pacific Command (USPACOM), Admiral Samuel Locklear, told reporters that the seas and skies of the Asia-Pacific were rapidly evolving into "the most militarized region in the world."[5] He added that it was not only the quantity of weapons being stockpiled by China and other nations in the Pacific, but also the advanced type of weapons systems that was causing concerns for American military planners. *The Wall Street Journal* in February 2016 argued that "the rapid rise in Chinese military spending and greater assertiveness in its territorial claims is fueling an arms race in the Asia-Pacific region even though many of the countries involved have been hit by an economic slowdown." *The Economist* on the other hand explained that the region was not witnessing a "classical arms race between two great powers, of the sort Britain and Germany engaged in before the first world war, or a cold-war contest like that between America and the Soviet Union. But certainly, Asian countries are competing to modernize their military forces."[6] The article's byline further argued that "the Asia-Pacific region is at peace—but it is buying a lot of weapons."[7]

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[3] See Paul Holtom et al, "Trends in International Arms Transfers, 2009," *SIPRI Fact Sheet*, March 2010, January 18, 2017, http://books.sipri.org/files/FS/SIPRIFS1003.pdf; Sam Perlo-Freeman, "Deciphering China's Latest Defence Budget Figures," *SIPRI Newsletter*, March 31, 2014, https://www.sipri.org/node/377; and Herbert Wulf, "China, India and the Three Cs," *SIPRI Commentary*, March 6, 2014, https://www.sipri.org/commentary/blog/2014/china-india-and-three-cs.

[4] Geoffrey Till, *Asia's Naval Expansion: An Arms Race in the Making?,* Adelphi 52 (Routledge and IISS: London, 2012), 12.

[5] Carlo Munoz, "Locklear: Asia-Pacific is Becoming 'Most Militarized Region in the World,'" *US Naval Institute News,* January 23, 2014, https://news.usni.org/2014/01/23/locklear-asia-pacific-becoming-militarized-region-world.

[6] "Taking Arms," *The Economist,* February 27, 2016, http://www.economist.com/news/asia/21693619-asia-pacific-region-peacebut-it-buying-lot-weapons-taking-arms.

[7] Robert Wall and Doug Cameron, "Chinese Military Spending, Ambitions Fuel Asian Arms Race, Studies Say," *The Wall Street Journal,* February 22, 2016, http://www.wsj.com/articles/chinese-military-spending-ambitions-fuel-asian-arms-race-studies-say-1456095661.

In this context, it has become tempting for both scholars[8] and the media[9] to label such strategic behavior[10] an "arms race"—broadly understood as a progressive and competitive increase in armaments by two or more states resulting from conflicting purposes or mutual fears.[11] The assumed primary motivations behind this dynamic range from the threat of China to enhancing self-defense requirements in response to South China Sea territorial disputes.[12] However, no significant effort has been made by proponents of "arms races" to distinguish the phenomenon from military modernization or strategic competition. This study defines military modernization as a country committing to harnessing the capability gains that flow from regularly updating the systems on its existing platforms. This involves procurement, upgrades and enhancement. Capability is understood as the "ability to succeed at an assigned mission."[13] Strategic competition "lies midway on a spectrum whose [political] ends are defined by conflict and cooperation." [14] Competition is seen as a bipolar relationship between strategic actors who possess aims relative to each other, and formulate a strategy to achieve them. It is not synonymous with interaction. Interaction on the other hand is not

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[8] Examples include Desmond Ball, *Asia's Naval Arms Race;* Alessio Patalano and James Manicom, "Rising Tides: Seapower and Regional Security in Northeast Asia," *Journal of Strategic Studies* 37, no. 3 (April 2014): 335-344; and Andrew T. H. Tan, *The Arms Race in Asia: Trends, Causes and Implications* (London: Routledge, 2014).

[9] See "A New Arms race is Exploding into Asia, with an Expensive and Extensive Shopping List of New Weapons. Who's Buying What — And Where does Australia stand?" *news.com.au,* February 13, 2014, http://www.news.com.au/technology/a-new-arms-race-is-exploding-into-asia-with-an-expensive-and-extensive-shopping-list-of-new-weapons-whos-buying-what-and-where-does-australia-stand/story-e6frfrnr-1226825644654; Vaishali Gauba, "Asia Defense Spending: New Arms Race in South China Sea," *CNBC,* May 21, 2015, http://www.cnbc.com/2015/05/21/asia-defense-spending-new-arms-race-in-south-china-sea.html; and Bruce Einhorn, "Submarines: Asia's Underwater Arms Race," *Bloomberg Business Week,* April 24, 2015, http://www.bloomberg.com/news/articles/2015-04-23/submarines-china-leads-asia-s-underwater-arms-race.

[10] Strategic behaviour is defined as "behaviour relevant to the threat or use of force for political purpose." See Colin S. Gray, "Strategic Culture as Context: The First Generation of Theory Strikes Back," *Review of International Studies* 25, no. 1 (January 1999): 50.

[11] Samuel P. Huntington, "Arms Races: Prerequisites and Results," *Public Policy* 8, no. 1 (1958): 42.

[12] See Till, *Asia's Naval Expansion: An Arms Race in the Making?,* 31-64.

[13] Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton and Oxford: Princeton University Press, 2004), 5.

[14] Thomas G. Mahnken, "Thinking about Competitive Strategies," in *Competitive Strategies for the 21st Century: Theory, History, and Practice,* ed. Thomas G. Mahnken (Stanford: Stanford University Press, 2012), 5

tightly coupled in a didactic pair like competition, and decisions are only partially influenced by other actors' actions.[15]

All too often these dynamics are grouped together and labeled an "arms race." Relatively little attention is paid to the critical questions of when and why armament dynamics become interactive, and if it augments strategic competition. Media reporting often fails to recognize that the term "arms race" is based on academic understandings and political advocacy debates regarding the bipolar relationship between the US and the Soviet Union during the Cold War. Yet, the transparency of the bilateral relationship between Washington and Moscow was unique due to the extreme implications of the use of nuclear technology, and because both sides recognized that they were indeed "racing." For instance, in 1967, John F. Kennedy's State of the Union address argued, "The deadly arms race, and the huge resources it absorbs, have long overshadowed all else we must do." [16] In 1974, upon Richard Nixon's return from the Soviet Union he described the arms limitation agreements as "another major step towards bringing the arms race under control." [17] Finally, in 1987, Ronald Reagan and Mikhail S. Gorbachev vowed to "undo the logic of the arms race by working together in good faith."[18] The "arms race" paradigm was thus founded on a historically unique relationship that we are unlikely to see again.

Moreover, previous scholarly debates on conventional naval "arms races" have focused on at least one of these three cases: the construction of Dreadnought battle ships in the early twentieth century between Britain and Imperial Germany; the development of Japanese, British and American naval forces during the 1920s and 1930s; and the build-up of capabilities in the mid- to late 1980s in the Asia Pacific, which some analysts called the "new Asian

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[15] Mahnken, "Thinking about Competitive Strategies," 8.
[16] John F. Kennedy, "Annual Message to the Congress on the State of the Union," January 30, 1961, The American Presidency Project, University of California Santa Barbara, http://www.presidency.ucsb.edu/ws/index.php?pid=8045&st=arms+race&st1=.
[17] Richard Nixon, "Address to the Nation on Returning From the Soviet Union," July 3, 1974, The American Presidency Project, University of California Santa Barbara, http://www.presidency.ucsb.edu/ws/index.php?pid=4288&st=arms+race&st1=.
[18] David K. Shipler, "Reagan and Gorbachev Sign Missile Treaty and Vow to Work for Greater Reductions," *The New York Times,* December 9, 1987, http://www.nytimes.com/1987/12/09/politics/09REAG.html?pagewanted=all.

arms race."[19] Similarly, military budgets and policy have long been explained by the same logic of interest groups and institutions: where rationalists view Imperial Germany's decision to build a powerful navy in the run-up to World War I as part of a systemic rivalry with Britain, others regard it as a response to domestic lobby groups seeking to link a steel industry facing weak demand to military groups wanting bigger budgets.[20] These cases, therefore, raise the question of whether "arms race" theories can identify "abnormal" strategic behavior. Colin Gray, for instance, has argued that the "arms race" is of limited theoretical utility since it implies that military modernization has gained momentum to the point where policy has lost control. Similarly, Barry Buzan and Eric Herring have pointed out that the application of "arms race" theories to cases including peacetime military relations between nations further weakens the concept's ability to characterize "abnormally intense military competition."[21] Consequently, in their view, the search for a universal "arms race" theory to understand the phenomenon of when armament dynamics become competitive, has effectively robbed the concept of analytical and practical utility.[22] The term "arms race" no longer points to a form of strategic behavior with a set of characteristics on which there is broad agreement.

Against this background, although this thesis will assess the value of "arms race" theories, it is not primarily concerned with whether the process of sustained modernization of naval and associated air capabilities in the Asia-Pacific constitutes an "arms race." Rather, it focuses on a different set of

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[19] "Asia's Arms Race," *The Economist,* February 20, 1993, 21; Tai Ming Cheung, "Loaded Weapons: China in Arms Buying Spree in Former Soviet Union," *Far Eastern Economic Review,* September 3, 1992, 21; James Clad and Patrick Marshall, "South-East Asia's Quiet Arms Race," *Chicago Tribune,* May 23, 1992, 21; Jonathan Sikes, "Asia Put Its Wealth in Military," *Washington Times,* February 12, 1990, 7.

[20] See Eckart Kehr, *Battleship Building and Party Politics in Germany, 1894-1901: A Cross Section of the Political, Social, and Ideological Preconditions of German Imperialism*, trans. Pauline R. Anderson and Eugene N. Anderson, rev. ed. (Chicago: University of Chicago Press, 1973); James R. Kurth, "The Political Consequences of the Product Cycle: Industrial History and Political Outcomes," *International Organization* 33, no. 1 (Winter 1979): 1-34; Glenn H. Snyder, "Review: Alliances, Balance, and Stability," *International Organization* 45, no. 1 (Winter 1991): 121-142.

[21] Barry Buzan, *An Introduction to Strategic Studies: Military Technology and International Relations* (Basingstoke and London: IISS and Macmillan Press, 1987), 72.

[22] This is what Giovanni Sartori defines as "conceptual stretching." See Giovanni Sartori, "Concept Misinformation in Comparative Politics," *The American Political Science Review* 64, no. 4 (December 1970): 1033-1053.

interrelated questions regarding the arming dynamics in the Asia-Pacific between 2001 and 2016. First, why do states choose to react to a perceived arms build-up? Second, what are the conditions and catalysts for the sustained modernization of capabilities to transition into an interactive dynamic in the Asia-Pacific? How does interaction become competitive?

Accordingly, this research investigates the sustained modernization of naval and associated air capabilities in the Asia-Pacific (2001-2016) to assess the efficacy of "arms race" theories for explaining arming dynamics. It is important to note that all military modernization constitutes arming. Modernization involves arms acquisitions [23] and/or technical upgrades (enhancement or modification) to arms. A country commits to harnessing the capability gains that flow from regularly updating the systems on its existing platforms because a modern and modernizing defense force can be more readily expanded than one operating dated equipment and systems. It is within a country's sovereign right to secure its survival through armaments, and this necessitates a process of modernizing its armed forces and reacting to changes in the strategic environment. The empirical investigation pays particular attention to naval and associated air defense platforms as most arms dynamics focus on a single military domain.[24] The geography of the Asia-Pacific, and the related significance of sea-lanes and maritime borders have meant the rapid modernization of regional navies over other services. The region is largely a maritime theatre, and regional flashpoints involve maritime

[23] "Acquisition" is interchangeable with the term "procurement" and refers to "more than just the purchase of an item or service; the acquisition process encompasses design, engineering, construction, testing, deployment, sustainment, and disposal of weapons or related items purchased from a contractor." Moshe Schwartz, "Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process," Congressional Research Service Report, RL34026 (May 23, 2014): 1. The US Federal Acquisition Regulation (FAR) states that "acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of source, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract." US Department of Defense, "Subpart 2.1—Definitions," *Federal Acquisition Regulation (FAR),* No. 2005-94, 2005-95, last modified January 19, 2017, https://www.acquisition.gov/?q=browsefar.

[24] Sean Bolks and Richard J. Stoll, "The Arms Acquisition Process: The Effects of Internal and External Constraints on Arms Race Dynamics," *Journal of Conflict Resolution* 44, no. 5 (2000): 587.

territory, features and resources.[25] Moreover, navies have been the predominant way to project military power well beyond the borders of a state, particularly in maritime Asia.[26] Through examining the complexity of the current capability developments in the region, this investigation will then analyze to what degree the arming dynamics in the region are interactive.

Significance of Research and Objectives

The primary research question is: how can the sustained modernization of naval and associated air capabilities in the Asia-Pacific (2001-2016) be explained? The investigation will also address several supplemental questions:

- Which regional states have invested the most resources in naval and associated air capabilities? Which states have achieved significant qualitative and quantitative changes in these capabilities?
- What are the explanations for the increase in naval and associated air capabilities in the Asia-Pacific maritime theatre? Are there gaps in explanations?
- Is there a concept or theory that comprehensively explains the qualitative and quantitative advancements in capabilities in the Asia-Pacific?

In addressing these questions, this dissertation aims to make a significant theoretical and practical contribution to understanding armament behavior. It does not seek to invalidate "arms race" theory, rather it aims to assess the utility of "arms race" theories for explanations of the current modernization of many of the armed forces in the Asia-Pacific. By understanding the motives behind interactive arms dynamics, it pairs the cognitive and ideational decision-making processes and rationales of state elites in choosing armament policies with their material incentives to secure state survival.

The objective of the dissertation is not theory construction or methodological innovation. While it acknowledges the importance and difficulty of these

[25] Adam P. Liff, "Whither the Balancers: The Case for a Methodological Reset," *Security Studies* 25, no. 3 (2016): 433.
[26] Bolks and Stoll, "The Arms Acquisition Process," 589.

exercises in the international relations discipline, the dissertation takes a strategic studies approach (as outlined in the next section). The results and outcomes of the analysis intends to be "useful to the society within which it is practiced and possibly to all humankind. It is not a fine art."[27] It further acknowledges Hedley Bull's charge leveled against some strategists that in their pursuit of "technical rigor and precision," many have "lost touch with political variety and change," [28] and strives to do the opposite.

Therefore, the dissertation proposes that a new set of propositions is needed to explain the phenomenon of the modernization of an armed force. That process encompasses: (1) a state's decision-making process which in turn, is likely to depend on its own goals and its assessment of its potential adversary's goals; (2) the probability that a state's adversaries can and will respond to a buildup; (3) the impact of a mutual buildup on the state's ability to achieve its own objectives (to deter, defend and/or attack); (4) the impact of a strategic competition on a states' relationships, whether it achieves its objectives or simply adds tension; and (5) how the anticipated changes over time in a state's ability to compete, influences its current arming behavior.[29] In addition, the dissertation makes a practical contribution to understanding naval and associated air modernization in key Asia-Pacific countries, and the factors that make these programs interactive. Stemming from understandings of the 19th and 20th century naval competition and the Cold War nuclear "arms race," arming dynamics are often labeled as "lethal," "dangerous," and destabilizing to a security order. However, often the decision to arm is a decision to maintain a favorable balance of power, and not to maximize a state's power and achieve absolute and/or relative gains. To label the contemporary arming dynamics in the Asia-Pacific as an "arms race" is inaccurate and misleading, and could be damaging if policy-makers embrace it.

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[27] Colin S. Gray, "Out of the Wilderness: Prime Time for Strategic Culture" (Report Prepared for the US Defense Threat Reduction Agency, Advanced Systems and Concepts Office, October 31, 2006), 3.
[28] Hedley Bull, "Strategic Studies and Its Critics," *World Politics* 20, no. 4 (July 1968): 600.
[29] Charles L. Glaser, "The Causes and Consequences of Arms Races," *Annual Review of Political Science* 3, no. 1 (2000): 266.

Theoretical Approach

The dissertation adopts a strategic studies approach as it investigates both material and ideational influences on decisions to arm, which is essentially a strategic behavior (defined here as behavior relevant to the threat or use of force for political purposes).[30] Strategic studies deals with "how states and other political actors utilize force to advance their wider objectives, how their interactions become heated, and how these violent confrontations might be shaped"; [31] with particular emphasis on "the interaction between self-interested actors engaged in the politics of force."[32] This approach traces back to the Prussian General Carl von Clausewitz's dictum on the enduring political nature of war, and thus the "political origins, applications, and implications of organized violence in times of both war and peace." [33] Although the unit of analysis is the state, a state's strategic assessment to arm involves the intersection of international and domestic processes. The focus on politics underlines the importance of also understanding the domestic preferences and institutions that shape state behavior. The study recognizes that the balance of power and intensity of substantive disagreements between political and military leaders can differ significantly across and within states, over time. Therefore, geostrategic concerns and internal dynamics are not mutually exclusive—states and leaders do not exist in a vacuum—and both influence strategic behavior.

This approach adopts several assumptions from the broad realist school of thought. However, the author acknowledges Hedley Bull's argument that the discipline of international relations ("behavioralists") has "done a great disservice to theory in this field by conceiving of it as a construction of and manipulation of so called models." [34] The state is a unitary actor in an anarchical system but is also influenced by domestic political forces such as,

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[30] Gray, "Strategic Culture as Context," 50.
[31] Robert Ayson, "Strategic Studies," in *The Oxford Handbook of International Relations,* ed. Christian Reus-Smit and Duncan Snidal (Oxford: Oxford University Press, 2008), 558.
[32] Ayson, "Strategic Studies," 558.
[33] The nexus between politics and war is a key assumption of the strategic studies approach. See Ayson, "Strategic Studies," 559.
[34] The strategic studies approach does not seek to create a theory through formal models, but to understand international relations through detailed observation and interpretation, similar to the English School. See Hedley Bull, "International Theory: The Case for a Classical Approach," *World Politics* 18, no. 3 (1966): 375.

public opinion, the legislature and privileged interest groups.[35] The analysis thus "incorporates both external and internal variables," arguing that state behavior is driven "first and foremost by its place in the international system and specifically by relative material power capabilities … however the impact of such power capabilities on foreign [and security] policy is indirect and complex, because systemic pressures must be translated through intervening variables at the unit level."[36] It is understood that decision-makers of foreign and security policy are "Janus-faced, existing at the intersection of the international and the domestic," and such a condition can either constrain or enable decision-making and state behavior.[37] More importantly, it recognizes that "there is no immediate or perfect transmission belt linking material capabilities to foreign [and security] policy behavior."[38] As Aaron L. Friedberg argues, "there would seem to be strong logical and historical reasons for questioning the explanatory and predictive power of theories that move directly from international structures to state behavior."[39] Ideas and values matter as much as interests, therefore the actions of states are not fully "rational" and utility-maximizing.[40]

The decision to arm involves the preparation for war and assessments of the state's relative capabilities. States are unitary actors in an anarchic system, resorting to self-help and the accrual of power to ensure state survival. Power may comprise anything that "establishes and maintains the control of man over man … [and] covers all social relationships which serve that end, from physical violence to the most subtle psychological ties by which one mind controls another."[41] States are motivated by fear, self-help and power

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[35] Norrin M. Ripsman, "Neoclassical Realism and Domestic Interest Groups," in *Neoclassical Realism, the State, and Foreign Policy,* ed. Steven E. Lobell, Norrin M. Ripsman and Jeffrey W. Taliaferro (Cambridge: Cambridge University Press, 2009), 170.
[36] Gideon Rose, "Review: Neoclassical Realism and Theories of Foreign Policy," *World Politics* 51, no.1 (October 1998): 146.
[37] Steven E. Lobell, "Threat Assessment, the State, and Foreign Policy: A Neoclassical Realist Model" in *Neoclassical Realism, the State, and Foreign Policy,* ed. Steven E. Lobell, Norrin M. Ripsman and Jeffrey W. Taliaferro (Cambridge: Cambridge University Press, 2009), 43.
[38] Rose, "Review: Neoclassical Realism and Theories of Foreign Policy," 146-147.
[39] Aaron L. Friedberg, *The Weary Titan: Britain and the Experience of Relative Decline, 1895-1905* (Princeton: Princeton University Press, 1988), 7.
[40] Nicholas Kitchen, "Systemic Pressures and Domestic Ideas: A Neoclassical Realist Model of Grand Strategy Formation," *Review of International Studies* 36 (2010): 122-123.
[41] Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace,* 6th ed. (Boston: McGraw Hill, 1993), 11.

maximization in their search for survival[42] and states' knowledge of others' motives is based on the information communicated by their international policies. Moreover, the decisions to acquire or enhance arms are considered one of a state's three basic options to achieve its objectives in an anarchic international system, aside from winning allies and cooperating with the adversary to reduce threats.[43] As Nicholas Spykman has argued,

> …in a world of international anarchy, foreign policy must aim above all at the improvement or at least the preservation of the relative power position of the state. Power is in the last instance the ability to wage successful war, and in geography lie the clues to the problems of military and political strategy.[44]

Here, the security dilemma is significant—that is, the assumption that the measures one state takes to increase its own security decreases the security of other states—as it explains how states can have fundamentally compatible political goals yet can still end up in arms competition.[45] As John Herz observed,

> …striving to attain security from … attack, [states] are driven to acquire more and more power in order to escape the impact of the power of others. This, in turn, renders the others more insecure and compels them to prepare for the worst. Since none can ever feel entirely secure in such a world of competing units, power competition ensues, and the vicious circle of security and power accumulation is on.[46]

States are concerned about the distribution of material capabilities in other states, relative to their own, and this creates uncertainty over whether a potential adversary is motived by security concerns or by more expansive aims.[47] This environment creates uncertainty, and the incentives to bluff and

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[42] John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York and London: W. W. Norton, 2001), 32.
[43] Glaser, "The Causes and Consequences of Arms Races," 252.
[44] Colin S Gray, "Nicholas John Spykman, the Balance of Power, and International Order," *Journal of Strategic Studies* 38, no. 6 (2015): 873-897; and Nicholas J. Spykman, *America's Strategy in World Politics: The United States and the Balance of Power*, rev. ed. (New Brunswick: Transaction Publishers, 2007), 41.
[45] Robert Jervis, "Cooperation Under the Security Dilemma," *World Politics* 30, no. 2 (1978): 169.
[46] John H. Herz, "Idealist Internationalism and the Security Dilemma," *World Politics* 2, no. 2 (January 1950): 157.
[47] Charles L. Glaser, "The Security Dilemma Revisited," *World Politics* 50, no. 1 (1997): 192.

exaggerate capabilities or resolve, increases the risk of competition as anarchy makes it difficult for states to compel honest answers from one another except through the threat or imposition of harm.[48]

The key variables that influence whether a state can use force to achieve its political objectives, is not only power but also domestic factors that determine the nature and magnitude of the security dilemma. Despite systemic pressures on states to seek survival in an anarchical system of self-help, state behavior and interaction is also motivated by domestic determinants.[49] Domestic and international variables are interdependent. As Robert Putnam has put it, statesmen are strategically positioned between two "tables": one representing domestic politics and the other international negotiation—strategic behavior is constrained simultaneously by what other states accept and what domestic constituencies will ratify. [50] For instance, the armed forces and the defense industrial base in a number of Asia-Pacific countries are both symbols of national prestige, as well as major employers of local workforces, which further complicates and amplifies the influence of domestic politics on the military modernization process. These bureaucratic-politics processes also encompass psychological factors, notably the misperceptions that occur at both the individual and national levels. [51] Cognitive errors and misinterpretation of the international system (due to for instance, incomplete information), can lead to reactive or competitive behavior.

To further understand the decision-making process behind the use of force, the approach is further informed by understandings of strategic culture. That the strategic behavior of states is deeply informed by culture, ideas, values, beliefs and emotions has been a prominent idea since the political thought of

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[48] Eric Gartzke, "The Capitalist Peace," *American Journal of Political Science* 51, no. 1 (January 2007): 173.
[49] See Martha Finnemore and Kathryn Sikkink, "Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics," *Annual Review of Political Science* 4, no. 1 (2001): 391-416.
[50] Robert D. Putnam, "Diplomacy and Domestic Politics: The Logic of Two-level Games," *International Organization* 42, no. 3 (Summer 1988): 427-460.
[51] See Robert Jervis, *The Logic of Images in International Relations*, rev. ed. (Columbia: Columbia University Press, 1989); and Robert Jervis, *Perception and Misperception in International Politics* (Princeton: Princeton University Press, 1976).

Herodotus, Thucydides and Machiavelli.[52] As Bernard Brodie argued, "Whether with respect to arms control or otherwise, good strategy presumes good anthropology and sociology. Some of the greatest military blunders of all times have resulted from juvenile evaluations in this department."[53] Here, strategic culture is defined as

> the sum total of ideas, conditional emotional responses, and patterns of habitual behavior that members of a national strategic community have acquired through instruction or imitation and share with each other with regard to [nuclear] strategy. In the area of strategy, habitual behavior is largely cognitive behavior.[54]

This informs the preferred methods of operation that are more or less specific to a strategic environment—that is, a particular geographically based security community that has had a necessarily unique historical experience.[55] This enables examination of the dominant ideational frames of reference that are prevalent in key Asia-Pacific states.[56] As Colin Gray argues, in understanding Clausewitz's dictum[57]—that "war is thus an act of force to compel our enemy to do our will,"—"will" must also be defined. Clausewitz defines "will" as a "moral quality."[58] As the objective of war is

> not usually to destroy the enemy physically, rather is it to subordinate his will to ours … coercion and deterrence, are all intercultural struggles. They are contests between independent wills, the content and strength of which are very much, though not exclusively, the products of culture … Rational choice has difficulty with powerful feelings. Culture, cultural understanding or its lack, is apt to be the key to deterrence success or failure.[59]

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[52] Ashley J. Tellis, "Understanding Strategic Cultures in the Asia-Pacific," in *Strategic Asia 2016-17: Understanding Strategic Cultures in the Asia-Pacific,* ed. Ashley J. Tellis, Alison Szalwinski, and Michael Wills (Washington DC: The National Bureau of Asian Research, 2016), 7.
[53] Bernard Brodie, *War and Politics* (New York: Macmillan, 1973), 332.
[54] Jack L. Snyder, "The Soviet Strategic Culture: Implications for Limited Nuclear Operations," RAND Project Air Force Report R-2145-AF (September 1977), 8.
[55] Strategic culture is a significant concept for the interpretation of state behavior in the strategic studies approach. See Gray, "Strategic Culture as Context," 51.
[56] Tellis, "Understanding Strategic Cultures in the Asia-Pacific," 11.
[57] Gray, "Out of the Wilderness," 16.
[58] Carl von Clausewitz, *On War,* trans. Michael Howard and Peter Paret (Princeton, Princeton University Press, 1976), 184.
[59] Gray, "Out of the Wilderness," 16.

However, this does not mean the material and geopolitical dimensions are subordinate to understandings of strategic culture. Rather, the approach pays attention to both the subjective political and ideological purposes that motivate the use of organized violence, as well as understanding material capabilities and the operational demands placed on them.[60] Peter Paret has noted that "strategic thought is inevitably highly pragmatic. It is dependent on the realities of geography, society, economics, and politics, as well as on other, often fleeting factors that give rise to the issues and conflicts war is meant to resolve."[61] Strategic studies allows examination of the strategic behavior that drives interactive arming and what causes states to compete in the realm of force, and thus can evaluate the basic assumption that states strengthen their armaments purely because of perceived threats from other states.[62]

Methodology

The dissertation acknowledges as indispensable existing quantitative studies assessing the distribution of weapon platforms and capabilities across states in the Asia-Pacific. However, it argues that earlier studies have not only neglected internal impulses, but also the motivations that derive from states' strategic and political objectives. In this study, explanations for armaments are examined using a comparative case-study analysis of existing datasets supplemented by new empirical material. First, the empirical study analyzes data available on naval and associated air modernization to build a comparison, and to assess general trends from 1995-2016 of the largest and most technologically sophisticated navies of the Asia-Pacific.Although the study examines the period since 2001, the period of 1995-2000 has also been included to enable comparison of the effect of the 1997-1998 Asian Financial Crisis on the modernization of regional navies. Data is extracted from primary sources on defense budgets and expenditures, as well as the International Institute of Strategic Studies' annual *The Military Balance,* the Stockholm International Peace Research Institute's *Military Expenditure Database* and

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[60] See Robert Ayson, "Strategic Studies," 567.
[61] Cited in Ayson, "Strategic Studies," 567.
[62] Barry Buzan and Eric Herring, *The Arms Dynamic in World Politics* (Boulder: Lynne Reiner, 1998), 83.

Arms Transfer Database, and the US Department of State's *World Military Expenditures and Arms Transfers.*[63] A dataset specific to this study is compiled based on these sources to provide as objectively as possible, the evolution of naval-air capabilities of regional states.

A comparative analysis of military expenditure data and counts of weapons platforms allows a broad comparison capabilities and assess general trends. This uses a combination of two metrics to illustrate and understand regional trends. First, weapon platform counts—accounting for the types of surface combatants, submarines and aircraft that states possess—as a measure of naval power. Second, this is compared with military expenditures to determine and compare the modernization cycles of regional countries. Using military expenditure data to track weapons stocks provides a broader picture of trends. However, it is important to remain aware of the limitations of using data on military expenditure.[64] It is obvious, for example, that significant parts of military expenditure are allocated to areas other than procurement, operations and maintenance (O&M), and research and development (R&D). Moreover, the activities covered by official military expenditure data can vary significantly; there is no internationally agreed definition.[65] Other problems with the use of military expenditures as a measure involve the comparison of expenditures among different economic systems or economic policies, and the question of whether states engage in deliberate deception about the level of their expenditure.[66] Using total military expenditures implies competition occurs across the whole military domain, whereas most arms competitions feature only a single service—the type of military force with which they are best able to harm each other.[67] Unfortunately, reliable data on how military expenditure is distributed across the various functions—salaries, fuel,

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[63] See International Institute for Strategic Studies, *The Military Balance,* (London: IISS & Routledge), http://www.iiss.org/en/publications/military-s-balance/issues; Stockholm International Peace Research Institute, *SIPRI Military Expenditure Project* (Stockholm: SIPRI), http://portal.sipri.org/publications/pages/expenditures/splash-expenditures; and Bureau of Arms Control, Verification and Compliance, *World Military Expenditures and Arms Transfers,* Washington DC: US Department of State, http://www.state.gov/t/avc/rls/rpt/wmeat/.

[64] Charles H. Anderton, "Arms Race Modeling: Problems and Prospects," *The Journal of Conflict Resolution* 33, no. 2 (1989): 352.

[65] Bolks and Stoll, "The Arms Acquisition Process," 586.

[66] Bolks and Stoll, "The Arms Acquisition Process," 587.

[67] Huntington, "Arms Races," 55.

procurement, research and so on—is virtually non-existent for most states. It must also be noted that military expenditure and economic data are provided for indicative measures only, and is used to ascertain general trends of the region. It does not imply causation. Additionally, military expenditure data—for instance, levels, trends and share of GDP—can trigger or support useful inferences about what has been going on inside a particular country. On the other hand, to rely on such data to make international comparisons is a good deal more problematic. It should not be surprising that there has yet to be a single study using military expenditure data that has proven the existence of an "arms race" in the sense of the phenomenon characterized in the international relations arms race theory.

Second, a comparative case study analysis is conducted to test the theoretical predictions, investigate the causes, and explain the trends and the development of the largest and most technologically sophisticated navies in the Asia-Pacific as demonstrated in the data analysis. Due to the breadth of the region, cases were chosen on the basis of which actors have been (most widely identified as) participating in a regional "naval arms race"; and where this could be most readily corroborated in terms of the acquisition of sophisticated quantitative and qualitative naval and associated air capabilities. This process suggested five essential case studies: the US, China, Japan, South Korea and Vietnam. Case study analysis uses the comparative-case method and process-tracing, which is well-suited for studying complex phenomena over a set timeframe—specifically, the decision-making process regarding military modernization—where the number of cases is small and existing theories are not well articulated.[68] This is the basis for investigating the empirical puzzle of the key driving factors for these armaments, and how they have interacted to produce the regional phenomenon labeled as an "arms race" in the Asia-Pacific. The empirical investigation follows the style of a

[68] See Alexander George, "Case Studies and Theory Development: The Method of Structured, Focused Comparison," in *Diplomacy: New Approaches in History, Theory, and Policy*, ed. Paul Gordon Lauren (New York: Free Press, 1979), 95-124; James Mahoney and P. Larkin Terrie, "Comparative Historical Analysis in Contemporary Political Science," in *The Oxford Handbook of Political Methodology*, eds. Janet M. Box-Steffensmeier, Henry E. Brady, and David Collier (New York: Oxford University Press, 2008), 737-755; and Charles Tilly, *Big Structures, Large Processes, Huge Comparisons* (New York: Russell Sage Foundation, 1985).

narrative, which Lawrence Freedman has called, "compelling story lines which can explain events convincingly and from which inferences can be drawn," with the intent of "structuring the responses of others to developing events. They are strategic because they do not arise spontaneously but are deliberately constructed or reinforced out of the ideas and thoughts that are already current."[69]

It must be noted that the research does not aim to build a universal theory of an "arms race" or build a measure of "naval power."[70] It does not employ formal modeling given that past studies have exposed the weak explanatory power of this approach.[71] Rather, it aims to develop a new framework for understanding interactive arming premised on investigating the specific conditions of the Asia-Pacific since 2001. This is because a quantitative analysis examining correlations between the dependent and independent variables is not conducted. A quantitative analysis is premised on the assumption that all, or a sufficiency, of these variables can be adequately quantified, and the author's judgment is that this is not the case.

Understanding Military Capability

Significant to understanding arming is the evaluation of military capability, which is the more pertinent indicator of a state's strategic objectives and interests than defense spending data. The term has been used liberally in the academic discourse[72] since Kenneth N. Waltz emphasized that states in an anarchic system are distinguished by the gradation of material capabilities, and that power is estimated by comparing the capabilities of a number of units

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[69] Lawrence Freedman, *The Transformation of Strategic Affairs,* Adelphi Paper 379 (London: IISS and Routledge, 2006), 22.
[70] See Brian Crisher and Mark Souva, "Power At Sea: A Naval Power Dataset, 1865-2011" and "Naval Data Project," http://www.briancrisher.net/naval-data-project/.
[71] See Colin S. Gray, "The Arms Race is about Politics," *Foreign Policy* 9 (1972), 121; Colin S. Gray, "The Urge to Compete: Rationales for Arms Racing," *World Politics* 6, no. 2 (January 1974): 207; and Kendall D. Moll and Gregory M. Luebbert, "Arms Race and Military Expenditure Models: A Review," *The Journal of Conflict Resolution* 24, no. 1 (March 1980): 160-161.
[72] See for instance, Charles L. Glaser and Chairn Kaufmann, "What is the Offense-defense Balance and How Can we Measure It?" *International Security* 22, no. 4 (1998): 44-82; and Frank W. Wayman, J. David Singer and Gary Goertz, "Capabilities, Allocations, and Success in Militarized Disputes and Wars, 1816-1976," *International Studies Quarterly* 27, no. 4 (1983): 497-515.

(states).[73] The results of the empirical study reveal that the indices of military capabilities is often an index, numerical count or comparison of the numbers of weapons platforms. Much of the work on "arming" acknowledges the significance of understanding military capabilities because they can be understood as an index of power. Military capabilities are the best yardstick to gauge the level of threat from other states and can contribute to inferring intentions. David Baldwin, for instance, argued that "any statement about a state's capabilities is based on a prediction about which other actors can be affected in which ways."[74] Robert Jervis observed that "the most obvious way for states to judge whether others are a threat would be by monitoring their capabilities."[75]

However, there is little understanding of what exactly defines military capabilities. How to assess quantitative and qualitative capabilities? Which criteria are best to assess the respective merits of platforms? Understanding military capabilities requires an understanding of what a state can do with its weapons platforms, as opposed to simple indices of military expenditure and weapons counts. As Harold and Margaret Sprout argued, "such data acquires political relevance and significance only when related to some frame of assumptions as to what is to be undertaken or attempted in what operational contingencies."[76] Adam P. Liff has further argued that many studies on China's rapid growth and military modernization rely on the "often inaccurate belief that military power is best measured by the most easily quantifiable, conspicuous metrics: that larger numbers necessarily indicate greater warfighting capability, and fewer, less."[77]

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[73] Kenneth N. Waltz, *Theory of International Politics* (Reading: Addison-Wesley, 1979), 98.
[74] David A. Baldwin, "Neoliberalism, Neorealism, and World Politics," in *Neorealism and Neoliberalism: The Contemporary Debate,* ed. David A. Baldwin (New York: Columbia University Press, 1993), 16-17.
[75] Robert Jervis, "Perceiving and Coping with Threat," in *Psychology and Deterrence,* ed. Robert Jervis, Richard Ned Lebow, and Janice Gross Stein, with contributions by Patrick M. Morgan and Jack L. Snyder (Baltimore: The John Hopkins University Press, 1985), 13.
[76] Harold Sprout and Margaret Sprout, *The Ecological Perspective on Human Affairs: With Special Reference to International Politics* (Princeton: Princeton University Press, 1965), 215-216.
[77] Liff, "Whither the Balancers?" 421.

Moreover, according to Waltz, "states have different combinations of capabilities which are difficult to measure and compare, the more so since the weight to be assigned to different items changes with time."[78] Stephen Biddle has defined "military capability" as the "ability to succeed at an assigned mission."[79] Capabilities are an index of a state's national power, and because states exist in an environment where both internal and external threats to security are common, the ultimate measure of power is the effectiveness of a state's armed forces and its coercive abilities.[80] Therefore, military capabilities cannot be separated from questions of intent, but must also be assessed with regard to the economic and political potential of the state. Military power on the other hand "expresses and implements the power of the state in a variety of ways within and beyond the state borders, and is also one of the instruments with which political power is originally created and made permanent."[81]

Measuring military capability therefore focuses on which elements are necessary for the creation and employment of an effective force—it is premised on the understanding that a state's military organization receives national resources and transforms them into warfighting capabilities. The US Department of Defense outlines military capability as consisting of four pillars:[82]

1. *Readiness*: the ability of the military forces, units, weapon systems or equipment to deliver the output for which they are designed in peacetime and at the outset of hostilities. It is measured in terms of manning, equipping and training the force, and is defined to include the force's ability to mobilize, deploy and employ without unacceptable delays.

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[78] Waltz, *Theory of International Politics,* 131.
[79] Biddle, *Military Power,* 5.
[80] Ashley J. Tellis et al, *Measuring National Power in the Postindustrial Age,* RAND Monograph Reports, MR-1110-A (2000), 133.
[81] Peter Paret, "Military Power," *The Journal of Military History,* Vol. 53, No. 3 (July 1989), 240.
[82] US General Accounting Office, *Measuring Military Capability: Progress, Problems and Future Direction,* Report to the Chairman, Committee on Armed Services, House of Representatives, Washington DC, GAO/NSIAD-86-72 (February 1986), 7.

2. *Sustainability*: the staying power of military forces, or how long the forces can continue to fight. It involves the ability to resupply engaged forces during combat operations and is sometimes measured in terms of the estimated number of fighting days for which supplies are available.
3. *Modernization*: The technical sophistication of forces, units, weapon systems and equipment. It can include new acquisitions and/or modification, depending on the service. Assessments of modernization may compare new types of equipment with the items they replaced, or may compare equipment in one state's inventory with that of potential adversary forces.
4. *Force structure*: the numbers, size and composition of units constituting the military forces. It is usually described as numbers of divisions, ships, air wings and the like.

Effective military capability is derived from the ability to translate national resources (for instance, fiscal, and manpower) into military power. This is no easy task. For instance, a state may have generous budgets and a large surplus of manpower, but if the doctrine is misguided, the training ineffective, and leadership missing, military capability suffers.[83] Therefore the measures of military capability outlined here are what Biddle calls "input measures": they focus on understanding what goes into making an effective military capability, and how such effectiveness can be compared across states without a predictive analysis of how hypothetical force-on-force encounters would turn out in practice.[84]

However, this does not make military capability easily quantifiable. With regards to readiness and sustainability, it remains a question of how much logistics, manpower, maintenance, training and testing is needed to obtain a desired level that produces the greatest amount of capability. With regard to force structure and modernization, states have to choose which weapon systems and platforms to modernize, how many to buy, as well as deciding

[83] Tellis et al, *Measuring National Power in the Postindustrial Age,* 134.
[84] Stephen D. Biddle, "The European Conventional Balance: A Reinterpretation of the Debate," *Survival* 30, no. 2 (March-April 1988): 99-121.

on the optimal force structure to develop an integrated force to enhance capability.[85] Assessing the number and respective merits of platforms is only one part of assessing capabilities, and is not easily understood through pure indices of military expenditure. For instance, the capability of a navy does not depend simply on the volume of ship construction, acquisitions or enhancements. The time ships remain in the fleet also has significant implications for force structure and overall capability. Studies examining military modernization often do not take the life cycle of weapons platforms into account. For instance, a 2013 CSIS report on *The Evolving Military Balance in the Korean Peninsula and Northeast Asia* lists key force upgrades, modernization plans and procurements. However, these aggregate totals for each year do not detail when weapons platforms have to be upgraded.[86] When countries acquire and modernize aircraft, submarines or surface combatants to maintain a certain level of capability, this often creates the impression of an increase in armaments, and even that a state is competing both quantitatively and qualitatively. However, it must be recognized that most developed countries with established militaries sustain a continual cycle of military modernization not only to avoid disruptive surges and troughs in the state budget but also to protect the status of being a country that is serious about defending its sovereignty and other core interests.

Tracing military modernization is even more difficult. If technology and innovation remained static, military services would face the straightforward task of simply replacing old weapons only when they wore out. Yet, due to the complex technologies involved, any modernization process also takes a temporary, but potentially significant, toll on readiness and sustainability, as well as on the procurement budget.[87] For instance, purchases of important systems or components which may easily cost tens of billions of dollars will set in motion a series of ripple effects as operators, maintenance crews, and logistic pipelines attempt to integrate something new and different to provide a coherent force structure.

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[85] US General Accounting Office, *Measuring Military Capability,* 17, 23.
[86] See Cordesman and Hess, *The Evolving Military Balance in the Korean Peninsula and Northeast Asia*.
[87] Thomas L. McNaugher, *New Weapons, Old Politics: America's Military Procurement Muddle* (Washington DC: The Brookings Institution, 1989), 88-91.

Moreover, as technologies mature, performance improvements occur more slowly and at higher cost, therefore states could feel tempted to modernize less frequently. Modernization must therefore balance the need to move quickly in order to capture a technology's full benefits with the need to move slowly in order to make strategic decisions. Uncertainty at the strategic level makes it essential to modernize systematically and judiciously—a balance between neither rushing the process on the premise that a threat demands it which can prove costly, nor passing up the chance to modernize until information confirms the wisdom of doing so.[88]

Structure

The research is conducted in three parts. First, the study examines the key literature on "arms racing," military competition and military modernization. It investigates both the qualitative and quantitative literature on the "arms race" phenomenon and evaluates whether it is a useful paradigm for understanding armament dynamics. It then provides a new framework for understanding arming dynamics, that goes beyond the "arms race" and "arms competition" theories, called "interactive arming." Second, it conducts a comparative case study analysis which evaluates the motivations, overall scale and principal characteristics of the modernization of naval and associated air capabilities of the largest and most modern navies in the Asia-Pacific: the United States in the Western Pacific, the People's Republic of China (PRC), Japan, the Republic of Korea (ROK, South Korea) and the Socialist Republic of Vietnam (Vietnam). It identifies the significant causes that have contributed to country-specific build-ups and modernization of weapons platforms, and to what degree these programs interact with external factors. This empirical section draws from primary sources—such as defense policies, declaratory statements and military expenditure—to understand the multitude of material and ideational explanations that contribute to military modernization. It also ascertains how military modernization programs become interactive, and which key drivers of military modernization influence and augment strategic competition. The final part of the study summarizes the results of the

[88] McNaugher, *New Weapons, Old Politics,* 100.

empirical investigation into the explanations behind armaments in the Asia-Pacific (2001-2016). In doing so, it argues for the significance of the strategic studies school of thought in understanding armament decisions, and the use of force. It then provides cases and avenues for future research.

Chapter 2:
Arms Racing Theory

The purpose of this chapter is to examine in detail the scholarship on the "arms race" concept to determine its utility for analyzing contemporary arming in the Asia-Pacific region. First, it begins with a short history of the concept's evolution in strategic debate before introducing different definitions and characteristics of what might constitute an "arms race." This is followed by, second, a critique of the concept's use in both the qualitative and quantitative literature. The third section argues that the "arms race" label in current debate has often impeded clear analytical thinking about the relationship between a state's strategy and its armament decisions.[1] This critique supports the rationale that a more comprehensive analysis of the drivers behind armament dynamics is needed, particularly in the Asia-Pacific. Therefore, lastly, informed by the critique of the "arms race" literature, the chapter proposes six key hypotheses to be tested across the case studies.

A Short History

Throughout history, states secured their survival by means of military strength. The concept of military competition in which the military preparations of two states are directly related and interact has been a constant aspect of interstate rivalry. It is as Thucydides stated several millennia ago in his classic account of the Peloponnesian War, "the real cause, however, I consider to be the one which was formally most kept out of sight. The growth of the power of Athens, and the alarm which this inspired in Sparta, made war inevitable."[2]

The term "arms race" has its roots in scholarship attempting to understand arming dynamics between states and coalitions leading up to the First and Second World War, as well as the Cold War bipolar US-Soviet relationship.

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[1] Buzan and Herring, *The Arms Dynamic in World Politics,* 75.
[2] Robert B. Strassler, ed., *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War,* trans. Richard Crawley, rev. ed. (New York, London, Toronto and Sydney: Free Press, 1969), 16.

"Arms racing" has come to serve two primary functions: first, as an analytical concept to explain and identify abnormal strategic behavior between states. Second, as a political advocacy tool to influence political debate and armaments decisions. The conventional arms build-up by France and the British Commonwealth between 1840 and 1866 is widely considered the first competition in armaments in the modern era.[3] Continuing into the 1880s, both France and Great Britain continued to improve their arsenals of revolvers, rifles, machine-guns, guns and howitzers, engaging in a qualitative competition to increase the speed of fire, the accuracy of aim, range, weight and explosive force of the projectiles. From 1884 onwards not only did the number of warships increase, but crucial qualitative characteristics—size and speed, the caliber and range of guns and protective belts of armor—also evolved rapidly. Yet, the first recorded use of the term "arms race" dates to March 20, 1894 in the British House of Commons, when Radical MP, William Randal Cremer, decried large increases in the navy's budget as a "mad race of naval expenditures."[4] Victorian liberals and their socialist counterparts in Western Europe "saw excessive arms expenditure as a tragic diversion of wealth away from social goods and productive investments and as symptomatic of the twin evils of militarism and authoritarianism and the excesses of capitalism and imperialism."[5]

By the early twentieth century the term "arms race" became popular in the media and scholarly debate to describe competitive naval arming dynamics between Britain and Wilhelmine Germany, particularly the frenzied construction of the Dreadnoughts, and later super-Dreadnoughts, which continued until the outbreak of World War I in August 1914.[6] Although the British were the first to commence building of Dreadnought battleships, it

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[3] Bolks and Stoll, "The Arms Acquisition Process, 594; Colin S. Gray, "The Arms Race Phenomenon," *World Politics* 24, no. 1 (October 1971): 42; Huntington, "Arms Races," 43; and Paul Kennedy, *Strategy and Diplomacy* (Aylesbury: Fontana, 1984), 163-178.
[4] UK Parliamentary Debates, British House of Commons, Hansard, 4th Series, Vol. 22 (1894), 734.
[5] Joseph Maiolo, "Introduction to Part II: Between the Two World Wars," in *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century,* ed. Thomas G. Mahnken, Joseph Maiolo and David Stevenson (Oxford: Oxford University Press, 2016), 1.
[6] See Bolks and Stoll, "The Arms Acquisition Process"; Charles L. Glaser, "When Are Arms Races Dangerous? Rational versus suboptimal arming," *International Security* 28, no. 4 (2004), 44-84; and Phillip Noel-Baker, *The Arms Race: A Programme for Disarmament* (London: Oceana Publications, 1958).

was German Admiral Alfred von Tirpitz's perceived intentions that led to strategic competition between Germany and the British Empire.[7] The German construction of Dreadnoughts was rendering obsolescent the seventy-five pre-Dreadnought British battleships and armored cruisers, which in turn led to England constructing Dreadnoughts to restore its primacy at sea. In 1908, the Kaiser wrote to the First Lord of the Admiralty, Lord Tweedmouth: "Admiral Fisher and the Press had at once announced that [the Dreadnought] was capable of sinking the whole German Navy. These statements had forced the German government to begin building ships of a similar type, to satisfy public opinion."[8] The First and Second German Navy Laws that doubled Admiral Alfred von Tirpitz's fleet was constantly defended by Tirpitz and the Kaiser as not building against Britain, but necessary to guard the German Empire's coasts and colonies.[9] The British Empire, responded to the challenge by launching a naval build-up to restore the balance in its favor.[10] As well, the introduction of the submarine and the appreciation that it would have a major impact on the exercise of naval power meant that both the Triple Alliance (Germany, Austria-Hungary and Italy) and the Triple Entente (the United Kingdom, France and Russia) expanded their submarine fleets as swiftly as possible.[11]

In the retrospective search for the causes of World War I, Lord Grey of Fallodon highlighted what is now called "the security dilemma." He argued,

> The moral is obvious; it is that great armaments lead inevitably to war. If there are armaments on one side, there must be armaments on other sides … While one nation arms, other nations cannot tempt it to aggression by remaining defenceless. Armaments must have equipment; armies cannot be of use without strategic railways. Each measure taken by one nation is noted, and leads to counter-measures by others. The increase of armaments that is intended in each nation to produce

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[7] Jon Tetsuro Sumida, "Sir John Fisher and the Dreadnought: The Sources of Naval Mythology," *The Journal of Military History* 59, no. 4 (October 1995): 619.
[8] Quoted in Goldsworthy Lowes Dickinson, *The International Anarchy, 1904-14* (Century: The University of California, 1926), 386.
[9] See David E. Kaiser, "Germany and the Origins of the First World War," *The Journal of Modern History* 55, no. 3 (1983): 442-474.
[10] Noel-Baker, *The Arms Race,* 33.
[11] See Paul G. Halpern, *A Naval History of World War I* (Annapolis: Naval Institute Press, 1994); and Karl Lautenschlater, "The Submarine in Naval Warfare, 1901-2001," *International Security* 11, No, 3 (Winter 1986-1987): 94-140.

> consciousness of strength, and a sense of security, does not produce these effects. On the contrary, it produces a consciousness of the strength of other nations and a sense of fear. Fear begets suspicion and distrust and evil imaginings of all sorts, till each government feels it would be criminal and a betrayal of its own country not to take every precaution, while every government regards every precaution of every other government as evidence of hostile intent. [12]

Thus, naval development focused on tactical improvements and hardware—high-technology machines of war—as opposed to relying on "tried and true strategies and tactics of the past."[13] The result was a growing adherence to so-called "technological determinism," for instance, the belief that weapons determined strategy rather than the reverse and that lessons learned from historical experiences were of limited value. Quantitative measures rather than qualitative considerations defined naval policy: numbers, sizes, speeds, tonnage, defensive armor, range, accuracy and striking power of guns. Dreadnoughts, Super-dreadnoughts, cruisers, destroyers and submarines increased in both power and numbers. Technology transformed warships so rapidly that navies had to keep pace through constant discussion, evaluation, and changes in weapons, ship design and training. [14] This technological determinism led to a reactive process of developing "miracle weapons" that presumably could neutralize the force of battleships—notably underwater mines and automotive torpedoes. [15]

Major advances in aircraft technology in the interwar period transformed the air arm into a much more potent weapon of war. Aircraft made naval vessels easier to detect and destroy, and resulted in the replacement of the battleship with the aircraft carrier as the key to naval power and sea control. Air power enabled states to inflict significant damage from a distance. In the early years of World War II, the German *Wehrmacht* combined land mobility and air power highly effectively in the context of its "blitzkrieg" tactics. The spectacular success of blitzkrieg for gaining a tactical advantage intensified the quest among all war parties both for qualitative improvements in weapons

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[12] Viscount Grey of Fallodon, *Twenty-Five Years, 1892-1916,* Vol. 1 (London: Hodder and Stoughton, 1925), 91-92.
[13] Clark G. Reynolds, *Navies in History* (Annapolis: Naval Institute Press, 1998), 137.
[14] Noel-Baker, *The Arms Race,* 53.
[15] Reynolds, *Navies in History,* 138.

and related equipment and for decisive new synergies between these capabilities.[16] This also meant that qualitative and quantitative increases in armaments focused on joint operations and contingencies. That is, to retain dominance over the maritime theatre, both naval and associated air power was required. The two treaties of the 1921-1922 Washington Naval Conference—primarily focused on the navies of the US, the UK and Japan (although China, France, Italy, Belgium, the Netherlands and Belgium were also participants; and the USSR was not invited)—aimed to avoid conflict in the Asia-Pacific through battleship and carrier tonnage quotas and gun restrictions.[17] It attempted to "freeze" the geostrategic balance of power in the Pacific: Britain in the Indian Ocean and South Pacific; the US in the Hawaiian, Philippine and Aleutian Island groups and Guam and Wake; and Japan in the Central Pacific Islands and Formosa (Taiwan).[18] Although an arms control agreement was reached, it did not alleviate mutual suspicions and tensions. To the contrary, the US, the UK and Japan increasingly sought technologically sophisticated ships to replace obsolescent ones.[19] Particular emphasis was placed on developing and building aircraft carriers, which the American and Japanese navies converted from battle cruiser and battleship hulls — modernization which remained within the terms of the treaties.[20] The US, Great Britain and Japan also continued to develop defense doctrine and fortify their respective spheres of influence.[21]

Yet, despite the conventional arms build-up in the 19th and 20th century, "arms race" theories are most strongly and widely associated with the Cold War bipolar conflict between the US and the Soviet Union. The evolution of armaments dynamics on both sides between the late 1940s and late 1980s led to the "arms race" concept as an analytical explanation for both the increases in arms and changes in the levels of technological sophistication.[22] The study

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[16] Buzan and Herring, *The Arms Dynamic in World Politics,* 17-18.
[17] Clark G. Reynolds, *History and the Sea: Essays on Maritime Strategies* (Columbia: University of South Carolina, 1983), 82.
[18] Reynolds, *Navies in History,* 176.
[19] Harlow A. Hyde, *Scraps of Paper: The Disarmament Treaties Between the World Wars* (Nebraska: Media Publishing, 1988), 119.
[20] Reynolds, *Navies in History*, 172.
[21] Reynolds, *Navies in History,* 177.
[22] See Hanson W. Baldwin, *The Great Arms Race: A Comparison of US and Soviet Power* (New York: Praeger, 1958); David Carlton and Carlo Schaerf, eds., *The Dynamics of the*

of the nuclear build-up "became more systematic [but] without losing any of the passion and sense of urgency" that characterized the explanations of the arms build-ups in World War I and World War II.[23] By the 1950s, both superpowers on average spent eight percent or more of their Gross Domestic Product (GDP) on armaments. Between 1982 and 1986, the Soviet defense expenditure had increased to some 14 percent of GDP.[24] Yet although the US was also spending approximately six percent, it was consistently more effective in leveraging new technology. This arming dynamic was unique in that both Washington and Moscow also identified that their nuclear weapons programs were "racing."[25] This resulted in the superpowers exchanging information about their nuclear forces, installing the Hot Line, accepting strategic surveillance by national means, and eventually negotiating arms control agreements that codified and secured the strategic balance even more.[26] This period of "strategic stability"[27] was unique—it was a form of parity based on the acknowledgement of both sides' strategic forces having a function of war prevention.[28] The notion that a stable military balance would result in a safer world and that quantitative increases in the level of missiles added nothing to deterrence, constituted a great leap forward in the world of the strategist.[29] With regards to nuclear capabilities, a stalemate was a reasonable objective.

Arms Race, (London: Croom Helm, 1975); Julius Duscha, *Arms, Money & Politics* (New York: Ives Washburn, 1964); Lawrence Freedman, "Nuclear Weapons in Europe: Is There an Arms Race?," *Millennium* 13, no. 1 (1984): 57-64; Herman Kahn, "The Arms Race and Some of Its Hazards," *Daedalus* 89, no. 4 (Fall 1960): 744-780; Jeremy J. Stone, *Containing the Arms Race: Some Specific Proposals* (Cambridge: MIT Press, 1966).

[23] Maiolo, "Introduction," 3.

[24] See "Russian Military Budget," Federation of American Scientists, September 7, 2000, http://fas.org/nuke/guide/russia/agency/mo-budget.htm.

[25] Grant T. Hammond, *Plowshares into Swords: Arms Races in International Politics, 1840-1991* (Columbia: University of South Carolina Press, 1993), 234; and Olav Njølstad, "The Development of the Arms Race and How We Think About It," in *International Relations Since the End of the Cold War: New & Old Dimension,* ed. Geir Lundestad (Oxford: Oxford University Press, 2013), 171.

[26] Njølstad, "The Development of the Arms Race and How We Think About It," 177.

[27] In some of the "strategic stability" literature, the paradoxical term "arms race stability" is used. Colin S. Gray explains it as the condition "wherein neither party to an arms competition will press developments or deployments in quest of major advantage, because such advantage is judged to be unattainable." This seemingly describes the non-existence of an "arms race." See Colin S. Gray, "Strategic Stability Reconsidered," *Daedalus* 109, no. 4 (Fall 1980): 135. See also, Fred Charles Ikle, "Can Nuclear Deterrence Last out the Century," *Foreign Affairs* 51, no. 2 (January 1973): 267-285.

[28] David S. Yost, "Strategic Stability in the Cold War: Lessons for Continuing Challenges," *Proliferation Papers* 36 (January 2011), Naval Postgraduate School, Monterey, 8, 19.

[29] Gray, "Strategic Stability Reconsidered," 137.

In the post-Cold War era, attempts to understand strategic behavior—in particular the link between arms and policy, and peacetime increases in military expenditure—led to the re-application of the term "arms race" to a number of cases and stripping the concept of its Cold War connotations.[30] However, this broad-sweeping application to include rather placid military relations—in a deliberate attempt to devise a universal theory of the "arms race"—meant that the concept even lost its ability to deal with "abnormally intense military competition."[31] Between the late 1980s and early 1990s, there was emphasis on the Asia-Pacific where superpower disengagement, the rise of China, booming local economies, the demand of Exclusive Economic Zones (EEZ) and a wealth of territorial disputes provided fertile ground for naval modernization.[32] Indeed, since rapid growth in economic power of regional countries enabled investment in military potential and expenditure, many observers argued that a "new regional arms race" in the Asia-Pacific was occurring.[33]

However, the emphasis on military expenditure as the key measure for an "arms race"—which became entrenched after World War II—meant that distinguishing characteristics, such as the changing balance of power and greater demands for self-reliance, were overlooked. Here, "self-reliance" means:

> Obviously, no country, including the superpowers, is truly self-reliant in the rigorous sense of the word. All countries are part of an increasingly interdependent global system. They require resources from outside their borders and are affected by external actions over which they have little direct control. Nevertheless, the term self-reliant … is far from meaningless. It indicates a national will to depend as little as possible on external decisions and resources in matters of national defense and

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[30] This was particularly the case for the 1980s modernization of Asian naval forces, as economic growth translated into rising defense expenditure, and the need to replace obsolescent equipment acquired decades before led to labels of an "arms race." See Till, *Asia's Naval Expansion,* 31.
[31] Buzan and Herring, *The Arms Dynamic in World Politics,* 77.
[32] Buzan and Herring. *The Arms Dynamic in World Politics,* 76.
[33] See Michael T. Klare, "The Next Great Arms Race," *Foreign Affairs* 72, no. 3 (Summer 1993): 136-152; Ro-myung Gong and Gerald Segal, "The Consequences of Arms Proliferation in Asia," in *Asia's International Role in the Post-Cold War Era,* Adelphi Paper 276 (London: Brassey's for the International Institute for Strategic Studies, 1993).

> internal security. A self-reliant nation, regardless of its internal social organization or ideology, intrinsically contributes to a world order congenial with US interests. It does so not only by remaining independent of our potential enemies, but also by not being interested in becoming our client and thus a burdensome drain on our resources and often an albatross in the constantly changing international political community.[34]

When the Asian Financial Crisis led to a temporarily halt of many military modernization programs it quickly became even more clear that there was no regional "arms race." Yet by 2001, both quantitative and qualitative increases in armaments, particularly in Northeast Asia, had resumed and triggered a renewed debate about whether the region was now indeed witnessing a 21st century "arms race." This was despite the fact that in many regional countries, military expenditure only rose modestly, if at all. For most regional countries (the PRC being the sole exception) raw military expenditure indices in the past two decades would deny the existence of competitive arming or an "arms race." This highlights the danger of "solitary reliance on any single metric" and a tendency to "conclude from quantitative decreases (or increases) in numbers of personnel or weapons platforms that states must be first, reducing (or enhancing) their military capabilities and therefore; and second do not (or do) perceive an external threat."[35] Instead, military expenditure must be considered alongside "strategic context, [and] qualitative characteristics of the specific unit/platform in question."[36]

"Arms Racing": Definitions and Characteristics

How has scholarship approached the "arms race" theory? The first thing to note is that, as originally formulated, the qualifications for an "arms race" are extremely demanding. Samuel Huntington's article, "Arms Races: Prerequisites and Results" is accepted as among the core expositions of the theory. has provided the most influential contribution. According to Huntington, an arms race is

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[34] Guy J. Pauker, Steven Canby, A. Ross Johnson and William B. Quandt, "In Search of Self-Reliance: U.S. Security Assistance to the Third World Under the Nixon Doctrine," A Report prepared for Defense Advanced Research Projects Agency, R-1092-ARPA (June 1973), 3.
[35] Liff, "Whither the Balancers?," 433.
[36] Liff, "Whither the Balancers?," 433.

> …a progressive, competitive, peacetime increase in armaments by two states or coalition of states resulting from conflicting purposes or mutual fears. An arms race is thus a form of reciprocal interaction between two states or coalitions. A race cannot exist without an increase in arms, quantitatively or qualitatively, but every peacetime increase in arms is not necessarily the result of an arms race. A nation may expand its armaments for the domestic purposes of aiding industry or curbing unemployment, or because it believes an absolute need exists for such an increase regardless of the actions of other states.[37]

In similar vein, Colin Gray elaborates on the conditions for an arms race, emphasizing the political dynamics involved, and that multiple actors can be involved:

> There should be two or more parties perceiving themselves to be in an adversary relationship, which are increasing or improving their armaments at a *rapid rate* and structuring their respective military postures with a *general* attention to the past, current, and anticipated military and political behavior of other parties.[38]

He also points to a critical differentiation between quantitative and qualitative arms races since the former are "commonly held to be more dangerous to peace than are qualitative, or technological, races because the former can point to an advantage in numbers that may provide confidence in military victory, while in the latter the military postures of the rivals are in a state of perpetual anticipation."[39]

In addition, arms races depend on the existence of a distinct form of rivalry in the international system whose attributes are outlined by Huntington:

> A state system which facilitates the balancing of power by internal rather than external means; the preeminence of military force-in-being over territory or other factors as an element of national power; the capacity within each state to increase its military strength through quantitative or qualitative means; and the conscious awareness by each state of the dependence of its own arms policy upon that of another state.[40]

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[37] Huntington, "Arms Races," 42.
[38] Gray, "The Arms Race," 40.
[39] Colin S. Gray, *Weapons Don't Make War: Policy Strategy, and Military Technology* (Lawrence: University of Kansas Press, 1993), 48.
[40] Huntington, "Arms races," 43.

For him, this iterative "action-reaction" dynamic is the key driver of the arms races giving it its own momentum. Largely due to the relationship between the US and the Soviet Union, the term "action-reaction" emerged as a defining dynamic of "arms races."[41] It was argued that such a process has two principle features. First, a rapid rate of capability development, with the participants stretching their resources to go beyond parity and to ensure they remain ahead. And second, reciprocal dynamics in which developments in offensive and defensive capabilities become an interactive process in which the offensive arms requirements of one party depend upon the known, assumed or anticipated defensive capabilities of the forces of other parties.[42] There has also been a distinction made between two types of "action-reaction": "counter-reaction" (where a party responds to another's capabilities); and "mirror-reaction" (where a party imitates another's capabilities).[43] However, it is extremely difficult to distinguish between the two as any form of imitation involves "countering." Also, with the nature of naval technology and the requirements of conducting operations in the maritime domain, a majority if not all armament patterns could be labeled as "mirroring."

Moreover, despite acknowledging domestic determinants, Huntington emphasizes the external pressures of a state's strategic environment as the main driver for arms races. Seen in this light, an arms race aims to achieve a favorable distribution of power in an anarchic international system. Barry Buzan and Eric Herring also stress that arms races are reserved for rare occasions of states' interaction. For them, an arms race is an extreme form of a more common phenomenon they call an "arms dynamic," which is a broad continuum:

> The entire set of pressures that make actors (usually states) both acquire armed forces and change the quantity and quality of the armed forces they already

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[41] See Buzan and Herring, *The Arms Dynamic in World Politics,* 83-100; and Glaser, "The Causes and Consequences of Arms Races," 253-254.
[42] Desmond Ball, "Arms and Affluence: Military Acquisitions in the Asia-Pacific region," *International Security* 18, no. 3 (Winter 1993/4): 94.
[43] See Ball, "Arms and Affluence," 94.

> possess. … The term arms racing is reserved for the most extreme manifestations of the arms dynamic, when actors are going flat out or almost flat out in major competitive investments in military capability… Arms racing is still a significant phenomenon because it is an expression of intensified manifestations of the arms dynamic. Indeed arms racing is more likely to occur when states are engaged in full mobilization for total war, and such mobilization is more likely during war, or when the expectation of war is already high, rather than during peace. [44]

Consequently, they argue that there are no different types of arms races but rather varying degrees of arms dynamics that makes conflict more or less likely. The opposite of arms racing is the objective of "the maintenance of the military status quo"[45]—or what might be termed as "modernization." Buzan and Herring observe that "maintenance can escalate into racing, and racing can subside into maintenance."[46] The middle ground between "maintenance" and "arms races" is occupied by "arms competition":

> Relations between virtually all potential adversary states fall into the gray area between maintenance and racing. Military competition accommodates the way potential adversaries chip away at the status quo and constantly seek to improve their position, although having no confidence in gaining a decisive advantage. The outcome might be the maintenance of the military status quo, but that is not the intention of the participants—this is the familiar point that balances of power tend to form as the unintended consequence of advantage seeking.[47]

Aside from the detailed elaborations offered by Huntington, Gray, as well as Buzan and Herring, other strategic scholars have not drawn a clear distinction between an "arms race," "action-reaction," and "military competition" between states. The explanations of the processes of the "arms race," "action-reaction," and "military competition" all seem analogous. For instance, Thomas Schelling and Morton Halperin simply defined an arms race as "the interaction between two or more adversaries' military programs, to a tendency for each side's programs to respond to what the other is doing."[48]

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[44] Buzan and Herring, *The Arms Dynamic in World Politics,* 79-80.
[45] Buzan and Herring, *The Arms Dynamic in World Politics,* 79.
[46] Buzan and Herring, *The Arms Dynamic in World Politics,* 80.
[47] Buzan and Herring, *The Arms Dynamic in World Politics,* 80.
[48] Thomas C. Schelling and Morton H. Halperin, *Strategy and Arms Control* (New York: Twentieth Century Fund, 1961), 34.

Finally, according to Charles Anderton, an arms race is "a situation where two or more parties change the quantity or quality of their armed forces in response to perceived past, current or anticipated future increases in the quantity or quality of armed forces of the other party(ies)."[49] Yet, as the next section demonstrates, the "arms race" itself is of limited analytical utility.

The "Arms Race": A Useful Analytical Concept?

This section critiques the concept of "arms racing" from several angles. It demonstrates that neither qualitative nor quantitative approaches are completely satisfying to explain the complex phenomenon of how and when the interaction of actors' arming dynamics occur. Definitions and associated metrics employed in the arms racing literature are often underspecified and inconsistent. The following critique of the literature demonstrates Adam P. Liff's argument that, "the tendency to privilege a few relatively conspicuous and easily measurable—yet in some cases insignificant, obsolescent, or otherwise misleading—metrics coupled with loose standards concerning pinpointing causal mechanisms and causal stretching, is also not uncommon."[50]

Qualitative Approaches and its Limitations

Qualitative studies on arms races stem from Huntington's effort to bring analytical precision to the study of armament dynamics. The most significant of these works are Colin Gray, Barry Buzan and Eric Herring, and Grant T. Hammond's studies, which build on Huntington's understanding of the "arms race" to offer typologies and frameworks on how to classify and identify cases of arms races. Hedley Bull's *The Control of the Arms Race,* also built on Huntington's analysis, offers valuable insight into restraining arms race dynamics through disarmament and arms control. As well, using game theory, Thomas C. Schelling conceived of the arms race as a form of tacit bargaining through the competitive deployment of forces. These studies highlight the difficulties in setting the preconditions and parameters of the

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[49] Walter Isard and Charles H. Anderton, "A Survey of Arms Race Models," in *Arms Races, Arms Control, and Conflict Analysis: Contributions from Peace Science and Peace Economics,* ed. Walter Isard (Cambridge: Cambridge University Press, 1988), 17.
[50] Liff, "Whither the Balancers?," 429.

arms race. These theoretical understandings of arms racing diverge about whether they are caused primarily by pressures building up within states or by external forces produced by those states' external interaction. The application of the term arms race is also problematic, because the metaphor is misleading: "races in athletics have clear start and finish lines, but arms races do not."[51] The pejorative connotations to the term imply that any expansion in arms is dangerous and irrational, and is a momentum leading towards war, despite many instances of arms races ending peacefully.

Moreover, there is disagreement amongst scholars over the preconditions for an arms race. For Colin Gray four factors constitute an arms race:

1. There must be two or more parties, conscious of their antagonism.
2. They must structure their armed forces with attention to the probable effectiveness of the forces in combat with, or as deterrent to, the other arms race participants.
3. They must compete in terms of quantity (men, weapons) and/or quality (men, weapons, organization, doctrine, deployment).
4. There must be rapid increases in quantity and/or improvements in quality.[52]

In response to Gray, Grant Hammond proposed eight criteria:

1. Two or more participants, though the relationship is in essence a bilateral one.
2. Specific designation of an adversary or potential adversary.
3. Military and diplomatic planning based directly on the capabilities and intent of the other.
4. A high degree of public animosity or antagonism between the parties involved.
5. Political-military linkage of state actions between or among the rival forces structures and strategies.
6. An extraordinary and consistent increase in the level of defense effort in excess of 8 percent per annum.
7. The focus on a particular weapons environment or weapons system vis-à-vis the opponent with an explicit ratio goal.
8. The purpose of the effort: seeking dominance via intimidation over the rival in political-military affairs.[53]

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[51] Maiolo, "Introduction to Part II," 2.
[52] Gray, "The Arms Race Phenomenon," 41.
[53] Hammond, *Plowshares into Swords,* 31.

However, Hammond's attempt to bring greater specificity to the concept of the arms race encountered criticism by Buzan and Herring who argued,

> …1 and 2 are fine, 3, 4, and 5 are hard to measure and therefore difficult to operationalize; 6 is arbitrary (why 8 percent?); 7 is unnecessary because it occurs too commonly; and 8 is unnecessarily narrow because an arms race could also be pursued for the purpose of deterrence, improving one's ability to fight a war should one occur, or avoiding the attempt of another to achieve dominance.[54]

This suggests that overall testing for an arms race through examining historical processes faces limitations. That is because the criteria set is based on subjective understandings and prior knowledge of the cases, and thus any test for the existence of the arms race phenomenon is inherently biased and arbitrary. As Gray remarked: "neither careful scholarship nor more casual judgment provides algorithms reliably capable of distinguishing between an arms race and defense preparation or modernization."[55] An arms race is either a specialized and rare phenomenon and thus does not help to understand the more common dynamic military relationships, or it simply cannot be isolated from this common dynamic. This implies that the arms race concept has limited analytical utility.

A second key problem for the arms racing literature is empirics. Investigations into "arms races" rest on the assumption that there is some pattern of behavior which lends itself to description as a "race."[56] However, analytical explanations of arms races face the challenge that while definitions and ideas are based on the choice of empirical evidence,[57] it is far from clear if the "arms race" is indeed an existing phenomenon or simply a misused paradigm for understanding strategic behavior. Huntington's historical examples for arms races (Table 2.1), demonstrates the weaknesses of historical case studies:

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[54] Buzan and Herring, *The Arms Dynamic in World Politics,* 79.
[55] Gray, *Weapons Don't Make War,* 48.
[56] Colin S. Gray, "Arms Races and Other Pathetic Fallacies: A Case for Deconstruction," *Review of International Studies* 22, no, 3 (1996): 329.
[57] As Gray pointed out: "the choice of an overall view of an arms race is directly dependent upon the major empirical referents." Gray, "The Arms Race Phenomenon," 42.

	Actors	Type	Year
1	France vs. England	Naval	1840-1866
2	France vs. Germany	Land	1874-1894
3	England vs. France and Russia	Naval	1884-1904
4	Argentina vs. Chile	Naval	1890-1902
5	England vs. Germany	Naval	1898-1912
6	France vs. Germany	Land	1911-1914
7	England vs. United States	Naval	1916-1930
8	Japan vs. United States	Naval	1916-1922
9	France vs. Germany	Land	1934-1939
10	Soviet Union vs. Germany	Land	1934-1941
11	Germany vs. England	Air	1934-1939
12	United States vs. Japan	Naval	1934-1941
13	Soviet Union vs. United States	Nuclear	1946-1989

Table 2.1: Arms Races [Samuel Huntington][58]

There are several shortcomings with this choice of arms racing dyads. First, many of the states—such as France vs. Germany (1874-1894) and Japan vs. United States (1916-1922)—were not arming as peer competitors—France and Japan were conscious that the relationship was sharply asymmetric.[59] Second, despite the specific time frames given, it is difficult to determine when an arms race begins and ends. Huntington himself acknowledged that, "since an arms race is necessarily a matter of degree, differences of opinion will exist as to whether any given relationship constitutes an arms race and as to what are the precise opening and closing dates of any given arms race."[60]

Donald C. Watt's important work on multilateral arms races demonstrated the value in modeling interactive competitive arming comprising more than two actors (See Figure 2.1), based on his understanding of the international system of the period 1818-1839.[61] Watt demonstrated that competitive dynamics in principle involves more than two actors, and is also a two-way process. As a

[58] Huntington, "Arms Races," 43.
[59] Evan Mawdsley, "Land Armaments, 1919-1941," in *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century,* ed. Thomas G. Mahnken, Joseph Maiolo and David Stevenson (Oxford: Oxford University Press, 2016), 90.
[60] Huntington, "Arms Races," 43, fn. 4.
[61] Donald C. Watt, "The Possibility of a Multilateral Arms Race: A Note," *International Relations* 2, no. 6 (1962): 372-379.

state responds to a number of threats in its strategic environment, military competition can be trilateral or even quinquelateral (See Figure 2.2).

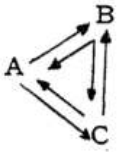

Figure 2.1: Example of Two-way Trilateral Arms Race [Donald C. Watt][62]

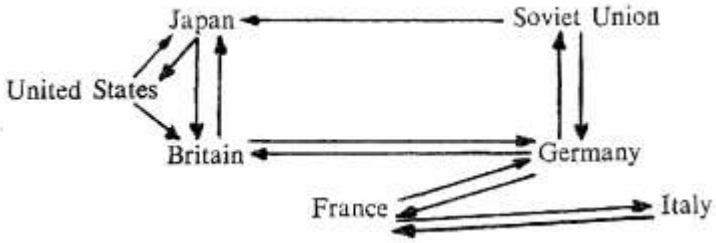

Figure 2.2: Arms Race 1918-1939 [Donald C. Watt][63]

Third, the Cold War case of the Soviet Union vs. United States (1946-1989) is also problematic. Albert Wohlstetter's analysis of American and Soviet defense spending and arms programs during the first two decades of the Cold War demonstrated that there was only a partial connection between the actions of one side and those of the other.[64] Since the early 1960s, the United States reduced its spending on strategic nuclear weapons in relative terms whereas the Soviet Union did the opposite.[65] The American position was based on the realization that given existing arsenals even a significant variation in the relative number of warheads would have made no difference to either the outbreak or the outcome of a conflict. That is, a certain number of surviving nuclear warheads would have almost guaranteed "sufficient" destruction.[66] Moreover, both sides also had different options available to compete in both the number of weapons platforms (quantitative) and the level of technological sophistication (quantitative). Therefore, even though there

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[62] Watt, "The Possibility of a Multilateral Arms Race," 375.
[63] Watt, "The Possibility of a Multilateral Arms Race," 375.
[64] Thomas G. Mahnken, "Introduction to Part III: The Cold War Arms Race," in *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century,* ed. Thomas G. Mahnken, Joseph Maiolo, and David Stevenson (Oxford: Oxford University Press, 2016), 138.
[65] Albert Wohlstetter, "Is there a Strategic Arms Race?," *Foreign Policy* 15 (Summer 1974): 3-20; and Albert Wohlstetter, "Rivals, but no Race," *Foreign Policy* 16 (Fall 1974): 48-81.
[66] Gray, "The Arms Race is about Politics," 117.

was political rivalry and military competition between the two superpowers, there was no qualitative or quantitative "race." The destructive potential of the nuclear weapons, and consequently its ability to influence policy at the highest level, makes the US-Soviet nuclear build-up unique and not applicable to conventional cases.

In contrast to Huntington, Gray's historical examples of arms races are more limited (Table 2.2). One reason for this was his criticism of the duel form of Huntington's empirical support—bipolarity forms the base for Huntington's "arms race" categorization.[67] However, international relationships rest on the subjective judgments of the political leadership in individual states, and political decisions are not made in a vacuum. Gray's cases are based on his four-point criteria:

	Actors	Type	Year
1	England vs. France and Russia, with Italian, German and Austro-Hungarian complications	Naval	1884-1904
2	England vs. Germany (Phase I)	Naval	1898-1905
3	England vs. Germany (Phase II)	Naval	1906-1914
4	England vs. United States vs. Japan, with many complications especially regarding France and Italy	Naval	1918-1922
5	Soviet Union vs. United States, with Chinese complications after 1964	All categories of armaments	1946-1989

Table 2.2: Arms Races [Colin S. Gray][68]

Yet, despite providing historical examples for arms races, Gray later turned into a major critic of the concept itself. His article, "Arms Races and Other Pathetic Fallacies," dismissed his "youthful forays into the arcane reaches of arms race analysis."[69] Instead, he argued that the arms race is actually an "unhelpful metaphor" for understanding strategic behavior.[70] His later reservations were both theoretical and empirical. He concluded that definitions of "arms races" are as "rare as they tend to be unconvincing," and

[67] Gray, "The Arms Race Phenomenon," 43.
[68] Gray, "The Arms Race Phenomenon," 41-44.
[69] Gray, "Arms races and other pathetic fallacies," 329.
[70] Gray, "Arms races and other pathetic fallacies," 323.

that a great deal of the "difficulty with efforts at arms race analysis essentially is empirical."[71] Gray also criticized his own cases (and those of Grant T. Hammond, See Table 2.3) as based on the "assumption that there is some pattern of behavior which lends itself to ascription as arms race."[72] He argues that by self-selecting cases, Hammond equates an "arms race" to simply the "competitive component of an enduring rivalry."[73] Clearly, a lack of understanding and rigor has not precluded "*ad hoc* or hit and run theorizing" on the topic. Gray notes the frequency with which Samuel P. Huntington's seminal study on "arms races" is cited as a fair comment on the shortage of writings that address the issue in a systemic and rigorous fashion.[74]

	Actors	Type	Year
Arms Race			
1	Japan vs. Russia	Naval	1895-1904
2	Germany vs. England	Naval	1902-1912
3	France vs. Germany	Land	1911-1914
4	Japan vs. United States vs. England	Naval	1916-1922
Military Competition			
5	France vs. Germany	Naval	1874-1894
6	England vs. France and Russia	Naval	1884-1904
7	England vs. United States	Naval	1922-1930
Rearmament Race			
8	England and United States vs. Germany and Japan	Naval and Air	1938-1939/41
Space Race			
9	Soviet Union vs. United States	Technology	1957-1969

Table 2.3: Arms Races [Grant T. Hammond][75]

[71] Gray, "Arms races and other pathetic fallacies," 323.
[72] Gray, "Arms races and other pathetic fallacies," 329.
[73] See for example, Gary Goertz and Paul F. Diehl, "Enduring Rivalries: Theoretical Constructs and Empirical Patterns," *International Studies Quarterly* 37, no. 2 (June 1993): 155-156.
[74] Gray, "The Arms Race is about Politics," 121; and Gray, "The Urge to Compete," 207.
[75] Hammond, *Plowshares into Swords,* 35-36. Hammond also identifies up to ten "one-sided panics defined as sudden, abortive and one-sided races within a rivalry. See pp. 39-43.

Gray's major objection referred to a fundamental misunderstanding of the relationship between armaments and strategy. He faults the scholarly literature that identifies "action-reaction" as the key driver of an "arms race" for assuming a dominance of a reactive process over political purpose and domestic decision-making processes.[76] Armaments are part of a nation's strategy, defined as the "art of distributing and applying military means to fulfill the ends of policy."[77] This implies that armament dynamics do not operate in a politics-free zone since "strategy is the art of the dialectic of force, or more precisely, *the art of the dialectic of two opposing wills using force to resolve their dispute.*"[78] Therefore, any analytical explanation of "arms races" must pay attention to the Clausewitzian notion that "war is not merely an act of policy but a true *political instrument,* a continuation of political intercourse, carried on with other means."[79] Although war and military competition may develop their own "grammar," policy remains supreme.[80] Following this logic, "arms races must and should be viewed as an arena of foreign policy manipulation."[81] In essence, any quantitative and qualitative changes in the levels of arms must have an interactive relationship with a state's strategic policy settings since "military power derives its moral tone from the political purposes for which it is employed."[82]

Similarly to Gray, Hedley Bull observed that, "the term 'arms race', suggesting as it does a contest in which the efforts of the participants are limited only by their capacity to struggle and not at all by their will to do, provides in some ways a misleading description of the phenomena to which it is usually applied."[83] As opposed to a rational decision to acquire arms, "arms racing" implies that the acquisition of weapons can intensify to the point where participants lose sight of their political purpose and thereby

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[76] See Gray, "The Arms Race Phenomenon," 71-78; and Gray, "The Urge to Compete," 217.
[77] Basil H. Liddell Hart, *Strategy: The Indirect Approach* (London: Faber and Faber, 1967), 335.
[78] Quoted in Colin S. Gray, *Modern Strategy* (Oxford: Oxford University Press, 1999), 17. Emphasis added.
[79] Clausewitz, *On War,* 87. Emphasis added.
[80] Gray, *Weapons Don't Make War,* 3.
[81] Gray, "The Arms Race is about Politics," 120.
[82] Gray, *Weapons Don't Make War,* 49.
[83] Hedley Bull, *The Control of the Arms Race: Disarmament and Arms Control in the Missile Age* (New York: Praeger, 1965), xv.

abandon reason and judgment. In his historical analysis of military competition, British military historian Michael Howard emphasized the dependent character of armaments on the intensity of political rivalry, the breadth of factors contributing to competitive strategies, and the contribution of a competition in arms to political stabilization and peace rather than war.[84] Echoing Bull, Howard observed: "The history of Europe since the close of the Middle Ages, with the possible exceptions of the period 1870-1914, gives little ground for supposing that the tensions produced by rival armaments-systems have been the sole, or even principle cause of international conflicts; and the history of North America, whose greatest war arose between two communities which at the outset were virtually unarmed, gives even less."[85] In the view of these scholars, the "arms race" was not only an unhelpful metaphor but also non-existent as a strategic phenomenon. A "simple, apolitical, mad momentum model" triggering "arms racing" does not reflect empirical reality as it implies that modern technology, not states are responsible for an "action-reaction" process and a mindless war.[86]

Thus, the military modernization process is unlikely to "spiral out of control" and can be expected to remain directed at achieving an overarching political objective, including, in extremis, prevailing in conflict in a manner consistent with the national interest. In this context, Thomas Schelling observed,

> …victory inadequately expresses what a nation wants from its military force. Mostly it wants, in these times, the influence that resides in latent force. It wants the bargaining force that comes from the capacity to hurt, not just the direct consequence of successful military action. Even total victory over an enemy provides at best an opportunity for unopposed violence against the enemy populations. How to use that opportunity in the national interest, or in some wider interest, can be just as important as the achievement of victory itself; but traditional military suicide does not tell us how to use that capacity for inflicting pain.[87]

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[84] Michael Howard, *The Lessons in History* (New Haven: Yale University Press, 1992), 96.
[85] Michael Howard, *Studies in War and Peace* (London: Temple Smith, 1970), 227.
[86] Gray, "The Urge to Compete," 233.
[87] Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966), 31.

This point was demonstrated during the Cold War when, after a prolonged phase of competition that resembled a genuine arms race, a new Soviet leadership realized that continuing to compete and build-up its military capabilities threatened its economic viability and was therefore no longer in its overall national interests.[88]

In addition, much of the arms race literature displays little interest in explaining what actually triggers military modernization to become interactive, and how this could augment political rivalry.[89] The decision to acquire or enhance arms ("internal balancing") is simply considered one of a state's three basic options to achieve a favorable position in the international system aside from gaining allies ("external balancing") and cooperating ("bandwagoning") with a potential adversary to reduce threats.[90] Most studies of arms competition leave aside the questions why states engage in arms build-ups as a means to seek security. While they acknowledge that armament dynamics can become reciprocal due to a number of operational and tactical purposes,[91] this interaction between actors is assumed to be competitive. States acquire arms to maintain parity or deter, as opposed to competing for indisputable sovereignty (avoiding war) or demonstrating that superiority in war.[92] As argued by Sergey Radchenko in his analysis of the Soviet Union's rationales for arming during the Cold War, labeling all arming dynamics as

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[88] See Stephen I. Schwartz, "Appendix D: Assessing the Costs of Other Nuclear Weapons States," in his *Atomic Audit: The Costs and Consequences of US Nuclear Weapons Since 1940* (New York: Brookings Institution Press, 1998), 611-612.
[89] Charles H. Fairbank Jr., "Arms Races: The Metaphor and the Facts," *The National Interest* 1 (1985), 83.
[90] "Internal balancing" refers to moves to increase material capability, particularly military and economic, see Waltz, *Theory of International Politics,* 118. "External balancing" refers to a "formal or informal arrangement for security cooperation between two or more sovereign state," see Stephen M. Walt, "Alliance Formation and the Balance of Power," *International Security* 9, no. 4 (1985): 7. "Bandwagoning" refers to accommodation with a stronger power with the hopes of gaining benefits or neutralizing a threat. See David C. Kang, "Between Balancing and Bandwagoning: South Korea's Response to China," *Journal of East Asian Studies* 9, no. 1 (January-April 2009): 4.
[91] See for instance, Ball, "Arms or Affluence"; Charles L. Glaser, "When are Arms Races Dangerous?"; and Till, *Asia's Naval Expansion.*
[92] Timothy Hoyt, "The United States and the Cold War Arms Race," in *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century*, ed. Thomas G. Mahnken, Joseph Maiolo, and David Stevenson (Oxford: Oxford University Press, 2016), 155-156.

competitive is superficial and does not explain reasoning behind key decisions.[93]

Not only does the literature provide inadequate strategic explanations for military modernization, it also fails to give due weight to non-military factors such as ideational elements.[94] Nationalism is re-emerging in the Asia-Pacific, and is a particularly strong force in China.[95] Robert Ross has argued that "naval nationalism is one manifestation of *prestige strategies*, whereby governments seek international success to bolster domestic popularity. Prestige-seeking governments sometimes provoke war in the pursuit of a popular military victory. But governments also can seek greater prestige by developing defense policies and acquiring weaponry that do not provoke war but nonetheless destabilize great power relations."[96] As Edward Luttwak has pointed out, certain platforms are implements of "naval suasion," influencing "allies, adversaries, or neutrals" through "the existence, display, manipulation, or symbolic use" of sea-based or sea-related forces.[97] Therefore it has become essential to identify and examine not only the material influences on state elites in decision-making but also the nationalistic-ideational narratives within societies that provide additional motivation for states to pursue modernization and help shape the choices made. Decision-makers often do not deal with an objective strategic reality, but one that is defined by domestic

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[93] Sergey Radchenko, "The Soviet Union and the Cold War Arms Race," in *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century*, ed. Thomas G. Mahnken, Joseph Maiolo, and David Stevenson (Oxford: Oxford University Press, 2016), 174.

[94] This weakness has been noted repeatedly over the last thirty years. See Moll and Luebbert, "Arms Race and Military Expenditure Models," 160-161. Studies that do take ideational factors include Robert D. Benford and Lester R. Kurtz, "Performing the Nuclear Ceremony: The Arms Race as a Ritual," *Journal of Applied Behavioral Science* 23, no. 4 (December 1987): 463-482; David Kinsella, "Forces Driving Third World Military Industrialization: Interests and Passions," (Paper Presented at the Annual Meeting of the International Studies Association, San Diego, April 17-21, 1996); Robert Kelly, "A 'Confucian Long Peace' in Pre-Western East Asia?" *The European Journal of International Relations* (July 2011): 407-430.

[95] Medeiros highlighted in 2005 the growing phenomena of "manipulated nationalism" in Asia. See Evan S. Medeiros, "Strategic Hedging and the Future of the Asia-Pacific," *The Washington Quarterly* 29, no. 1 (2005): 159. Of particular emphasis is rising Chinese nationalism, see Michael Yahuda, *The International Politics of the Asia-Pacific,* 3rd ed., (London and New York: Routledge, 2003), 272, 343.

[96] Robert S. Ross, "China's Naval Nationalism: Sources, Prospects, and the US Response," *International Security* 34, no. 2 (Fall 2009): 50.

[97] Edward N. Luttwak, *Strategy and History: Collected Essays,* Vol. 2 (New Brunswick and Oxford: Transaction Books, 1985), 84.

and international norms, institutions, cultural interactions, and other systems of meaning. If, as Alexander Wendt famously noted, "anarchy is what states make of it,"[98] then it can also be surmised that the contemporary naval build-up in the Asia-Pacific is not merely a product of geostrategic factors but also ideational and normative ones.

Moreover, Barry Buzan argued that an arms race should not be considered a frequently occurring normal strategic behavior of states. Instead, in his view, arms racing is "an abnormally intense condition in relations between states reflecting either or both of *active political rivalry*, and mutual fear of the other's military potential."[99] Yet, he also noted that this would still leave the problem of "how to distinguish this abnormal condition from the norm of self-defense behavior under the conditions of anarchy."[100] In the face of this criticism, other scholars have attempted to provide greater analytical clarity to the arms race theories. Adam P. Liff and G. John Ikenberry argue that in the Asia-Pacific, "there is already some evidence of *security dilemma-driven military competition* in the Asia-Pacific, which could worsen significantly in the near future. These dynamics manifest despite the available evidence showing that the region is not now engaged in a full-scale arm race."[101] Hammond also maintained that "the term *military competition* [is] a circumstance that is more than status quo and less arms race … It is a general effort at increased preparedness that is characteristic of prudent action in international politics."[102] Yet, in response to Hammond, Gray pointed out that if empirical findings establish that arms races do not cause wars, the occurrence of conflict could not be used to infer that the prior competition was a race rather than a managed enhancement of military capabilities.[103]

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[98] Alexander Wendt, "Anarchy is What States Make of It: The Social Construction of Power Politics," *International Organization* 45, no. 2 (Spring 1992): 391-425.
[99] Buzan, *An Introduction to Strategic Studies,* 69-70. Emphasis added.
[100] Buzan, *An Introduction to Strategic Studies,* 69-70. Emphasis added.
[101] Adam P. Liff and G. John Ikenberry, "Racing toward Tragedy?: China's Rise, Military Competition in the Asia Pacific, and the Security Dilemma," *International Security* 39, no. 2 (Fall 2014): 54. Emphasis added.
[102] Hammond, *Plowshares into Swords,* 8. Emphasis added.
[103] Gray, "Arms Races and other Pathetic Fallacies," 325.

Quantitative Approaches and its Limitations

There is a significant body of quantitative studies—predominantly in the international relations discipline—on the topic of military competition to prove the existence of an arms race and its potential consequences. Much of this literature is rooted in Cold War theorizing about arms races, and is devoted to debates on how to measure or formally model an arms race, the variables and their contributions to an arms race, and the question of whether arms races are the primary trigger for conflict. The most significant of these studies are Lewis F. Richardson and Anatol Rapoport's interpretation of Richardson's mathematical models of arms races, which inspired a generation of quantitative research into proving the existence of the arms race, why they occur, when they become unstable, and how they led to war. These quantitative approaches highlighted the limitations of using formal modeling and raw data, as they lacked sufficient comparable data on key indicators such as military expenditure and weapons procurement, as well as a large enough number and variety of instances to build a dataset for reliable modeling. Moreover, it highlighted the difficulty of pinpointing at what level military modernization crossed the threshold from routine upgrading of forces (to match organizational and technical needs) to full-blown competitive "racing."[104] Thus these studies often employed a very ambiguous definition of "arms races" to develop a universal theory, and to make the phenomenon applicable to as many cases as possible.

Richardson[105] and Rapoport[106] produced foundational quantitative studies on arms races. Richardson developed a descriptive model of interactive arming

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[104] Maiolo, "Introduction to Part II," 2.
[105] See Lewis F. Richardson, "War Moods: I," *Psychometrika* 13 (1948): 147-174; "War Moods: II," *Psychometrika* 13 (1948): 197-232; "Variation of the Frequency of Fatal Quarrels with Magnitude," *Journal of American Statistical Association* 43 (1948): 523-546; *Arms and Insecurity: A Mathematical Study of the Causes and Origins of War,* ed. Nicolas Rachevsky and Ernesto Trucco (Pittsburgh: Boxwood Press, 1960); and *Statistics of Deadly Quarrels* (Pittsburgh: Boxwood Press, 1975).
[106] See Anatol Rapoport, "Lewis F. Richardson's Mathematical Theory of War," *Conflict Resolution* 1, no. 3 (September 1957): 249-299; *Fights, Games and Debates* (Ann Arbor: University of Michigan Press, 1961); and "Mathematical Methods in Theories of International Relations: Expectations, Caveats and Opportunities," in *Mathematical Models in International Relations,* ed. D. A. Zinnes and J. V. Gillespie (New York: Praegar, 1976), 10-36.

in which changes in a state's military expenditures are influenced by three factors:

1. Out of fear of military insecurity, country A will make increases in its armaments proportional to the level of country B's armaments. B will respond in a similar way to A's armaments.
2. The burden of armaments upon the economy of the country imposes a restraint upon further expenditures. The restraint is proportional to the size of the existing force.
3. There are hostilities, ambitions and grievances that drive nations to arm at a constant rate, even in the absence of a military threat from another nation. [107]

Richardson and Rapoport's models comprise of a pair of linked differential equations, with constant coefficients for each of the three factors. In this model, states do not have explicit objectives and the model itself does not seek to account for strategic behavior. Rather, what determines the course of an arms race are the parameters of the model, for instance, the intensity of a state's reaction to an adversary. [108] These models are thus useful in highlighting the interlocking nature of weapons decisions and the basic interdependence of defense expenditures in states with intersecting strategic visions. His models contend that nations increase arms expenditures when they perceive that a rival nation is capable of posing a significant military threat to their security.[109]

Richardson's model has had a profound and long-term influence on thinking about competitive military relationships.[110] Stephen Majeski observed that it was "[Richardson's] verbal, non-formal theory which is the foundation of the arms race literature."[111] Michael Intriligator and Dagobert Brito concurred,

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[107] William R. Caspary, "Richardson's Model of Arms Races: Description, Critique, and an Alternative Model," *International Studies Quarterly* 11, no. 1 (March 1967): 64.
[108] Glaser, "The Causes and Consequences of Arms Races," 255.
[109] See Richardson, *Arms and Insecurity,* 19-36; and Rapoport, "Lewis F. Richardson's Mathematical Theory of War," 275-282.
[110] See Michael D. Intriligator and Dagobert L. Brito, "Arms Races," *Defence and Peace Economics* 11, no. 1 (2000): 45-54; Charles S. Taber, "National Arms Acquisitions as a Rational Competitive Process," *Simulation & Gaming* 24, no. 4 (December 1993): 413-428; and Michael Don Ward, "Differential Paths to Parity: A Study of the Contemporary Arms Race," *The American Political Science Review* 78, no. 2 (June 1984): 297-317.
[111] Stephen J. Majeski, "Expectations and Arms Races," *American Journal of Political Science* 29, no. 2 (May 1985): 218.

arguing that "the Richardson model has been the dominant paradigm for both theoretical and empirical studies of the arms race." [112] Lastly, Charles Taber formed the view that "the arms race literature, building from Richardson (1960), is probably the largest body of formal work in international relations."[113]

Nevertheless, Richardson's model was not without its problems. His approach yielded a formulaic depiction of a complex political process. In addition, modern quantitative studies—which built on Richardson's work—neglect the existence of qualitative studies by scholars such as Huntington, Gray, Howard and Bull, which previously raised significant doubt about the usefulness of arms race theories. As well, despite a larger empirical base, the literature based on formal models and mathematical equations, which studied the process of the arms race largely through the prism of military expenditure, constructed formal models with seemingly arbitrary parameters. Theresa Smith's parameters for an arms race provides a telling example:

> A race usually involves at least two parties—independent states in this analysis—one may be far more committed to racing than another. … The competition must begin last a minimum of four years. An arms race then begins in a year for which military spending rises and hostility towards some adversary nation-state has been declared as government policy. A race ends for a given participant when military spending falls for two consecutive periods, the end point being the last year to show an increase.[114]

Yet the danger of operationalizing abnormal military competition—labeled as an "arms race"—simply with military expenditure and foreign policy statements is that it leaves arms race applicable to any instance of arming. In addition, these formals models make the implicit assumption that all arms races are essentially the same, disregarding nuance and singularity. The propensity to broaden the applicability of the term "arms race" resulted in the

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[112] Intriligator and Brito, "Arms Races," 50.
[113] Taber, "National Arms Acquisitions as a Rational Competitive Process," 414.
[114] Theresa Clair Smith, "Arms Race Instability and War," *The Journal of Conflict Resolution* 24, no. 2 (1980): 255.

lack of distinction between a "race," "buildup," and "competitions."[115] Moreover, the use of defense spending to measure arms racing can be seriously misleading, particularly with regards to qualitative changes—innovations in military forces may not result out of direct spending increases.[116] As well, these studies see no value in distinguishing between an "arms race," "action-reaction" and an "arms competition." Both qualitative and quantitative studies also ascribe "military modernization" with a somewhat benign intent, despite it being inherently an activity involving the use of force. Nor do they exhibit any curiosity about the various external and internal pressures that affect increases in defense spending and associated policy statements. For instance, while William Caspary's study of Richardson's model noted that "one suspects that emotions are a dynamic part of the system, stimulated by weapons levels, and in turn stimulating weapons production,"[117] it failed to draw any conclusion for quantitative studies on arms racing.

As a result, quantitative studies adopting a broad definition of an "arms race" to build a large *n*-size, defeat their attempts to study a unique phenomenon viewed as abnormal and purposefully intense military competition. As well, formal models only test dyadic pairs, as opposed to cases of three or more players. The objective to have a large sample (*n*) size to demonstrate correlation and the power of the model results in definitions of the arms race so broad that they are not sensitive to contingency. Any form of inter-state rivalry involving an increase in armaments—which could be mere modernization—and hostile declaratory policy—which could be simple a reflection of nationalist sentiment—is classified as an arms race. These studies therefore classify cases such as Chile vs. Peru (1869-1879), NATO-Warsaw Pact (1949-1975), Israel vs. Arab Nations, South Africa vs. OAU (1961-1977) and Albania vs. USSR (1968-1977), as "arms races."[118]

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[115] See Bolks and Stoll, "The Arms Acquisition Process"; Carlton and Schaerf, *The Dynamics of the Arms Race;* and Glaser, "The Causes and Consequences of Arms Races," 251-276.
[116] Glaser, "The Causes and Consequences of Arms Races," 264.
[117] Caspary, "Richardson's Model of Arms Races," 87.
[118] See Majeski, "Expectations and Arms Races," 225; Carlos Seiglie, "Exploring Potential Arms Races," *Economics and Politics* 8, no. 3 (November 1996): 237; and Smith, "Arms Race Instability and War," 260.

Surprisingly, many of these studies omit the US-Soviet case as an arms race because quantitative tests on spending patterns do not demonstrate the presence of a "nuclear arms race."[119] Kugler, Organski and Fox reached the rather paradoxical assessment that "it is obvious that the United States and the USSR are building nuclear arms, but are not doing so, as they allege, because they are racing or competing with one another."[120] The authors acknowledged that the results of their data contradicts conventional wisdom. They reasoned that their data did not demonstrate a "nuclear arms race," was because the US and USSR were lying, and the increase in nuclear armaments was due to another unstated reason. Finally, Richardson's model omits specificity regarding the relationship between military expenditure and accumulated arms stockpile, adding to the conceptual problem with the arms race formulation.[121] The model's lack of understanding of the type of weapon and its influence on policy demonstrates the lack of sensitivity to context in formal models.

As a consequence, some quantitative approaches to naval arms races measured weapons stockpiles, the number and type of major capabilities and/or the level of firepower in order to assess the balance of military capabilities.[122] For instance, Ward examined stock-flow interaction to examine the scope and structure of naval armaments.[123] Bolks and Stoll operationalized naval power through the type of warship(s) with the greatest amount of combat power, contending that in naval history states were focused on the number of hulls to weigh the balance of naval forces.[124] Crisher and Souva examined relative naval power by measuring the aggregate tonnage of

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[119] See Thomas R. Cusack and Michael Don Ward, "Military Spending in the United States, Soviet Union, and the People's Republic of China," *Journal of Conflict Resolution* 25, no. 3 (1981): 429; and A. F. K. Organski and Jacek Kugler with Daniel J. Fox, "Deterrence and the Arms Race: The Impotence of Power," *International Security* 4, no. 4 (Spring 1980): 105-138.
[120] Kugler, Organski and Fox, "Deterrence and the Arms Race," 138.
[121] Rein Taagepera, "Stockpile-budget and Ratio Interaction Models for Arms Races," *Peace Science Society (International Papers)* 29 (1979-1980): 67
[122] See for instance Brian Crisher and Mark Souva, "Power At Sea: A Naval Power Dataset, 1865-2011" (Working Paper, Florida State University, 2012); Bolks and Stoll, "The Arms Acquisition Process," 589; and Ward, "Differential Paths to Parity," 298.
[123] Ward, "Differential Paths to Parity," 298.
[124] Bolks and Stoll, "The Arms Acquisition Process," 589.

active ships that have the capability of inflicting significant damage on both land and sea targets.[125] However, assessing naval power through the measure of ship counts over-simplifies the complexities of decision-making processes behind arming dynamics. Instead, presumably to protect the integrity of their models the authors assume that "states use simple decision-making rules to make foreign and defense policy."[126] That is, they largely regard the state as a "black box" despite clear evidence in scholarship that domestic factors have a major impact on states' foreign and defense decision-making processes, including military modernization.[127] And despite the methodological rigor committed to objective analytical explanations, the mathematics also cannot take into account strategic interaction and concepts such as bluffing, cooperation, plotting of one nation against another, as well as uncertainty and misperception of other countries' naval build-ups.[128]

In response to these limitations, some scholars developed models based on behavior and social psychology methods to address complex issues such as maximizing behavior, bureaucratic decision-making, alliance formation, multi-country stability, the balance of power and proliferation.[129] These models and game-theoretic simulations attempted to operationalize the decision-making processes for acquiring arms to reach predictions about whether states will adopt a competitive arming policy. For example, Majeski developed an expectation model based on game theory to test whether expectations of an opponent's military expenditure and prior expectation errors play an important role in arms race dynamics.[130] Taber provided a simple expected utility model, based on prospect theory, to determine how states behave in the decision-making process for arms acquisitions.[131]

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[125] Crisher and Souva, "Power At Sea," 3.
[126] Bolks and Stoll, "The Arms Acquisition Process," 583.
[127] On decision-making processes see Richard Hermann, "The Power of Perceptions in Foreign-Policy Decision Making: Do Views of the Soviet Union Determine the Policy Choices of American Leaders?" *American Journal of Political Science* 30, no, 4 (November 1986): 841-875; Kalevi J. Holsti, "National Role Conceptions in the Study of Foreign Policy," *International Studies Quarterly* 14, no. 3 (1970): 233-309; and Michael J. Shapiro and G. Matthew Bonham, "Cognitive Process and Foreign Policy Decision-Making," *International Studies Quarterly* 17, no. 2 (June 1973): 147-174.
[128] Anderton, "Arms Race Modeling: Problems and Prospects," 348.
[129] See Intriligator and Brito, "Arms Races," 50.
[130] Majeski, "Expectations and Arms Races," 241.
[131] Taber, "National Arms Acquisition as a Rational Competitive Process," 424.

Intriligator and Brito employed a game theoretic approach based on the Prisoner's Dilemma in order to predict whether an arms race becomes more or less stable when one actor in a dyad views its opponents weapons stocks.[132] Lastly, Lichbach developed a game theory model based on the Richardson equations to predict when an arms rivalry between two nations would result in an "arms race, arms control or arms domination."[133]

However, despite their reference to the psychology and behavior of states, these models are essentially based on rational actor approaches. They assume that the simple rules used to operationalize decision-making processes for the purposes of animating the model are in fact accurate reflections of reality. Moreover, their work, as Taber admitted, to some extent simply reconfirmed earlier research: "several of the results confirm long-standing theoretical explanations … arms races in the model resulting from the security dilemma tend to gain momentum as images become more extreme. This dynamic conforms with the predictions of the well-known, but never formalized, spiral model." [134] Most importantly, these quantitative studies converted the literature on arms races into a debate on methodology: how to prove correlations, how to disaggregate the dependent variables and the expenditures of opponents, whether stocks are a better measure than expenditure, and what measures provide any particular model with the most explanatory power. This approach, however, has come at the expense of dealing with the critical question of why and how states adopt armament policies, and when and how they interact at the international level. Indeed, recent arms racing literature has been preoccupied with methodological questions as opposed to conceptual ones.[135] In the end, quantitative studies on arms racing engage in mathematical modeling of a highly complex political phenomenon, and shy away from the fact that many variables that contribute to interactive arming defy reliable quantification. Conversely, some quantitative studies have argued that arms racing is generally present at

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[132] Intriligator and Brito, "Arms Races," 51.
[133] Mark Irving Lichbach, "When Is an Arms Rivalry a Prisoner's Dilemma? Richardson's Models and 2x2 Games," *The Journal of Conflict Resolution* 34, no. 1 (March 1990): 29-56.
[134] Taber, "National Arms Acquisition as a Rational Competitive Process," 424.
[135] A good example for such an approach is Moll and Luebbert, "Arms Race and Military Expenditure Models."

certain junctures of an international rivalry. By equating an "arms race" with the "competitive component of an enduring rivalry," the authors affix the term to any armament policy of a state.[136] Such an approach, however, lacks a systematic and rigorous application, and falls more into the category of "*ad hoc* or hit and run theorizing" on the topic."[137]

The Decision to Arm

The decision to arm is driven by both external threat perceptions and the behavior of external powers, the domestic interests such as economic growth and employment, and the level of activity in specialized sectors like research and development and ship-building.[138] History suggests that internal political events are inherently tied to the strategic processes that assess the changes in the armaments of potential adversaries.[139] As Lawrence Freedman has pointed out:

> The trouble with most models of arms [competitions] is that they rarely provide a decent explanation of *why* nations buy the weapons they do. Defence policy is made up of a variety of elements of which an assessment of what is happening on the other side is only one. And even then, the nature of the assessment of what is going on on the other side is in part bureaucratically determined. … The determinants of defence policy are, therefore, much more than merely the activities of the other side; at the very least one has to take into account how these activities are comprehended by the national security apparatus, but there are also the other political, economic and military factors that shape defence policy.[140]

Material dynamics derive from the structure of the international system—above all, its anarchic character—creating an imperative for states to secure their own survival through material power. This imperative stems from factors external to the state. The general insecurity of international anarchy leads states to worry not simply about how well they fare themselves ("absolute gains") but also how well they fare compared to other states

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[136] See for instance Goertz and Diehl, "Enduring Rivalries," 155-156.
[137] On the shortage of academic work that address arms racing in a systemic and rigorous fashion see also Gray, "The Arms Race is about Politics," 121; and Gray, "The Urge to Compete," 207.
[138] Glaser, "The Causes and Consequences of Arms Races," 251.
[139] Fairbank, "Arms Races," 79.
[140] Freedman, "Nuclear Weapons in Europe," 58.

("relative gains"). States that gain disproportionately in relation to other states may achieve a superiority that threatens the goals or even the security of their cooperative partners.[141] States strengthen their armaments because of the threats they perceive from other states, and this can extend to a reactive process that leads to an endless escalation.[142] Such a situation can readily acquire the characteristics of a "security dilemma," where each qualitative and quantitative adjustment in arms by one actor is assessed by others as a diminution in their security requiring redress. An anarchic international system can see a group of states, all seeking to do no more than provide for their own defense, driven into a process of competitive accumulations of armaments in order to retain maximum confidence in their national security.[143]

Two prominent historical examples include the arms dynamic between the British and German navies (1898-1912) leading up to the First World War, and the logic behind the nuclear arms build-up between the US and the Soviet Union. First, Germany's naval challenge to Britain's hegemonic position at sea—which Britain saw as essential to its security—led to competition between the two states' shipbuilding, in particular the revolutionary Dreadnought. The British government perceived the German challenge as a threat to its relative power. The competitive naval programs were thus a signal of political rivalry—an increase in armaments to revise the power balance and a reaction in armaments to maintain it.[144] Second, during the Cold War, the desire to preserve deterrence of an all-out attack led to increases and improvements in both the Soviet and American's missiles. For the US, and in contrast to the USSR, the qualitative improvement of an essentially constant number of missiles was of decisive importance: this comprised the strategic-

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[141] Duncan Snidal, "Relative Gains and the Pattern of International Cooperation," in *Neorealism and Neoliberalism: The Contemporary Debate,* ed. David Baldwin (New York: Columbia University Press, 1993), 172.
[142] Buzan and Herring, *The Arms Dynamic in World Politics,* 83.
[143] See Jervis, "Cooperation Under the Security Dilemma,"; Glenn H. Snyder, "The Security Dilemma in Alliance Politics," *World Politics* 36, no. 4 (1984): 461-495; and Jack L. Snyder, "Perceptions of the Security Dilemma in 1914," in *Psychology and Deterrence,* ed. Robert Jervis, Richard Ned Lebow, and Janice Gross Stein (Baltimore: The John Hopkins University Press, 1985), 153-179.
[144] Michael Howard, *The Causes of War* (Unwin: London, 1983), 18-19; and Fairbank, "Arms Races," 82-83.

land based missile series of *Minuteman*, *Minuteman III* and *MX,* and its submarine-based missile series of *Polaris*, *Poseidon* and *Trident*.[145] In particular, the deployment of MIRVs (multiple independently targetable re-entry vehicles) increased American strike capability by a factor of three, leading the Soviet Union to respond with quantitative increases and the development of its own MIRV capability by 1975 (intercontinental ballistic missiles [ICBM]) and 1978 (submarine-launched ballistic missiles [SLBM]), respectively.[146]

Material explanations came to dominate the post-Cold War era of armament policies and dynamics. Yet, these focused predominantly on the adversary's weapons build-up, disregarding more comprehensive and compelling explanations of why armament programs exhibit more or less urgency.[147] Significantly, they ignored that these decisions to arm are based on perceptions and (misperceptions) of a potential adversaries' capabilities. These perceptions of threat are based not just on strategic calculations but also ideas, beliefs and values inherent to a state and its political institutions. These cognitive and ideational factors cannot be disentangled from material ones, since the decision to engage in arming policies is shaped as much by political conditions in which threats arise and are dealt with, as by their material basis.[148] Nevertheless, the ideas of states driving arms acquisitions and military competition has received considerable less attention than the explanation that states are locked in an "action-reaction spiral." This is a major shortfall in the academic literature on arms dynamics since investigations into how states choose among the range of options in relation to their domestic structures and affairs sheds light on not only why states adopt arming policies, but also what the interaction of a number of arming

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[145] Michael D. Intriligator and Dagobert L. Brito, "Can Arms Races Lead to the Outbreak of War," *The Journal of Conflict Resolution* 28, no. 1 (March 1984): 63-84.
[146] Kahn, "The Arms Race and Some of Its Hazards"; and Milton Leitenberg, "The Origin of MIRV" in his *Studies of Military R&D and Weapons Development* (Washington DC: Federation of American Scientists, April 1983), 1.
[147] See Ball, "Arms and Affluence"; and Richard A. Bitzinger, "A New Arms Race? Explaining Recent Southeast Asian Military Acquisitions," *Contemporary Southeast Asia* 32, no. 1 (2010): 50-69.
[148] Ayson, "Strategic Studies," 566.

programs. The logic of strategic action and consequences[149] increases the demands on the decision-maker, as these individuals must calculate what their opponents are likely to do in order to devise their own strategy. Therefore, explorations of how and why states will arm must go beyond narrow rational choice analysis and recognize such factors as emotions and cognitive limitations that affect choices and behavior.[150]

In this regard, Buzan and Herring note that external factors of rivalry serve as the main engine for competitive arming dynamics but when reactions become anticipatory, "the state has, in effect, restructured itself internally on a long-term basis to deal with the arms dynamic."[151] Additional domestic political factors include the link between a state's economy and its military modernization as a major agent of scientific and technological progress. Both involve not only the material basis of state power but also the ideological concern for national prestige associated with a sophisticated armed force. Such ideational variables, however, are often specific to a case and often overlooked in strategic debate as they are not easy to prove and operationalize, and therefore difficult to correlate with competitive behavior. Yet, identifying only one distinct factor, or emphasizing structural over normative variables, results in the loss of understanding of specific causes as well as misunderstanding of the consequences of arms competition. As Kennedy points out, "ultimately, arms increases—and arms [competitions]—are the reflection of complex political/ideological/racial/economic/territorial differences, rather than phenomena which exist, as it were of themselves, uncaused causes."[152]

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[149] See Fritz W. Ermarth's examination of the Cold War US and Soviet Union relationship in Fritz W. Ermarth, "Contrasts in American and Soviet Strategic Thought," *International Security* 3, no, 2 (Fall 1978): 142-143.
[150] Margaret Levi, "Reconsiderations of Rational Choice in Comparative and Political Analysis," in *Comparative Politics: Rationality, Culture, and Structure,* ed. Mark Irving Lichbach and Alan S. Zuckerman, 2nd ed., (Cambridge: Cambridge University Press, 2009), 131.
[151] Buzan and Herring, *The Arms Dynamic in World Politics,* 101.
[152] Kennedy, *Strategy and Diplomacy 1870-1945,* 174.

Hypotheses

The survey of the theoretical literature conducted for this study suggests that explanations for the modernization of naval and associated air capabilities can be encapsulated in six core hypotheses. These hypotheses are both material and ideational, encompass both qualitative and quantitative changes, and address the reality that reciprocal arming dynamics can be multipolar. Regional states build-up their armed forces based not only on an assessment of their strategic environment but also the interests and values of their internal institutions. Ideational and institutional factors influence the decision-making calculus of states, as decision-makers assessing and perceiving external threats must also assess the consequences of choosing between a competitive and cooperative policy.[153] The six key hypotheses are as follows:

> *H1: The process of military modernization is based on both external threats to national security and domestic pressures.*
>
> If states are rational unitary actors, military modernization should follow a strategic calculus. Assessments of external threats to national security lead to capability requirements which are translated into acquisitions and/or enhancements in a cost-efficient manner to address these threats. However, the state must also balance its concerns for national security with domestic interests (such as budgets and fiscal balances) and ideas. Ideational factors feed into any modernization driven primarily by perceptions of threat and the assessment of deterrence. Thus, both material and ideational factors interact to impact military modernization.[154]
>
> *H2: Interactive arms dynamics can be multilateral.*
>
> According to Samuel Huntington, arms races can only be bilateral in nature. That is, they are a reciprocal interaction between two states, or coalitions of states, resulting from conflicting purposes or mutual

[153] On domestic variables influencing foreign policy decision-making see: Graham T. Allison, "Conceptual Models and the Cuban Missile Crisis," *The American Political Science Review* 63, no. 3 (September, 1969): 689-718; Jack S. Levy, "Domestic Politics and War," *The Journal of Interdisciplinary History* 18, no. 4 (Spring 1988): 653-673; and Putnam, "Diplomacy and Domestic Politics."

[154] Gray, "The Arms Race Phenomenon," 77.

fears.[155] However, this argument assumes that the international system based on a balance of power consists of only a series of bipolar or bilateral antagonisms. Estimates of international relationships rest on the subjective judgments of the political leadership in individual states, and a state may regard more than one state as its potential adversary. Therefore, interactive arms dynamics do not involve only mutually exclusive pairs of states, but can also play out among three or more actors.[156]

H3: Interactive arms dynamics have both quantitative and qualitative aspects.

States that modernize their weapons platforms should have a capacity for both quantitative and qualitative increases in military power. The former requires states to be capable of re-allocating resources from civilian to military purposes. The latter demands dynamic innovation and investment in technology. Both address the need to develop and maintain military capability. The notion of a Revolution in Military Affairs (RMA)[157] is difficult because exploiting it involves going beyond new weapons and equipment to redesigning military units, changing when and where intelligence is inserted, and changing command, control and communication (C3) conventions. On the other hand, this preparedness to embrace revolutionary and disruptive change could help ensure cost-effectiveness, while also maintaining technological superiority of weapons platforms. Moreover, such a process is unlikely to involve only a single weapons platform. It involves not only reciprocal increments in armaments, but also a succession of generations of weapons (enhancement), competition in

[155] Huntington, "Arms Races," 41-86.
[156] Watt, "The Possibility of a Multilateral Arms Race," 375.
[157] The RMA is defined as "when one of the participants in a conflict incorporates new technology, organization, and doctrine to the extent that victory is attained in the immediate instance, but more importantly, that any other actors who might wish to deal with that participant or that activity must match, or counter the new combination of technology, organization and doctrine in order to prevails. The accomplishments of the victor become the necessary foundation for *any* future military activities in that area of conflict." See Theodor Galdi, "Revolution in Military Affairs? Competing Concepts, Organizational Responses, Outstanding Issues," Congressional Research Report for Congress 95-1170 F (Washington DC: Library of Congress, December 11, 1995), http://www.iwar.org.uk/rma/resources/rma/crs95-1170F.htm.

strategic doctrine, and changes in organization and force structure. This hypothesis tests whether interactive arms dynamics privileges qualitative over quantitative changes due to the increased sophistication of capabilities that now accompany new platforms.

H4: The modernization of defense capabilities is influenced by the actions of potential adversaries.

The process of force modernization by states—either to deter an attack by an adversary or to employ military power offensively—requires devoting a significant share of the nation's resources to accumulate and maintain a stock of weapons and human resources. Therefore, it is assumed that participants form expectations based, in particular, on their opponent's prior, current and expected future military expenditure. This tests Lewis Richardson's model of interactive arming, in which changes in a state's military expenditure are influenced by three factors: (1) the military expenditure of the adversary, (2) the economic burden of previous modernization of military forces, and (3) the intensity of the state's grievance against its opponents.[158]

H5: The existence of an allied relationship or security partnership does not prevent the occurrence of interactive arming.

Research on military alliances tends to emphasize a state's desire to balance against security threats.[159] Yet, states also pursue security independently by relying on their own military capabilities and acquiring additional arms. The two are not mutually exclusive and alliance support does not substitute for military capabilities or vice versa. Rather, alliances and arms are complementary in that states tend to increase their military spending, while also seeking (or increasing) cooperative arrangements and/or alliance ties.[160]

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[158] See Richardson, *Arms and Insecurity*.
[159] See Morgenthau, *Politics Among Nations*; and Waltz, *Theory of International Politics.*
[160] Paul F. Diehl, "Substitutes or Complements? The Effects of Alliances on Military Spending in Major Power Rivalries," *International Interactions* 19, no. 3 (1994): 159-176; and Gerard L. Sorokin, "Arms, Alliances, and Security Tradeoffs in Enduring Rivalries," *International Studies Quarterly* 38, no. 3 (September 1994): 422.

H6: Interactive arms dynamics do not generate their own momentum towards conflict.

Participants in interactive arming must maintain a general attention to the developing military posture of their rivals. The strategic actors provide vital, though possibly intermittent, flows of information that serve to trigger reactions that could possibly become strategic competition. However, the domestic processes of a state determine whether it should react, what is a relevant or expedient reaction, and the scale and timing of a reaction.[161] These domestic processes are based on the perceptions of a state. According to Carl von Clausewitz, "the effect of fear is to multiply lies and inaccuracies. As a rule, most men would rather believe bad news than good, and rather tend to exaggerate the bad news."[162] Robert Jervis also argues that men generally perceive what they want to perceive.[163] In a competition between states, these perceptions—or misperceptions—imply that arms dynamics can generate their own momentum towards conflict. However, this assumes that statesmen can lose control over policy.

In the next chapter, the regional trends of arming in the Asia-Pacific are examined through a broad overview of economic performance and military expenditure data. These broad measures support useful inferences about regional stability, security perceptions among regional states and even possible explanations for military modernization in specific countries. These broad measures are less useful, however, for cross-country comparisons. This material has to be supplemented with an examination of the behavior of states in terms of all six of the core hypotheses set out above. It is the contention of this thesis that, taken together, these analytical tools can be applied to the empirical case studies to develop a new framework to understand military modernization and arms acquisitions, called "interactive arming."

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[161] Gray, "The Arms Race Phenomenon," 77.
[162] Clausewitz, *On War,* 117.
[163] Jervis, *Perception and Misperception in International Politics,* 356.

Chapter 3:
Arming in the Asia-Pacific

An analysis of naval and associated air modernization of capabilities in the Asia-Pacific region can usefully start with an examination of the available empirical data on military expenditure and procurement.[1] There are both regional-specific similarities as well as country-specific differences. First, this chapter provides an examination of regional defense expenditure and current armaments, and a comparison of military modernization programs It aims to be a guide as to who is arming the most, and what are the major naval and associated air capabilities being developed. Second, it examines the possible motivations that have previously been raised as explanations for military modernization in the Asia-Pacific. Third, it proposes a preliminary framework of "interactive arming" for understanding military modernization. Lastly, it details how the five sets of cases will be explored.

Regional Trends

Compared to other regions, military expenditure in the Asia-Pacific seems modest. Only the PRC, Japan and the ROK rank in the top ten for defense spenders globally (Table 3.1). The US clearly remains the top defense spender, and in the context of East Asia, USPACOM remains a substantial element of the overall US military force structure. Indeed, the current objective is that by 2020, 60 percent of American naval assets will be based in the Pacific. Additionally, when comparing regional defense spending, since 1995 North America had the highest expenditure in the world (Figure 3.1), and the US defense budget is almost five times more than the second highest defense spender, China (Table 3.1).What has maintained high levels of regional defense spending though is China's increasing investment in military modernization.[2]

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[1] See Tan, *The Arms Race in Asia,* 45.

[2] The primary source for military expenditure data was the International Institute for Strategic Studies (IISS) Military Balance database; the SIPRI Military Expenditure database, and the US Department of State's Bureau of Arms Control, Verification and Compliance, *World Military Expenditures and Arms Transfers* (WMEAT) database. All data is presented in constant 2015 US dollars. Economic data is taken from the

Rank	Country	Defense budgets in USD bn
1	United States	606.23
2	People's Republic of China	225.71
3	Russia	70.35
4	Saudi Arabia	61.39
5	France	55.68
6	India	55.63
7	United Kingdom	54.22
8	Japan	41.57
9	Germany	40.99
10	South Korea	37.27

Table 3.1: Top 10 Defense Budgets (2016)

However, when comparing the real value amount, the trend is more concerning. When considering the constant dollars spent, and the notion that defense expenditure is being invested on sophisticated platforms of a certain type, the picture presented is more troubling. Post the 2008 Global Financial Crisis, when most regions recorded dips in military expenditure, defense investments in the Asia-Pacific rose and overtook those in Western Europe (Figure 3.1). East Asia is the only region where aggregate military spending has increased every year since 1995. The sustained rapid growth in China's military outlays has made a significant contribution to this trend. Considering that American military spending is allocated for global contingencies and not regional theatres, unsurprisingly, China accounts for the bulk of regional defense spending, with 42 percent in 2013 alone. Beijing bounced back very quickly after the 2008 Global Financial Crisis and its defense expenditure resumed its rapid growth compared to the rest of Northeast Asia, where Japan, South Korea and Taiwan have had only minimal increases in recent years (Figure 3.2 and Figure 3.3). In constant dollars, China has recorded two decades of double-digit increases in annual defense spending (See Figure 3.4).

International Monetary Fund (IMF) World Economic Outlook. See US Department of State, *WMEAT 2016,* https://www.state.gov/t/avc/rls/rpt/wmeat/2016/index.htm; IISS, *The Military Balance* (London: Routledge and IISS), http://www.iiss.org/en/publications/military-s-balance*;* SIPRI, *SIPRI Military Expenditure Database 1988-2015,* https://www.sipri.org/databases/milex*;* and IMF, *World Economic Outlook,* http://www.imf.org/external/ns/cs.aspx?id=28.

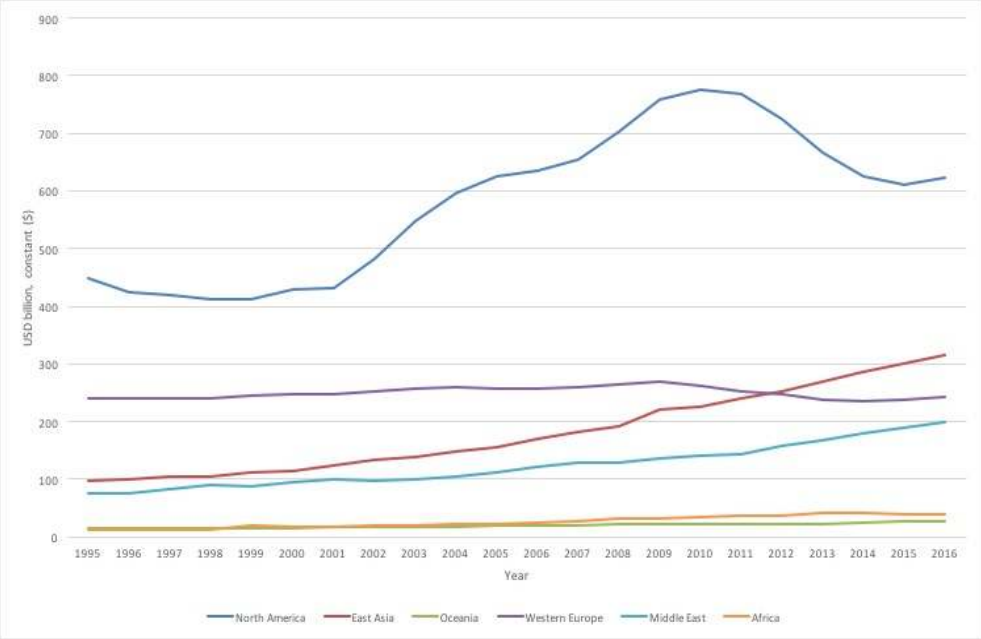


Figure 3.1: Comparison of Regional Military Expenditure (1995-2016)

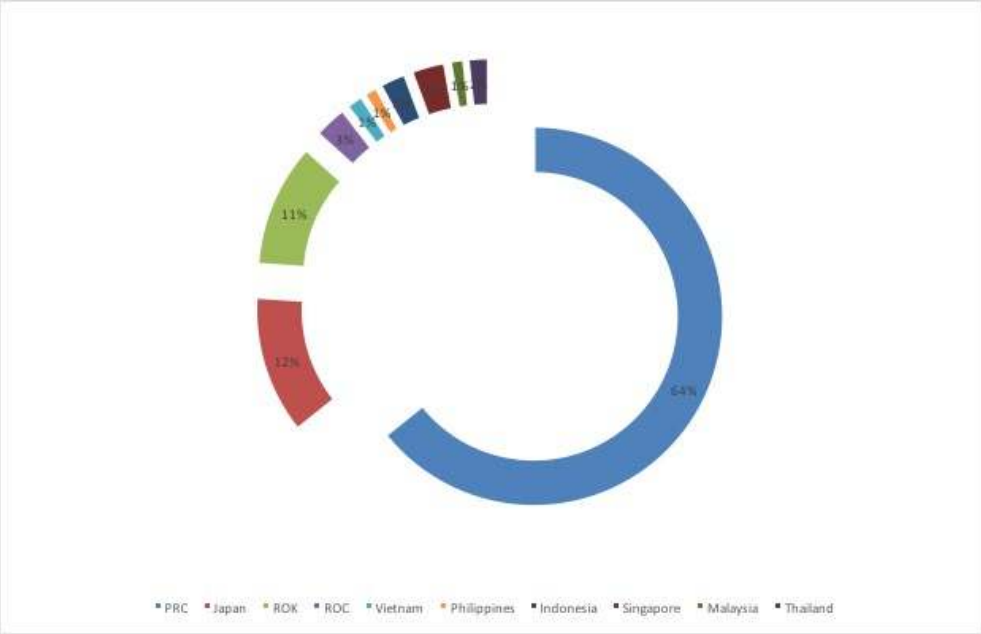
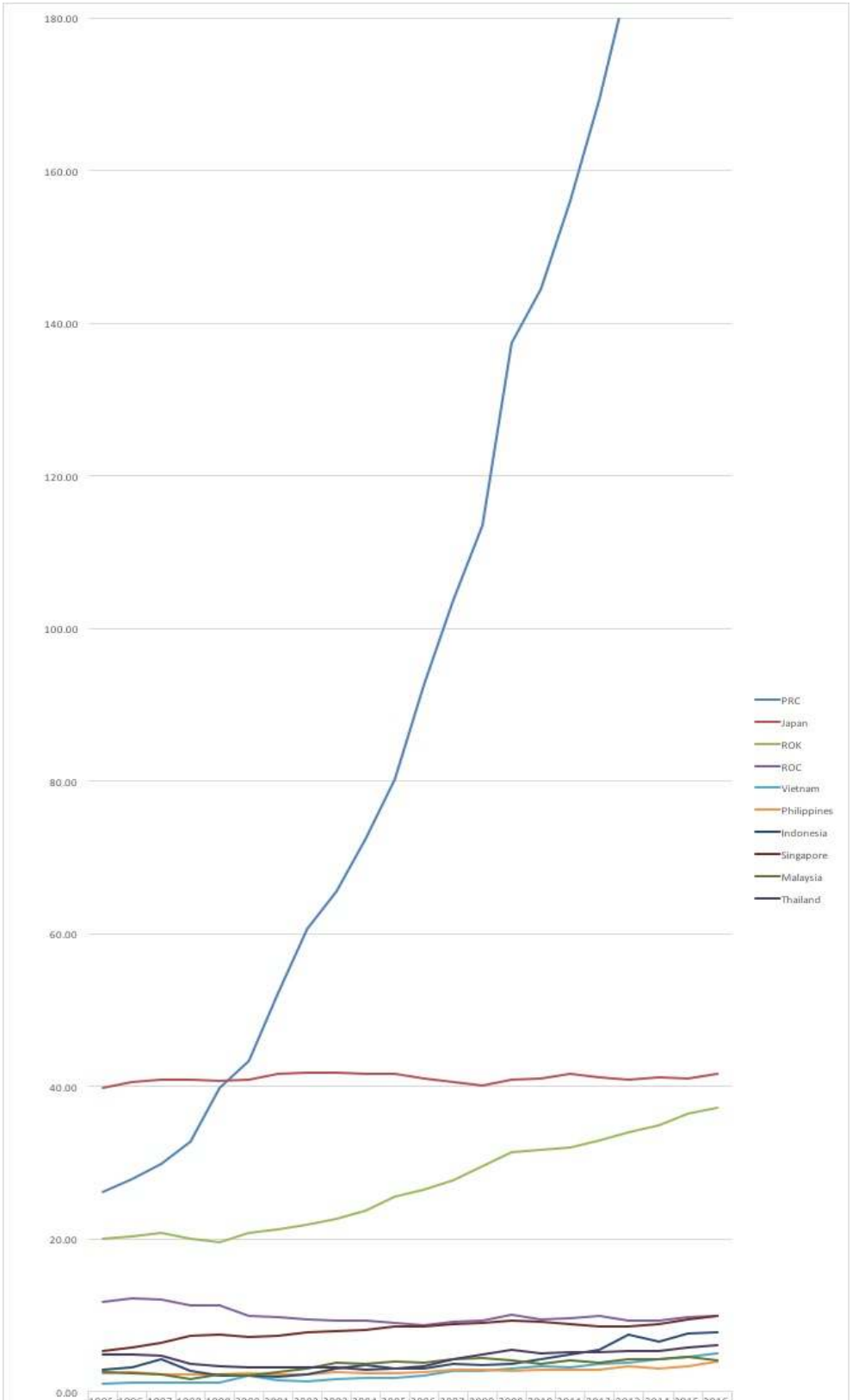


Figure 3.2: Regional Proportions of Asia-Pacific Military Expenditure (2016)[3]

[3] North Korea has been excluded from regional trends overview because estimates of its military expenditure are particularly unreliable. The United States is also excluded from regional trends overview due to its military expenditure encompassing its global outlook and reach.



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PRC	26.23	27.86	29.88	32.74	39.83	43.26	52.22	60.69	65.54	72.47	80.20	92.65	103.6	113.5	137.5	144.5	156.0	169.3	185.1	200.9	214.0	225.7
Japan	39.79	40.52	40.86	40.90	40.68	40.89	41.60	41.81	41.86	41.70	41.62	41.09	40.56	40.17	40.92	41.06	41.62	41.11	40.94	41.16	41.10	41.57
ROK	20.01	20.29	20.79	20.07	19.53	20.73	21.32	21.91	22.65	23.65	25.58	26.50	27.70	29.51	31.36	31.62	32.06	32.88	33.91	34.95	36.43	37.26
ROC	11.79	12.16	12.11	11.33	11.31	9.94	9.76	9.44	9.35	9.36	9.01	8.64	9.15	9.31	10.03	9.48	9.57	9.91	9.36	9.30	9.80	9.96
Vietnam	1.10	1.20	1.17	1.15	1.17	2.11	1.55	1.41	1.70	1.74	1.81	2.14	2.75	2.71	2.98	3.32	3.10	3.61	3.78	4.18	4.56	5
Philippines	2.42	2.54	2.27	2.24	2.21	2.33	2.20	2.32	2.58	2.43	2.48	2.56	2.81	2.81	2.70	2.84	2.89	2.93	3.33	3.07	3.34	3.99
Indonesia	2.84	3.18	4.18	2.73	2.08	2.14	1.90	2.30	3.09	3.45	3.00	3.04	3.66	3.41	3.57	4.19	4.80	5.51	7.41	6.53	7.64	7.78
Singapore	5.26	5.76	6.46	7.32	7.46	7.21	7.38	7.78	7.86	8.01	8.51	8.58	8.91	8.98	9.28	9.10	8.78	8.58	8.55	8.80	9.39	9.99
Malaysia	2.56	2.47	2.32	1.70	2.30	2.09	2.60	2.96	3.77	3.64	3.89	3.81	4.25	4.35	4.11	3.59	4.02	3.83	4.18	4.21	4.53	4.03
Thailand	4.91	4.83	4.69	3.70	3.29	3.14	3.14	3.17	3.14	2.92	2.97	3.29	4.23	4.91	5.47	5.07	5.22	5.14	5.35	5.39	5.73	6.05

Figure 3.3: Breakdown of Asia-Pacific Military Expenditure (1995-2016)

It is also instructive to look at the proportion of GDP that countries spend on defense. When using this measure, it appears that most countries invest only a modest share of their GDP in defense and in some cases, in fact, there has even been a decline (Figure 3.4 and 3.5).

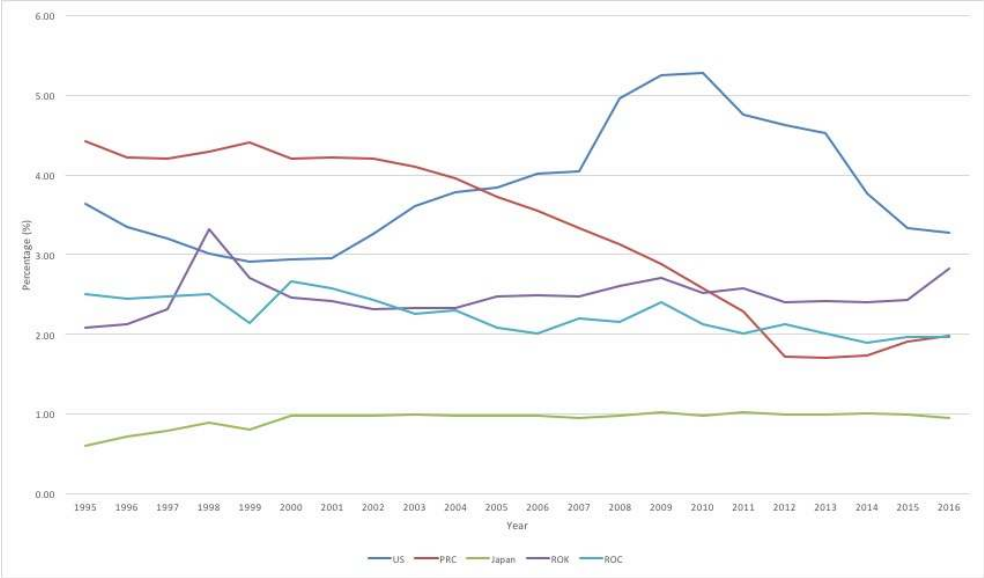


Figure 3.4: Northeast Asia Proportion of GDP on Defense Spending (1995-2016)

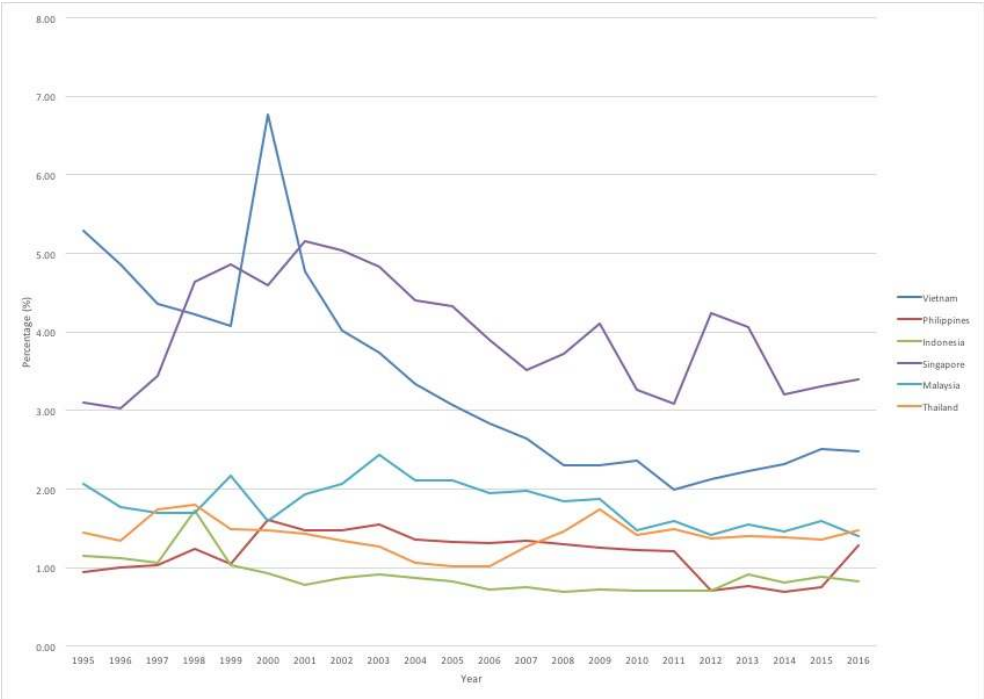


Figure 3.5: Southeast Asia Proportion of GDP on Defense Spending (1995-2016)

At first glance, other Asia-Pacific regional countries do not come close to China's investments, and, as with China, their spending as part of GDP also

appears rather modest. However, although this measure suggests that the security anxieties in the region are not acute, it is still the case that most states are at least sustaining the level of military expenditure in real terms. Coupled with the evident determination to invest in more sophisticated, higher capability platforms, produces a picture of maritime force postures in the region that is significantly more vibrant than much of the military expenditure data seems to suggest. South Korea's defense expenditure was affected the most by the Global Financial Crisis whereas Japan and Taiwan's had already declined before the event. But often overlooked, after the Global Financial Crisis neither defense spending nor the major equipment programs in Northeast Asian countries decreased or plateaued (Figure 3.6).

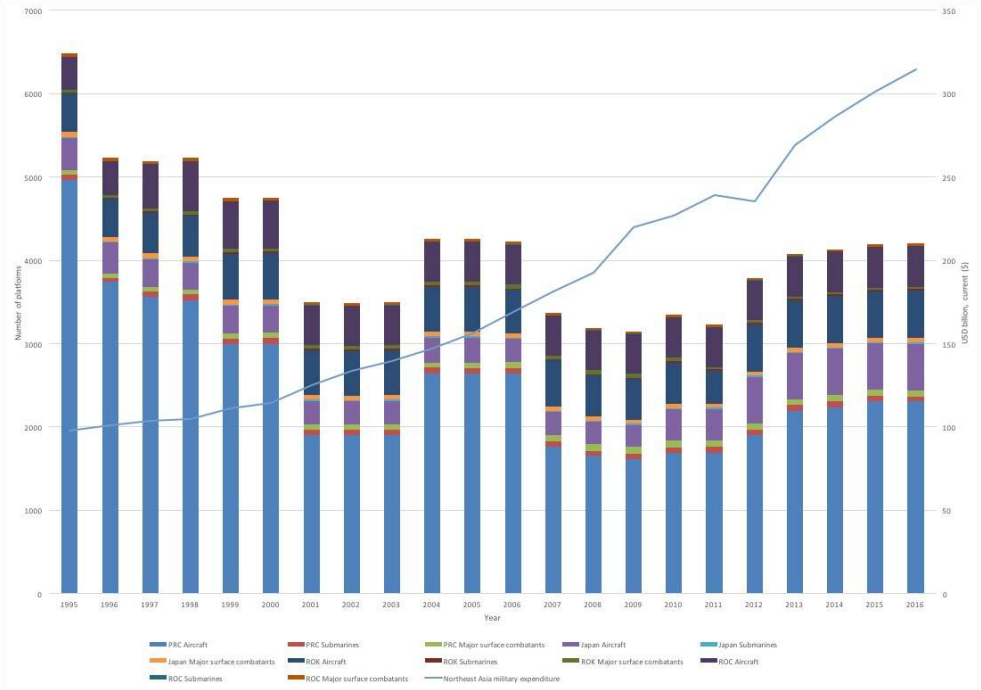


Figure 3.6: Northeast Asia Regional Comparison of Platforms vs. Expenditure (1995-2016)

The period between 1995 and 2006 in which military expenditure increased, and the levels of platforms also increased, indicating the beginning of a cycle of military modernization—obsolescent equipment being replaced or upgraded and expenditure increased to provide replacements.[4] However,

[4] This practice is similar to the "maintenance of the status quo" process described by Buzan and Herring, and the "structural disarmament" process described by Ron Matthews. See Buzan and Herring, *The Arms Dynamic in World Politics,* 80; and Ron Matthews and Curie Maharani, "The Defense Iron Triangle Revisited," in *The Modern Defense Industry: Political, Economic, and Technological Issues,* ed. Richard A. Bitzinger (Santa Barbara: Praeger Security, 2009), Chapter 3, Google e-book.

when the number of platforms started to decrease in 2007, military expenditure still increased, suggesting the rapid replacement of obsolescent platforms with more expensive platforms of higher levels of technological sophistication. That is, a higher investment in qualitative armaments to gain a technological edge, and then "flatline" quantitative investments in maintaining a competitive number of these sophisticated platforms. This suggests that Northeast Asia military programs were not solely influenced by economic performance. Rather, because of changing strategic dynamics, the development of naval and air capabilities has gone beyond the level needed to replace obsolescent equipment. More capable navies have been developed, supported by land-based aircraft for maritime surveillance and strike operations.

In Southeast Asia, budgets and ambitions have been more limited compared with neighbors to the north, and many countries have attempted to rid themselves of obsolescent equipment through various modernization programs.[5] However, such processes remain haphazard and do not account for the long-term maintenance required for sophisticated platforms, which could result in imbalanced forces structures. Of course, when compared with Northeast Asia, the absolute amount of defense expenditure in this region remains modest. Real spending increases after the Asian Financial Crisis seem to have been driven by renewed economic growth rather than a response to a perceived adverse change in the regional security environment (See Figures 3.3 and 3.4). However, it is important to note that after the Global Financial Crisis (which impacted almost all Southeast Asian countries apart from Singapore and Indonesia), regional defense expenditure continued to rise. Singapore retained its top position, spending an average of five per cent of its GDP on defense and accounting for approximately 23 percent of regional defense spending.[6] But Malaysia and Thailand have also had significant increases in percentage terms, although this comes off relatively low bases. Indonesian spending is also increased, though again off a low base and the defense budget has remained below one per cent of GDP, as it is in

[5] Wendell Minnick, "Tighter Budgets Limit Southeast Asian Plans," *Defense News,* April 13, 2014, http://www.defensenews.com/article/20140413/DEFREG03/304130015/.
[6] Based on figures from *WMEAT* database and IMF *World Economic Outlook*.

the Philippines (See Figures 3.4 and 3.5).[7]

A comparison between military expenditure and major platforms across Southeast Asia (See Figures 3.3 and 3.7) demonstrates a steady increase in defense spending and plateauing numbers of platforms up until 2011, suggesting that Southeast Asian countries until then were focused on retaining minimum self-defense capability. However, from 2012 onwards, the number of platforms decreased whilst military expenditure continued to climb, indicating substantive efforts to modernize and invest in fewer but more capable platforms.

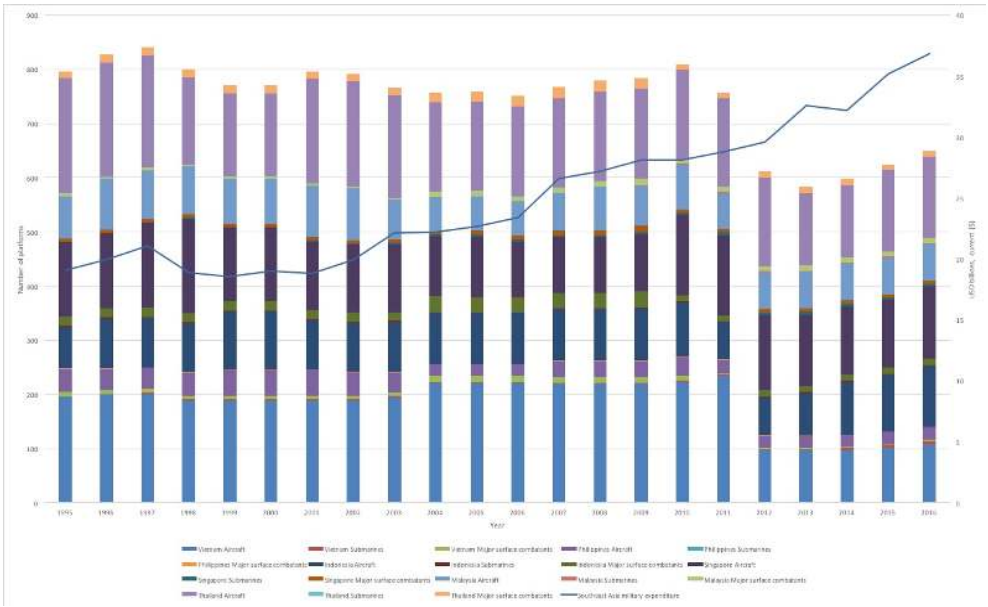


Figure 3.7: Southeast Asia Regional Comparison of Platforms vs. Expenditure (1995-2016)

Furthermore, a complicating factor when examining the number of naval platforms has been the rise of patrol and coastal combatants as a proxy for surface combatants. The majority of patrol and coastal combatants—under agencies of various euphemisms—are armed, funded, manned and equipped by associated navies. Although, the need to patrol EEZs and Sea Lines of Communication (SLOCs) have driven the rise of these numbers, the numbers seem to indicate that such capabilities now extend beyond just maritime constabulary needs (See Figure 3.8). This is evident as EEZs and UNCLOs was formally adopted only in 1982, with the 1994 Third United Conference

[7] Richard C. Smith, "Asian Military Modernisation," *Lowy Institute Perspectives* (October 7, 2008), 2.

on the Law of the Sea (UNCLOS III) increasing the requirements for surveillance and power projection over 200nm EEZs.[8] Since 2010 there has been a surge in acquisitions for patrol and coastal combatants across the Asia-Pacific. When viewed in total, most activity in the acquisition of armed patrol and coastal combatants has been in the frigate, corvette, and off-shore patrol vessel and patrol boat/craft platform categories, with all states acquiring these platform types since 2010.[9]

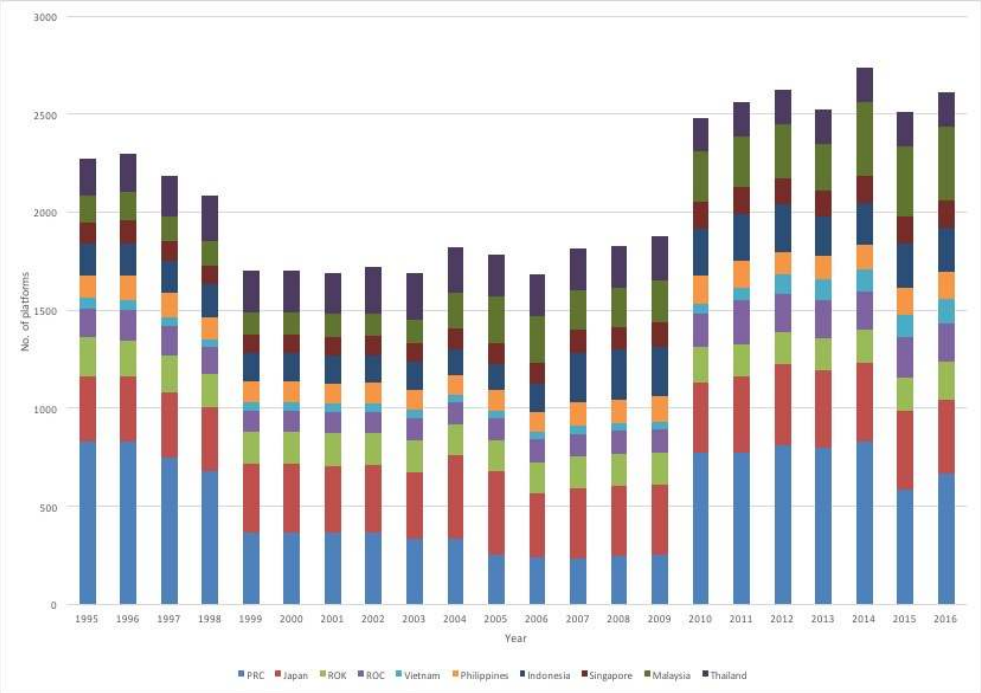


Figure 3.8: Regional Comparison of Patrol and Coastal Combatants (1995-2016)[10]

In addition, it is important to note that maintaining a competitive and innovative defense industrial base, not least to respond to export opportunities (See Figure 3.9), remains a significant driver of force posture upgrades, particularly in Northeast Asia. Typically, defense technologies are indigenously developed and then supplied to the respective countries' defense forces before being primed for export.

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[8] Sam Bateman, "Coast Guards: New Forces For Regional Order and Security," *East-West Center: Asia-Pacific Issues* 65 (January 2003).
[9] See also IISS, *The Military Balance 2016,* 216.
[10] NB: Patrol and coastal combatants includes all naval and paramilitary patrol and coastal combatants e.g. Customs, Marines, Maritime Police, Marine Police, Fisheries Police; China Maritime Safety Administration established in October 1998, and China Coast Guard formed in June 2013; ROC Coast Guard established in 2010; and Vietnam Coast Guard established September 1, 1998.

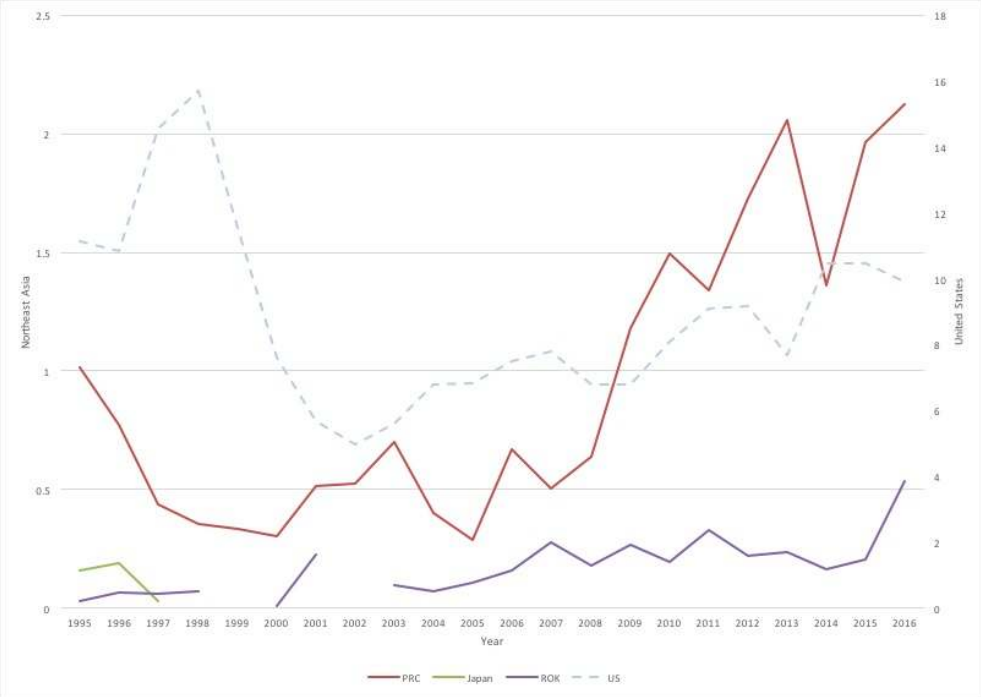

Figure 3.9: Comparison of Value of Arms Exports for PRC, Japan, ROK and the US in USD billion (1995-2016)

However, apart from providing general trends this data does not provide sufficient explanation for regional security postures or explanations for military modernization and arming. It is significant that in 2009, for the first time, East Asia as a region has displaced Western Europe—the core arena during the Cold War—as the second-highest regional defense spender. The exponential growth in Chinese defense spending is disproportionately responsible for this trend. However, it can be reasonably inferred that widespread anxieties in the Western Pacific, coupled with concerns about American commitments to its historical security obligations in Asia are sustaining absolute levels of military expenditure elsewhere, such as Japan and South Korea. As will be further explained, China's military force posture aspirations lie unmistakably in the direction of power projection. Overall, regional trends suggest that there is no single-factor explanation for the naval and associated air capabilities development of the past decade in the Asia-Pacific.[11] Rather a multitude of variables have influenced—to greater or lesser extents, and in varying combinations—different countries at different times since 2001.

[11] Andrew Davies, "Asian Military Trends and their Implications for Australia," *ASPI Strategic Insights* 42 (July 2008): 2.

Possible Explanations

Regional countries in the Asia-Pacific demonstrate commonalities in the motivation to arm, but also country-specific differences. First, one of the most significant drivers of arming dynamics appears to have been the changing balance of power. That is, the growing concerns of regional small and middle powers about an increasing threat stemming from competition between major regional powers. The Asia-Pacific maritime balance of power began to fundamentally change around 2000 when China started to address what has been a historic strategic weakness—its vulnerability to military intervention from the sea.[12] The perceived relative decline of US military power has led to increased regional concerns about the intentions behind the development of power projection capabilities on the part of not only China, but also Japan, Taiwan, South Korea and Vietnam.

Second, alliance commitments have influenced modernization decisions in the Asia-Pacific. Arms and alliances are (imperfect) substitutes for each other; either of them may be adopted as a means to advance a nation's security. The presence of the alliance leader–the US—has often enabled regional allies to acquire sophisticated weapons. Additionally, when considering abandonment and entrapment dynamics, a policy based on arms or alliances translates into a matter of control over a country's decisions.[13] A defense policy based on self-reliance theoretically allows countries to avoid the risks of abandonment and entrapment, whereas a policy based on alliances enables a country to minimize the cost of purchasing or producing arms.[14] Self-reliance, that is, the ability to operate independently when necessary, and with partners when

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[12] Michael McDevitt, "Small Navies in Asia: The Strategic Rationale for Growth," in *Small Navies: Strategy and Policy for Small Navies in War and Peace,* ed. Michael Mulqueen, Deborah Sanders and Ian Speller (London: Routledge and Corbett Centre For Maritime Policy Studies, 2016), Google e-book, Chapter 6.

[13] Sorokin, "Arms, Alliances and Security Tradeoffs in Enduring Rivalries," 424. Here, abandonment is defined as a "fear that the ally may leave the alliance may not live up to explicit commitments, or may fail to provide support in contingencies where support is expected." Entrapment "occurs when an alliance commitment turns detrimental to one's interest. It is the entanglement in a dispute over an ally's interest that one does not share, or values only partially." Victor D. Cha, "Abandonment, Entrapment, and Neoclassical Realism in Asia: The United States, Japan, and Korea," *International Studies Quarterly* 44, no. 2 (2000): 265. See also, Snyder, "The Security Dilemma in Alliance Politics"; and Stephen M. Walt, "Alliances in a Unipolar World," *World Politics* 61, no. 1 (January 2009): 86-120.

[14] Sorokin, "Arms, Alliances and Security Tradeoffs in Enduring Rivalries," 424.

required, is the base requirement for all military modernization programs. The 1969 Guam doctrine and the post-Cold War context since 1989 created stronger expectations of enhanced self-reliance to better deal with regional contingencies on the basis of a country's own resources. This involved a primary emphasis on the defense of maritime approaches, which translated into a re-orientation and re-prioritizing of naval and associated air capabilities. Additionally, a policy of "pure" defense self-reliance is simply unrealistic in the face of China's rapid and comprehensive military modernization has made a policy of "pure" defense self-reliance is simply unrealistic for a number of neighboring countries. These states have therefore been drawn to policy settings that combine arms and alliance policies as a means to both lower costs and reduce the risk of entrapment and abandonment.

Third, the salience of regional conflict increased, especially with regards to competing sovereignty claims arising from maritime territorial disputes in the East and South China Seas. Sovereignty, legitimacy and territorial disputes over maritime boundaries dominate many relationships in the Asia-Pacific (Figure 3.10):

1. The unresolved dispute between the PRC and Japan to the Pinnacle Islands (Diaoyu or Senkaku), as well as the maritime boundaries around Okinotorishima (or Okinotori Islands).
2. The unresolved dispute between Japan and South Korea over Liancourt Rocks (Takeshima or Dokdo) in the southern part of the Sea of Japan.
3. The unresolved dispute between China and South Korea over Socotra Rock (Ieodo or Suyan), which both claim as part of its EEZ.
4. Divided sovereignty on the Korean Peninsula, where some 1.4 million ground forces of the Republic of Korea and Democratic People's Republic of Korea (DPRK, North Korea) remain deployed against each other across the Demilitarized Zone (DMZ), and the dispute over their maritime boundary in the Yellow (or West) Sea.
5. Competing sovereignty claims of the Chinese regimes on mainland China and Taiwan.

6. The unresolved dispute between China and Vietnam over the Paracel Islands (Xisha Quandao or Quan Doa Hoang Sa) in the South China Sea.
7. The unresolved claims over the Spratly Islands in the South China Sea, disputed by China, Vietnam, Brunei, Malaysia, Taiwan and the Philippines.

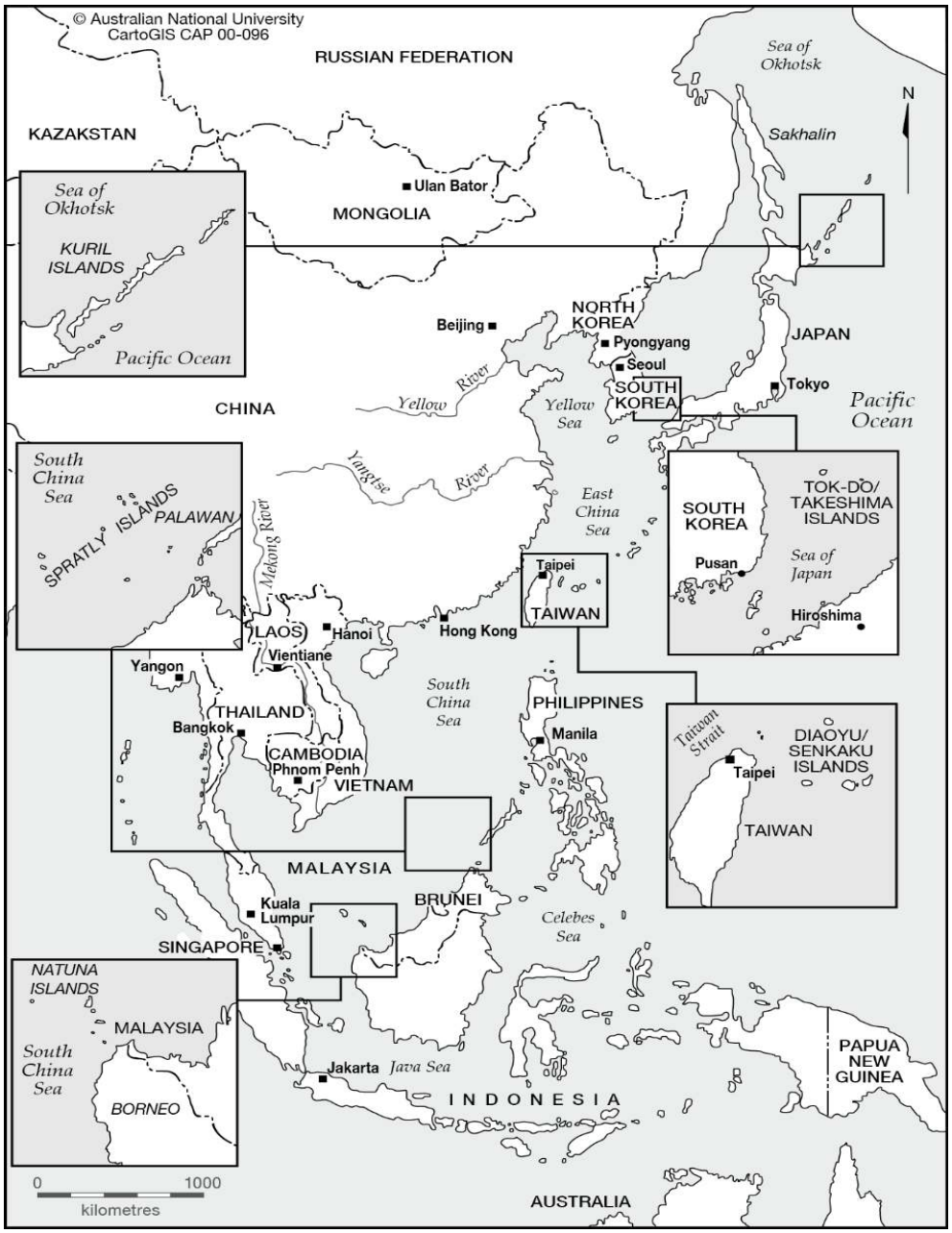

Figure 3.10: Asia-Pacific Maritime Disputes[15]

Northeast Asian countries' vigorous naval modernization programs suggest

[15] CartoGIS, College of Asia and the Pacific, The Australian National University.

not just the desire to balance or hedge[16] against potential threats, but also protect sovereignty claims. Particularly for the PRC, Japan and South Korea, highly capable blue-water navies are being developed, including modern surface combatants (destroyers and frigates), aircraft carriers (euphemistically called "amphibious transport ships" or "sea control ships"), new submarines, as well as land-based aircraft for both maritime surveillance and strike. For Southeast Asia, sovereignty disputes in the South China Sea have dominated strategic explanations for developing naval capabilities, in submarines and anti-submarine warfare (ASW).[17]

Related to this is the protection of EEZs, critical SLOCs, and fisheries and other marine resources. For instance, Japan as an island nation has been particularly reliant "on other countries for the supply of natural resources, energy, food, and many other materials which are indispensable to national existence."[18] Other countries have also become concerned about increasing illegal activity such as piracy and smuggling in the Malacca Straits and the surrounding access ways in the South China Sea. Additionally, the 1994 UNCLOS III convention[19] meant that many regional countries had to fulfill requirements to project capabilities over resource-rich maritime areas that were greater than their land areas. These maritime disputes and potential conflicts have become significant in shaping the naval modernization programs of the Asia-Pacific. They drive, for instance, the requirement for greater maritime surveillance capabilities and maritime constabulary operations, including maritime reconnaissance aircraft, such as *P-3C Orions,* ground-based signals intelligence systems, longer-endurance surface

[16] Here, hedging is defined as "an alignment choice involving the signaling of ambiguity over the extent of shared security interests with great powers," which requires a state to make a "trade-off between the fundamental (but conflicting) interests of autonomy and alignment." See Darren J. Lim and Zack Cooper, "Reassessing Hedging: The Logic of Alignment in East Asia," *Security Studies* 24, no. 4 (2015): 698, 703 (696-272).
[17] Carlyle A. Thayer, "Southeast Asian States Deploy Conventional Submarines," *The Diplomat,* January 3, 2014, http://thediplomat.com/2014/01/southeast-asian-states-deploy-conventional-submarines/.
[18] Japan Defense Agency, *Defense of Japan 1990* (Tokyo: Japan Defense Agency, 1990), 116.
[19] Bateman, "Coast Guards."

combatants, platforms able to launch anti-ship missiles, and longer range aircraft and aerial refueling tanker aircraft.[20]

Fourth, a complex link exists between fiscal considerations and maintaining an armed force. Bernard Brodie stated that "in making choices among weapons systems and related systems, like radar-warning networks, the military budget is always the major and omnipresent constraint …we are inevitably concerned with (a) how the size of the national defense budget is determined, and (b) what sorts of considerations determine choices within the limits set by the budget." [21] Hedley Bull explored the economic and institutional dimensions of the causes of military competition. He referred to Immanuel Kant's proposition that the abolition of "standing armies links the contention that they are an economic burden with the contention that they are a cause of war, his argument being that the burden becomes so heavy in the long run that aggressive war is undertaken to remove it."[22] The notion that states undertake wars of aggression to eliminate the primary external threat and provide relief from the financial burden of maintaining a large and permanent military force, highlights the important link between a state's fiscal situation and its level of armaments.[23] On the one hand, "military Keynesianism" can be a means of economic stimulation, particularly in states with a large military-industrial infrastructure like the US.[24] For instance, rearmament aided the Third Reich in the 1930s, and the US prior to and especially after entering WWII, to overcome economic depression.[25]

On the other hand, economic growth often reduces the difficulty of increasing resources for defense simply because it can be done without challenging the

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[20] Bateman, "Coast Guards"; and David Rosenberg and Christopher Chung, "Maritime Security in the South China Sea: Coordinating Coastal and User State Priorities," *Ocean Development and International Law* 39, no. 1 (2008): 51-69.
[21] Bernard Brodie, *Strategy in the Missile Age* (Princeton: Princeton University Press, 1959), 361
[22] Bull, *The Control of the Arms Race,* 12, fn. 3.
[23] See theories on "preventive war," for instance David C. Kang, "International Relations Theory and the Second World War," *International Studies Quarterly* 47, no. 3 (September 2003): 301-324; and Randall L. Schweller, "Domestic Structure and Preventive War: Are Democracies More Pacific?" *World Politics* 44 (January 1992): 235-269.
[24] Buzan and Herring, *The Arms Dynamic in World Politics*, 107.
[25] David Gold, "Does Military Spending Stimulate or Retard Economic Performance? Revisiting an Old Debate" (International Affairs at The New School Working Paper, 2005-01), 2.

expectations of any other claimant to the governments resources.[26] This was the dominant explanation for rising defense spending in the Asia-Pacific in the mid-1980s to early 1990s, which many analysts chose to label a "regional arms race."[27] The majority of regional countries experienced economic growth in the past couple of decades—interrupted by the 1997-1998 Asian Financial Crisis—which provided the financial stimulus for modernization programs. In the first round of modernization, those countries with the highest rates of growth of GDP had the highest increase in defense expenditure, while those countries with the slowest rates of economic growth experienced the slowest increase in defense expenditure. However, since 2001, while there remains a positive correlation between economic growth and defense expenditure, the relationship between the two is not as close and has been complicated by other variables.

Fifth, state structures and institutions related to armaments can pursue interests of their own.[28] Indeed, the Cold War US-USSR rivalry highlighted the anxiety that industrial and military elites pursued their own interests by stoking competition. In 1961, President Dwight D. Eisenhower warned against the "unwarranted influence" accrued by the "military industrial complex."[29] Moreover, the nature of modern military technology encourages some states to support an extensive R&D establishment which favors faster technological change in military equipment and becomes an additional force driving military competition.[30] Technological change and development have become a decisive influence in the arms dynamic as military capability and technology are strongly correlated. As Buzan and Herring argue, technology is not just a problem in the hands of others, but a creator of security problems

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[26] Ball, "Arms and Affluence," 81.
[27] See Klare, "The Next Great Arms Race," and Bates Gill, "Arms Acquisitions in East Asia" in *SIPRI Yearbook 1994* (Oxford: Oxford University Press and SIPRI, 1994), 551-562.
[28] Glaser, "The Causes and Consequences of Arms Races," 257.
[29] Dwight D. Eisenhower, "421-Farewell Radio and Television Address to the American People," January 17, 1961, The American Presidency Project, University of California Santa Barbara, http://www.presidency.ucsb.edu/ws/index.php?pid=12086&st=military-industrial+complex&st1=.
[30] Bull, *The Control of the Arms Race,* 15; Harvey Brooks, "The Military Innovation System and the Qualitative Arms Race," *Daedalus* 104, no. 3 (1975): 81-82; and Matthew Evangelista, *Innovation and the Arms Race: How the United States and Soviet Union Develop New Military Technologies* (Ithaca: Cornell University Press, 1988), 269.

in itself, with technological change contributing to the greater destructiveness of war.[31] China, Japan and South Korea have been particularly ambitious in driving independence in key areas of defense technology. This has largely been shaped by the collective role of American defense companies, through their provision of military equipment via export sales, which has channeled the development of indigenous defense-industrial capability.[32]

Sixth, in many instances the desire for national prestige has had as much impact as geostrategic considerations.[33] The possession of sophisticated weapons and platforms, such as submarines, and the ability to operate and maintain them, has been regarded as an indicator of national wealth, technological prowess, and political modernity and sophistication. Modern military equipment thus becomes a symbol for national status and prestige. If one considers the spiral model, it incorporates the internal workings of the state. Philip Noel-Baker, for example, has argued that the increased influence of military officials in government decision-making, particularly in times of crisis, is a by-product of military competition. As Fallodon noted, whilst modernization may be a necessary process for a military institution, such measures cannot be viewed in isolation and inevitably neighbors and/or competitors will react to their own perception of threat. The increase in armaments erodes confidence, trust and restraint, leaving states primed for war. The underlying assumption behind the spiral model is that each actor has a self-centered perspective in which its own intentions are judged to be benevolent. While one's own military modernization is justified on self-protection grounds, those of the opponent are believed to have an aggressive intent. The "spiral model" stimulates the growth of nationalism and strengthens the appeal of armament policies. War then becomes a more likely policy choice because each society is psychologically predisposed to war and the national government becomes dominated by pro-military elements advocating the use of force in pursuit of national goals.[34] War therefore

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[31] Buzan and Herring, *The Arms Dynamic in World Politics*, 6.
[32] IISS, "Asia's Growing Defence-Industrial Capabilities," in *IISS Strategic Dossier: Asia-Pacific Regional Security Assessment 2016* (London: International Institute for Strategic Studies, 2016), 163.
[33] Ball, "Arms and Affluence," 91-92.
[34] Noel-Baker, *The Arms Race,* 31-51.

becomes the likely and rather ironical outcome of states' misguided efforts to preserve their security.[35] This is particularly true in the case for China and its "naval nationalism," and its desire for a carrier strike group capability and advanced command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems.[36]

Interactive Arming: A New Framework

It is thus important to develop a new framework based on strategic understandings of the use of force, and drawn from the regional-specific understanding of armaments dynamics, such as those in the Asia-Pacific. As Barry Posen has argued, any explanation for arming needs to combine systemic, national and subnational levels of analysis, consider quantitative and qualitative measurements of armaments, as well as identify structural and domestic causes of arming behavior.[37]

The starting point for understanding the phenomenon of building armed forces is the contention or proposition that the term "arms race" is a "misnomer"[38] and that this process is better characterized as a spectrum between two types of interactive arming (See Figure 3.11). This reflects Buzan and Herring's notion of an arms dynamic that makes conflict more or less likely. However, unlike Buzan and Herring, this study contends that arms do not affect the likelihood of strategic competition or conflict, rather it is the perception of the strategic environment and the degree of political rivalry between actors. In addition, and reflecting Huntington's ideas, interactive arming aims to affect the distribution of power, whether the intent is defensive or offensive. It does not assume that a codified pattern of behavior exists, rather, it is a framework for understanding arming as a strategic behavior.

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[35] Paul F. Diehl, "Arms Races to War: Testing Some Empirical Linkages," *The Sociological Quarterly* 26, no. 3 (Autumn 1985): 332.
[36] Ross, "China's Naval Nationalism," 65.
[37] See Barry Posen, *The Sources of Military Doctrine: France, Britain and Germany Between the World Wars* (Ithaca: Cornell University Press, 1984); and Hammond, *Plowshares into Swords*.
[38] That is, previously in the literature, the term "arms race" has been indistinguishable from the terms and definitions of "action-reaction," "military competition," and "military modernization."

Interaction does not occur because of the "spiral model," but because arming is a "natural function," and essentially a means to fulfill political objectives.

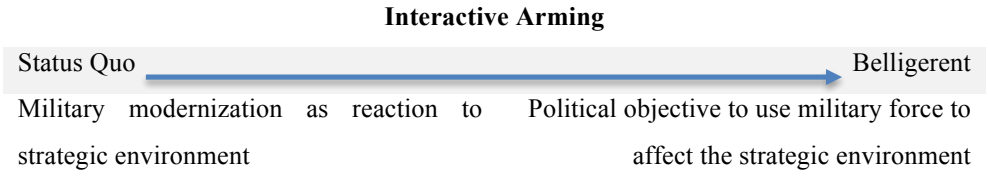

Figure 3.11: Spectrum of Interactive Arming

1. *Status quo:* A country responds to its strategic environment through the process of military modernization—a status quo situation. Countries aspire to develop military capabilities to provide for their defense, but seek to do so at the least financial cost. Among the potential risks associated with this approach is a defense capability less suited for rapid expansion in the event of a crisis.
2. *Belligerent*: A country sets capability objectives with the intent to use force for a political objective. That is, at its most extreme the arming dynamic is expressed as a form of strategic competition: a state (1) perceives another state as a real and present danger; (2) is conscious that defense of its interests involves a significant risk of war; (3) is resolved to not be deterred from defending its interests, including through acquiring military capabilities deemed to be commensurate with this political posture; and (4) has the political objective of using force to affect the strategic environment. Competing has two core dimensions: defeating or deflecting the opponent's strengths, and driving the competition into areas that play instead to one's owns strengths.

Interactive arming occurs between actors at the beginning or end of military modernization—when a political decision is made to develop a capability, or when that capability is fielded. This interaction is a "careful, continuous correlation of means and ends,"[39] responding to perceived shifts in the strategic environment. Any armament behavior inherently implies an

[39] Handel, *Masters of War,* 59.

interactive process, previously explained by international relations theorists as a "security dilemma." However, as the strategic studies approach argues that material and ideational explanations are interdependent, this framework is informed by understandings of both the "security dilemma" and domestic determinants. Therefore, the following analysis utilizes its own lexicon that is based on the framework proposed above. An extension of the framework will be provided in the concluding chapter, based on the empirical results of the case study analysis.

Five Sets of Cases

The following five chapters examine a set of cases that, collectively, are expected to expose the full range of possible motivations behind armament decisions. The first case study examined is China, as its comprehensive military modernization, willingness to threaten and use force, and perceptions of its political intentions has spurred an interactive dynamic with the US, Japan, Taiwan, South Korea and Vietnam. Consequently, China has been the centerpiece of this narrative and essential to understanding the changing capabilities and force structures of the key Asia-Pacific countries.

The evidence from these cases support the "interactive arming" framework, and the proposition that the applicability of the "arms race" concept to understanding armament decisions in the Asia-Pacific is by comparison narrow and limited. As opposed to a universal theory or one dominant driver that explains military modernization for every case, or to prove the existence of an "arms race," the evidence also demonstrates that each country has a specific and somewhat singular set of "key impulses." Therefore, in order to examine which explanations had an impact on the military modernization of the five cases, it isolates the influence of a number of explanatory variables. Here, the dependent variable is the modernization of naval and associated air capabilities. The independent variables are: economic growth and increased financial investment for defense capabilities; changing balance of power; issues of sovereignty arising from maritime territorial disputes; requirements

for surveillance and protection of EEZs; national prestige; technology acquisition and reverse engineering; and alliance commitments.[40]

The case studies are structured in three parts. Each has an introductory section called "Key Impulses," which highlight the impulses expected to be most influential explanations of arming behavior in each case. Each case study then probes the arming behavior of the state concerned, seeking to confirm that arming is a "natural" function influenced by a variety of both domestic and geostrategic influences, and that, because states exist in a regional security environment, all arming is inescapably "interactive." The concluding section of each case study assesses the findings against those anticipated.

[40] See Ball, "Arms and Affluence," 79; Andrew Mack and Desmond Ball, "The Military Build-up in the Asia-Pacific Region: Scope, Causes and Implications for Security" (SDSC Working Paper 264, Canberra: Australian National University, 1992), 10-17; Desmond Ball, "Trends in Military Acquisitions: Implications for Security and Prospects for Constraints/Control," in *The Making of a Security Community in the Asia Pacific,* ed. Bunn Nagara and K.S. Balakrishnan (Kuala Lumpur: Proceedings of the 7th Asia-Pacific Roundtable, June 6-9, 1993), 132-141.

Chapter 4:
China

Key Impulses

China's long-term military modernization emphasizes the upgrading of its naval and air power, an aspiration that involves a drastic realignment of its traditional force structure. Such changes demonstrate that the People's Liberation Army's (PLA) responsibilities have expanded from its previous strong focus on homeland defense and internal stability to include both territorial defense and expeditionary duties.[1] Whilst this modernization is often termed "rapid," it has been an ongoing political and strategic process driven by competing and overlapping impulses.

Four key impulses are driving Chinese military modernization. First, Beijing is motivated by the desire for strategic autonomy. Its investments and prioritizing of a self-reliant defense industry has driven foreign acquisitions for reverse engineering and technology transfer purposes to leapfrog generations in modern weapons systems. The drive to reduce its dependence on particularly Russian systems has led to a pattern of acquisitions of dual-use military technologies as well as the theft of advanced weapons components, mainly sensors, radars and command and control parts. Despite the challenges in innovative capacity, China's "trial and error" and reverse-engineering methods, means it will inevitably have the technology and skill to have capabilities commensurate with its national prestige and economic weight. China lacks neither the will, nor resources or political backing to close the remaining gaps in its scientific, technological and industrial competencies.[2] Second, China aims to erode the US alliance system and forward presence in the Asia-Pacific. China has shown a willingness to contest the US for power and influence, and not only to deter intervention in

[1] Timothy R. Heath, "Developments in China's Military Force Projection and Expeditionary Capabilities," (Testimony presented before the US-China Economic and Security Review Commission, January 21, 2016), http://www.rand.org/pubs/testimonies/CT450.html.
[2] Ron Huisken, "The Emergence of China as a Military Power," (Paper presented to the 5th East Asia Security Outlook Seminar, Brunei Darussalam, 29 January 2013), 12.

its sovereign affairs, but also to demonstrate its capability for blue-water power projection. It is unlikely that the PLA will match the "command of the commons," that the US achieved in the decades following WWII, but this is not their objective. China aims to be a major power with global influence. However, Beijing is not attempting to replicate American primacy, rather it aims to erode Washington's influence in Asia to create a favorable balance of power for China.

Third, there is a perceived need to enforce sovereignty claims and secure easier access to the open ocean. China's claims in the East and South China Seas have played a key role for both its geostrategic objectives as well as for its nationalist sentiments. On the one hand, the control of the "near and far seas" is essential for defending China's expanding economic and strategic objectives, and consequently naval and associated air capabilities have been sought for both sea control and sea denial. On the other hand, the unqualified recognition of these territories as belonging to the mainland has been an important part of the CCP narrative to "righting the wrongs" of the Century of National Humiliation. Lastly, this desire to restore Chinese hegemony in the Asia-Pacific provides an overarching narrative for its comprehensive military transformation. Although there has been a debate about how long China can sustain its economic growth—which necessarily forms the basis of its national power—since the mid-1990s, Beijing has achieved an annual average GDP growth above six percent, has maintained its overarching strategic objective of counter-intervention for its military, and its nationalist rhetoric on the unification of its territories has proven resilient and popular among Chinese citizens.

The "Chinese Dream"

The CCP's principle goal is to assure its political control over China as a one-party system. To ensure survival of the CCP regime, the two pillars of the party's domestic legitimacy are nationalism and economic benefits.[3] The

[3] Erica Strecker Downs and Phillip C. Saunders, "Legitimacy and the Limits of Nationalism: China and the Diaoyu Islands," *International Security* 23, no. 3 (Winter 1998/99): 116.

CCP also places great emphasis on its goal to build armed forces commensurate with China's ranking in the top tier of states in the international system.[4] It must be noted that the CCP is the executive authority that defines China's strategy and that the PLA is first and foremost the military arm of the CCP rather than the defense force of the PRC. The CCP has utilized nationalist ideology to build a broad base of national support for both its domestic and foreign policy.[5] This stems from a significant historical narrative of the late 19th century: a weak and corrupt Qing dynasty being humiliated by the West, increasingly forced into unequal treaties and arrangements.[6] The perception of China's humiliation by the West, or the "Century of National Humiliation," remains a significant influence on the modern Chinese worldview. China's defeat by Britain and France in the Opium Wars (1839-1860), and its bitter historical experience with the West, has fueled Chinese thinking regarding Western "interference" in China's internal affairs. The severity of its perceived wounds—especially with regards to its ancient symbolic supremacy, and civilizational and technological superiority—has driven a political discourse to rebuild China as the legitimate political "ruler" of Asia. This desire to correct the historical anomaly of China's subordination to the West during the Century of National Humiliation influences China's strategic thinking, particularly with regards to its territorial ambitions in the Taiwan Strait, the East China Sea and the South China Sea. For instance, in an analysis of the PRC's need for a blue water navy, strategist Guo Yadong has described the Chinese nation as having "suffered disgrace for almost one hundred years" because of the invasions by the naval forces of the major powers.[7]

This Chinese nationalism is a volatile mix of rising pride and lingering anxiety in the post-Cold War world. A shared objective of holding the nation

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[4] Ian Easton, "China's Maritime Strategy in the Asia-Pacific: Implications for Regional Stability," *Project 2049 Report* (September 26, 2013), 4.
[5] Suisheng Zhao, "Chinese Nationalism and Approaches toward East Asian Regional Cooperation" (Paper for International Institutions and Global Governance Program and Japan Program, Council on Foreign Relations, December 2009), 1.
[6] Christopher A. Ford, "The Past as Prism: China and the Shock of Plural Sovereignty," *Joint Forces Quarterly* 47 (4th Quarter, 2007): 19.
[7] Guo Yadong, "China Should Resist Noises of Threat Theories and Stick to Building Deep Blue Navy," *Huanqiu Shihao Online,* May 5, 2010, Open Source Center: CPP2010050671007.

together during the turbulent rise to great power status has reinvigorated the loyalty of the Chinese people to the CCP-led state, and it is likely that the CCP will continue to enjoy the political support of its citizens even if the resources devoted to the internal security mission match those directed at modernizing the PLA and protecting national sovereignty. In 2013, when Xi Jinping became Chairman of the CCP, head of state and Chairman of the Central Military Commission (CMC), he called for the continued realization of the great renaissance of the Chinese nation and the "Chinese Dream." According to many,[8] Xi's "Chinese Dream" slogan was inspired from a popular book by Colonel Liu Mingfu, *The China Dream: The Great Power Thinking and Strategic Position of China in the Post-American Era.*[9] The book argues that China should aim to surpass the US as the world's top military power, and that to be a strong nation a wealthy country needs to convert its economic successes into military power. Before ascending to the presidency, Xi visited the *Haikou,* a guided-missile destroyer that had been used to patrol the South China Sea, and remarked: "This dream can be said to be the dream of a strong nation. And for the military it is a dream of a strong military … To achieve the great revival of the Chinese nation, we must ensure there is unison between a prosperous country and strong military."[10]

Alongside the significant narrative of status and prestige, China began in the 1970s to recognize the potential economic value of controlling its maritime approaches, which had been largely ignored under Mao Zedong.[11] The importance of control of the seas to China's economic development was

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[8] See Jeremy Page, "For Xi, a 'China Dream' of Military Power," *The Wall Street Journal,* March 13, 2013, http://www.wsj.com/articles/SB10001424127887324128504578348774040546346; and Edward Wong, "Chinese Colonel's Hard-Line Views Seeps Into the Mainstream," *The New York Times,* October 2, 2015, http://www.nytimes.com/2015/10/03/world/asia/chinese-colonels-hard-line-views-seep-into-the-mainstream.html.

[9] Liu Mingfu, *Zhongguo meng: hou Meiguo shidai de daguo siwei zhanlue dingwei* [The China Dream: The Great Power Thinking and Strategic Position of China in the Post-American Era] (Beijing: Zhongguo youyi chuban gongsi, 2010).

[10] Quoted in Edward Wong, "China's Communist Party Chief Acts to Bolster Military," *The New York Times,* December, 14 2012, http://www.nytimes.com/2012/12/15/world/asia/chinas-xi-jinping-acts-to-bolster-military.html.

[11] Daniel M. Hartnett, "China's Evolving Interests and Activities in the East China Sea," in *The Long Littoral Project: East China and Yellow Seas—A Maritime Perspective on Indo-Pacific Security,* ed. Michael A. Devitt and Catherine K. Lea (Alexandria: Center for Naval Analyses, September 2012), 83-86.

influenced by economic considerations for the potential for hydrocarbons and minerals in the seabed, the significance of fisheries, and the increasing dependence on sea-lanes for China's fledgling export economy. In 1985, under the leadership of Deng Xiaoping, the Chinese Communist Party (CCP) reassessed its strategic outlook and concluded that the country was no longer facing an imminent threat of war, and therefore projected that China could enjoy a relatively stable environment for the foreseeable future. This afforded Beijing a strategic window of opportunity to focus on modernizing and downsizing the military in light of new requirements to fight a smaller and more technical war, referred to as "local war" (*jubu zhanzheng*) in PLA terminology.[12]

A key figure in China's naval modernization was General Liu Huaqing (1916-2011), who for much of the 1980s as commander of the PLA Navy (PLAN) spearheaded ambitious efforts to transform the Chinese navy from a coastal defense force into a blue water navy.[13] In 1986, Liu's position as naval commander helped push the PLAN to formally shift its strategy from "Coastal Defense" (*jin'an fangyu*) to "Offshore Defense" (*jinhai fangyu* or "near seas active defense"). This required the navy to conduct independent operations actions further out from China's coasts to defend its territorial maritime claims.[14] Liu recognized that the PLAN was unable to meet the requirements of this strategy and that it needed to develop four capabilities: (1) the ability to achieve limited sea control in certain areas for a certain period of time; (2) the ability to effectively defend China's sea lanes; (3), the ability to fight outside of China's claimed maritime areas; and (4) the ability to implement a credible sea-based nuclear deterrent.[15]

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[12] Yao Yunzhu, "The Evolution of Military Doctrine of the Chinese PLA from 1985 to 1995," *The Korean Journal of Defense Analysis* 7, no. 2 (1995): 57-62.
[13] Edward Wong, "Liu Huaqing Dies at 94; Oversaw Modernization of China's Navy," *The New York Times,* January 16, 2011, http://www.nytimes.com/2011/01/18/world/asia/18liu.html.
[14] Daniel M. Hartnett, "The Father of the Modern Chinese Navy – Liu Huaqing," *Center for International Maritime Security Blog,* October 8, 2014, http://cimsec.org/father-modern-chinese-navy-liu-huaqing/13291.
[15] Liu Huaqing, *Liu Huaqing Huiyilu* [Memoirs of Liu Huaqing] (Beijing: PLA Publishing House, 2004), 1-6.

Beijing has also expressed, more or less obliquely, the objective to change the post-Cold War distribution of power that upholds American leadership and primacy. Part of this strategic objective is to undermine American-led institutions that are believed by the CCP to counter China's accession as a global power and the natural leader of Asia.[16] Two examples of this strategy are Beijing's establishment of the Asia Infrastructure Investment Bank (AIIB)[17] and its 1992 declaration of its Law on the Territorial Sea and the Contiguous Zone ("1992 Territorial Sea Law").[18] The establishment of the AIIB aims to provide an alternative to Bretton Woods institutions, namely the World Bank and the IMF, which are viewed by many Chinese as a mere extension of US foreign policy.[19] Despite the intent to fund much-needed infrastructure projects in the developing countries of Asia, when considering the governance structure it is clear the overall purpose is to increase China's global influence. Only the PRC has a veto, the personnel rules are structured such that Beijing will provide all staff, and the emphasis on not having political tests for aid ensures China will not be encumbered in using AIIB funds for supporting friendly despots.[20] Its 1992 Territorial Sea Law is a direct challenge to UNCLOS.[21] China only joined the international maritime

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[16] See G. John Ikenberry, "The Illusion of Geopolitics: The Enduring Power of the Liberal Order," *Foreign Affairs* 93, no 3 (May/June 2014): 80-90; and Randall L. Schweller and Xiaoyu Pu, "After Unipolarity: China's Visions of International Order in an Era of US Decline," *International Security* 36, no. 1 (Summer 2011): 41-72.

[17] Asian Infrastructure Investment Bank, "Articles of Agreement," *Asian Infrastructure Investment Bank*, 2015, http://www.aiib.org/html/aboutus/Basic_Documents/.

[18] People's Republic of China, "Law on the Territorial Sea and the Contiguous Zone of 25 February 1992," 24th Meeting of the Standing Committee of the National People's Congress, February 25, 1992, http://www.un.org/depts/los/LEGISLATIONANDTREATIES/PDFFILES/CHN_1992_Law.pdf.

[19] Ming Wan, "The AIIB versus the World Bank and the ADB," in *The Asian Infrastructure Investment Bank: The Construction of Power and the Struggle for the East Asian International Order,* ed. Ming Wan (New York: Palgrave Macmillan, 2016), 58-91. See also, Cary Huang, "China-led Asian bank challenges US dominance of global economy," *South China Morning Post,* April 11, 2015, http://www.scmp.com/news/china/economy/article/1763525/china-led-asian-bank-challenges-us-dominance-global-economy; and Chua Chin Leng, "AIIB Starts New Era for Asia," *China Daily,* January 1, 2016, http://www.chinadaily.com.cn/opinion/2016-01/16/content_23114658.htm.

[20] Paula Subacchi, "The AIIB is a Threat to Global Economic Governance," *Foreign Policy,* March 31, 2015, http://foreignpolicy.com/2015/03/31/the-aiib-is-a-threat-to-global-economic-governance-china/.

[21] UN Division for Ocean Affairs and Law of the Sea, "United National Convention on the Law of the Sea," *United Nations*, December 10, 1982, http://www.un.org/depts/los/convention_agreements/texts/unclos/UNCLOS-TOC.htm.

community, UNCLOS III, to rally developing countries to fight against the so-called maritime hegemony of the United States and former Soviet Union. However, as the significance of its naval force and merchant shipping grew so did the desire to reshape the legal regime for China's territory and territorial claims at sea; with significant implications for the East and South China Seas.[22]

This narrative motivates military modernization to make the PLA's capabilities commensurate with its international standing as a major power. That is, to indigenously create a modern military without reliance on Western scientific and technological innovation. This was reflected in a memo circulated by senior leaders to Party members in a document issued by the General Office of the Communist Party of China in April 2013, known as "Document 9" or the *Briefing on the Current Situation in the Ideological Realm*.[23] The memo issued a warning that power could escape the grip of the CCP unless the party eradicated seven subversive currents coursing through Chinese society, with the number one problem being "Western constitutional democracy," whose promotion would "undermine the current leadership and the socialism with Chinese characteristics system of governance."[24] It went on to denounce the promotion of universal values, civil society, neo-liberalism, the "West's idea of journalism," the "undermining of the history of the CCP and of new China."[25] Consequently, a special place in PLA strategy is maintaining the perception that the CCP is best suited to protect China and to uphold its territorial claims, core national interests, as well as to maintain state sovereignty and prevent the imposition of Western values.

The "Chinese Dream" relies on maintaining China's economic strength.

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[22] Hyun-Soo Kim, "The 1992 Chinese Territorial Sea Law in the Light of the UN Convention," *The International and Comparative Law Quarterly* 43, no. 4 (October 1994): 894-904; and Liyu Wang and Peter H. Pearse, "The New Legal Regime for China's Territorial Sea," *Ocean Development & International Law* 24, no. 4 (1994): 431-442.
[23] Stanley Lubman, "Document No. 9: The Party Attacks Western Democratic Ideals," *The Wall Street Journal,* August 27, 2013, http://blogs.wsj.com/chinarealtime/2013/08/27/document-no-9-the-party-attacks-western-democratic-ideals/.
[24] "Document 9: A ChinaFile Translation," *ChinaFile,* November 8, 2013, https://www.chinafile.com/document-9-chinafile-translation.
[25] "Document 9: A ChinaFile Translation."

Conversely, China's economic strength has been a rallying point for its national prestige and upholding the CCP's political legitimacy. As China specialist David Shambaugh has argued: "as China has grown economically more powerful in recent years, nationalism has increased exponentially," and increased Chinese strength "is likely to result in increased defensiveness and assertiveness."[26] Other observers have also noted that as China's economic growth continues, so too has its ability to develop military capabilities that support more aggressive national security policies.[27] China's economic conditions are thus intimately connected to its national prestige and national security, and consequently influences its ability to sustain military modernization as well as the development of new military capabilities. Due to the close connection between nationalism, economy and national security, it is very likely that China will continue to have the fiscal strength and political will to support such defense-spending growth and military modernization at comparable levels. Hardly faltering during the Asian Financial Crisis, its defense budget has increased by double digit figures nearly every year since 1988—an increase of eight-fold over the last twenty years.[28] In March 2014, Beijing announced a 12.2 percent increase of its military budget to USD132 billion, continuing more than two decades of double-digit increases in annual defense spending. Its fiscal strength supports the implementation of strategic and military objectives that stretch into the Far East along the old Silk Road ("One Belt, One Road"), into the Indian and South Pacific Oceans, as well as in South America, Africa and in the Arctic Circle.[29]

At this juncture, it is important to briefly discuss the lack of transparency of China's military expenditure. As China's GDP has grown, so has its spending

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[26] David Shambaugh, "Containment or Engagement of China? Calculating Beijing's Responses," *International Security* 21, no. 2 (1996): 205.
[27] Avery Goldstein, "Great Expectations: Interpreting China's Arrival," *International Security* 22, no. 3 (Winter 1997/98): 36-73; Michael Leifer, "Chinese Economic Reform and Security Policy: The South China Sea Connection," *Survival* 37, no 2 (Summer 1995): 44-59; and Denny Roy, "The China Threat Issue: Major Arguments," *Asian Survey* 36, no. 8 (August 1996): 758-771.
[28] Based on figures from *SIPRI Military Expenditure Database 1988-2015*.
[29] Steve LeVine, "China is Building the Most Extensive Global Commercial-military Empire in History," *Quartz,* June 9, 2015, http://qz.com/415649/china-is-building-the-most-extensive-global-commercial-military-empire-in-history/.

on weapons and military. However, establishing the actual defense outlay for China is difficult as the PLA has long been able to generate impressive side revenues by establishing corporations and by commercializing amounts of land entrusted to it.[30] According to Transparency International, China is responsible for 12 percent of the world's declared defense spending, but 30 percent of the world's secretive defense spending. It is estimated that off-the-books spending ranges from 35 to 50 percent of total military expenditure. [31] Based on China's declared 2013 defense expenditure, this could be up to USD81 billion, which makes it very difficult to form an accurate assessment of what capabilities the CCP and PLA is spending their money on.[32] Further, "no information is available on acquisition planning and only broad details are disclosed on actual and planned purchases." The expenses for China's paramilitary forces and the PLA's own revenue stream, and the allocation of these funds, also remains uncertain.[33] The lack of transparency on defense outlay and capability does little to assuage neighbors as opponents' acquisitions and enhancements are interpreted as attempts to coerce. Secretive decision-making in defense creates perceptions of unpredictability which causes observers to draw a host of various conclusions over underlying motives. Yet despite the opacity, the declared military budget of the CCP still serves as a useful guideline to national strategic intentions, priorities and policies—in particular, the modernization priorities, as a long-term indicator of the sustainability of spending, and a reflection of the state of civil military affairs.[34]

Overall, the "Chinese Dream" reflects the desire to have the military and industrial power with cutting-edge science and technology that is commensurate with its national prestige and economic weight. Increasing investment into its defense industry and space program, the planned

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[30] Michael Lelyveld, "China Bars Outside Income for Military," *Radio Free Asia,* September 9, 2015, http://www.rfa.org/english/commentaries/energy_watch/pla-anti-corruption-push-02092015110130.html.
[31] Tehmina Abbas, Eva Anderson and Katherine Dixon, "Regional Results Asia-Pacific: Government Defence Anti-Corruption Index" (Report for Transparency International Defence and Security Program, November 2015), 4.
[32] Based on figures from *WMEAT* database.
[33] Abbas, Anderson and Dixon, "Regional Results Asia-Pacific," 4.
[34] Keith Crane et al, *Modernizing China's Military: Opportunities and Constraints* (Santa Monica: RAND Project Air Force, 2005), 91.

acquisition of up to six aircraft carriers, and the indigenous production of stealth jets aim to demonstrate that China is technologically advanced and capable of innovation. China's leadership has used its authority and centrally-controlled economy to align its national culture with the needs for economic growth in science and technology, to promote military innovation.[35] China's aircraft carrier, space program and submarines are much circulated images, for instance, Chinese soldiers are regularly photographed spelling out the characters for "Chinese dream, strong military dream"; and its key weapons investments featured on a set of commemorative postage stamps for the "Chinese Dream."[36]

However, although China has long-term objectives and capabilities for advanced technological capabilities, in the short-term its fiscal situation is challenging. This was hinted at in November 2013, when the newly installed President Xi laid out a sweeping economic and structural reform agenda in the November 2013 Third Plenary Session of the 18th CCP Central Committee. [37] This agenda largely addressed local-government fiscal imbalances, including the central government taking on some spending on social services overseen by local governments, as opposed to big-ticket reforms. The situation continued to manifest in 2014 through to 2015 with growing indications of slowing growth, increasing debt, hints of deflation, troubles in both the stock market and the real estate sector, decreasing currency reserves, and very limited policy options.[38] Xi was quoted in *Xinhua:*

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[35] US National Research Council, *S&T Strategies of Six Countries: Implications for the United States,* Division on Engineering and Physical Sciences, Standing Committee on Technology Insight—Gauge, Evaluate, and Review, Committee on Global Science and Technology Strategies and Their Effect on US National Security (Washington DC: The National Academies Press, 2010), 22.

[36] "*Liaoning* Carries 'Chinese Dream' on the Sea," *China Daily,* November 21, 2013, http://www.chinadaily.com.cn/china/China-Military-Watch/2013-11/21/content_17119775.htm; and William A. Callahan, "China Dream – 1," *The Asan Forum,* December 8, 2014, http://www.theasanforum.org/what-can-the-china-dream-do-in-the-prc/.

[37] "Communique of the Third Plenary Session of the 18th Central Committee of the Communist Party of China," *China.org.cn,* November 12, 2013, http://www.china.org.cn/china/third_plenary_session/2014-01/15/content_31203056.htm.

[38] "The Worries about China's Slowing Growth," *The Economist,* January 19, 2016, http://www.economist.com/blogs/economist-explains/2016/01/economist-explains-11; Minxin Pei, "China's Slowing Economy: The Worst has Yet to Come," *Fortune,* January 21, 2015, http://fortune.com/2015/01/21/china-economy-growth-slowdown/; Michael Schuman, "China Can't Postpone the Pain Forever," *Bloomberg View,* January 28, 2016, http://www.bloombergview.com/articles/2016-01-29/china-can-postpone-a-financial-crisis-

"We must boost our confidence, adapt to the new normal condition based on the characteristics of China's economic growth in the current phase and stay cool-minded."[39]

This "new normal" of China's economic conditions was seen again in 2015 with record-setting downturns and mismanaged government interventions, culminating in the Shanghai and Shenzhen Composite Indices falling 32 and 40 percent respectively in July, wiping out almost USD5 trillion in value. The beginning of 2016 also saw a steep sell-off in the stock market, which saw the CCP intervene with circuit-breakers to halt trading, yet within thirty minutes of reopening, the stock market had lost the 20 percent of value it had regained since December.[40] Alongside this, China reported that its foreign currency reserved plunged by USD99.5 billion in its attempts to boost the value of its own currency and stem the flow of capital flight overseas.[41] On January 26, 2016, it was announced that the head of China's National Bureau of Statistics, Wang Baoan, had been sacked and was being probed for corruption—a process that almost always guarantees a criminal conviction.[42] The conviction followed the release of data by the bureau that showed China's economy grew at the slowest pace in 25 years at 6.9 percent.[43]

At least three other officials at the securities regulator were also detained in 2015, all of whom played a role in approving initial public offerings on the stock market. The presidents of the Agricultural Bank of China and Minsheng

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but-not-the-cost; and Martin Wolf, "China's Great Economic Shift Needs to Begin," *Financial Times,* January 19, 2016, http://www.ft.com/intl/cms/s/0/564c7490-bb8d-11e5-b151-8e15c9a029fb.html#axzz3zcpard00.

[39] James Saft, "Xi Jinping's 'New Normal' with Chinese Characteristics," *South China Morning Post,* May 14, 2014, http://www.scmp.com/business/economy/article/1511855/xi-jinpings-new-normal-chinese-characteristics.

[40] "The Causes and Consequences of China's Market Crash," *The Economist,* August 24, 2015, http://www.economist.com/news/business-and-finance/21662092-china-sneezing-rest-world-rightly-nervous-causes-and-consequences-chinas.

[41] "China's Currency Reserves plunged in January," *BBC News,* February 7, 2016, http://www.bbc.com/news/business-35516054.

[42] Megha Rajagopalan, "China Statistics Chief Sacked Amid Corruption Probe," *Reuters,* January 29, 2016, http://www.reuters.com/article/us-china-corruption-idUSKCN0V70RP.

[43] Wendy Wu, Zhou Xin and Mandy Zuo, "China Turns in Lowest Growth Rate in 25 years at 6.9pc as Hong Kong, Shanghai Markets Rally Amid Hope of Policies to Stem Slowdown," *South China Morning Post,* January 19, 2016, http://www.scmp.com/news/china/economy/article/1902749/china-turns-lowest-growth-rate-25-years-69pc-hong-kong-shanghai?page=all.

Bank were arrested in 2015, and at least seven officials at Citic Securities, China's largest brokerage, were convicted for insider trading in allegations to Citic's role in the CCP's intervention to rescue the falling stock market in mid-2015.[44] The CCP responded to signs of economic weakness—including falling global exports—with stimulus measures to chase growth targets, rolling back some central and local fiscal reforms, intervened to control the faltering stock market, and devalued its currency (renminbi). This demonstrated an acknowledgement that the Chinese economy—which over the past three decades has been driven by high levels of investment in export-oriented manufacturing capacity and infrastructure—needs to shift to a consumption-driven growth model.[45] According to Suisheng Zhao, "from a historical perspective, the current China model is only a transitional model of development. It may have to go from a value-free to a value-added transition involving the sequencing of economic growth, legal reforms, democratization and constitutionalism, with different aspects of the development being emphasized at different times in the process to continue its political stability and economic growth."[46]

The slowdown of China's economy will have an impact on not only sustaining the increases to its military outlay and expenditure, but also its overall military strategy. First, the growth in Chinese military power and strategic weight has largely occurred on the back of its expanding economy and a slowdown would have a negative effect on its capacity to project power and extend its influence. The CCP is no more immune than any other regime to economic and fiscal realities.[47] Second, with changes to the economy, it remains to be seen whether the CCP can sustain focus on both internal contingencies and external challenges. Due to the connection between the

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[44] Gabriel Wildau, "China's Statistic Chief Wang Baoan Accused of Corruption," *Financial Times,* January 26, 2016, http://www.ft.com/intl/cms/s/0/61cde66e-c425-11e5-993a-d18bf6826744.html#axzz3zcpard00.

[45] US-China Economic and Security Review Commission, "2015 Report to Congress of the US-China Economic and Security Review Commission: Executive Summary and Recommendations," (One Hundred Fourteenth Congress, First Session, November 2015), 1.

[46] Suisheng Zhao, "The China Model: Can it Replace the Western Model of Modernization?" *Journal of Contemporary China* 19, no. 65 (June 2010): 433.

[47] John Lee, "China's Economic Slowdown: What are the Strategic Implications?" *The Washington Quarterly* 38, no. 3 (2015), 124.

CCP political legitimacy, economic growth and national security, Beijing has a vested interest in maintaining its economic and resource base.

Reducing Dependence on Foreign Military Technology

A significant part of realizing the "Chinese Dream" is the objective of self-reliance and indigenization in military innovation and defense production. China has thus engaged in the acquisition of certain weapon systems from foreign suppliers for reverse engineering. In 1999 then-President Jiang Zemin called for further impetus to modernization after research revealed that if China tried to match American military technology in the short-term, rather than leapfrogging, the result after twenty years would be China falling even further behind.[48] For instance, combat information systems aboard modern American frigates provide access to integrated data management systems, and advanced electronic warfare systems deliver a leading edge in communication and signal processing technologies.[49] PLAN frigates have yet to acquire or indigenously developed versions of these capabilities. Another example was China's 1995 procurement of Russia Su-27SK *Flanker* jets. It secured a USD2.5 billion production license deal from Russia to build 200 Su-27SKs. However, in 2006 Russia terminated the contract after 95 aircraft had been built when Moscow discovered that Beijing had reverse-engineered the aircraft and was covertly manufacturing an indigenous variant, the *Shenyang* J-11B, with Chinese-built avionics and weapons.[50] The successive indigenous variants, the J-15 and J-16 have been at the forefront of Chinese attempts to produce long-range fourth-generation fighters.[51] Reverse-

[48] Michael Pillsbury, "China's Military Strategy Towards the US: A View from Open Sources," in *US-China Commission Congressional Report* (Washington DC: National Defense University Press, 2001), 4-5

[49] See Dallas Boyd, "Advanced Technology Acquisition Strategies of the People's Republic of China," Report for US Defense Threat Reduction Agency, Advanced Systems and Concept Office, No.: ASCO 20120-021 (September 2010); and US-China Economic and Security Review Commission, "Hearing: Impact of Military and Dual-Use Exports to China," January 17, 2002, http://www.uscc.gov/Hearings/hearing-impact-military-and-dual-use-technology-exports-china.

[50] Wendell Minnick, "Russia-China Su-35 Deal Raises Reverse Engineering Issue," *DefenseNews,* November 20, 2015, http://www.defensenews.com/story/defense/air-space/strike/2015/11/20/russia-china-su-35-deal-raises-reverse-engineering-issue/76102226/.

[51] Sebastien Roblin, "China Stole This Fighter From Russia – and It's Coming to the South China Sea," *The National Interest,* July 24, 2016, http://nationalinterest.org/feature/china-stole-fighter-russia%E2%80%94-its-coming-the-south-china-sea-17087.

engineering is believed to be the impetus for China's 2015 acquisition of 24 Russian Su-35s.[52]

Despite the hype surrounding its military modernization program, China's military research and development is a "black box." [53] There is no doubt that China has acquired small numbers of certain modern weapons systems for reverse engineering and technology transfer.[54] Particularly for China's naval and aviation industry, the continued reliance on foreign parts is one of its biggest liabilities. To this end, President Xi re-emphasized the importance of R&D for the PLA. In March 2014, a new committee formed at the top echelon of the CCP. "The Small Leading Group for Deepening Reform of National Defense and Military" signaled Xi's determination for reform of the PLA's industrial and technological support base.[55] In August 2014, Xi also chaired a study session of the Politburo devoted to examining trends in military innovation, and called for the country's military to make technical and strategic innovations and to close the gap with other powers in emerging trends in warfare.[56] Xi stated that a global revolution in military science and technology was taking place "at a speed so fast, in a scope so wide, at a level so deep, and with an impact so great that it has been rarely seen since the end of World War Two." He added that this required China's defense establishment to "vigorously promote military innovation."[57]

China's promotion of military innovation—via development of its own indigenous defense industry—has driven the acquisition of advanced military technology for transfer into indigenous production. The key aim of having an

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[52] Minnick, "Russia-China Su-35 Deal Raises Reverse Engineering Issue."
[53] Benjamin David Baker, "Meet Chengdu's Ace Fighter Designer," *The Diplomat,* January 20, 2016, http://thediplomat/com/2016/01/meet-chengus-ace-fighter-designer.
[54] Ball, "Arms and Affluence," 92.
[55] David Cohen, "Newest Small Leading Group to 'Deepen' Reform of National Defense and the Military," *The Jamestown Foundation: China Brief,* 14, no. 6 (2014), https://jamestown.org/program/newest-small-leading-group-to-deepen-reform-of-national-defense-and-the-military/.
[56] Adrian Wan, "Xi Jinping Urges China's Military to Create 'Information Warfare' Strategy," *South China Morning Post,* August 30, 2014, http://www.scmp/news/china/article/1582004/xi-jinping-urges-chinas-military-create-information-warfare-strategy.
[57] "China Military Seeks to Bring Cyber Warfare Units Under One Roof," *Bloomberg Business,* October 23, 2015, http://www.bloomberg.com/news/articles/2015-10-22/china-military-chiefs-seek-to-unify-cyber-warfare-operations.

independent indigenous world-class defense technology base is twofold. First, to decrease dependence on foreign, particularly Russian, systems, and second, to further China's role in its domestic arms market to supply low-cost, low-capability arms.[58] To this end, China's acquisition of technology has included external and internal sources of technology, purchases, theft of foreign technologies, foreign-assisted developments as well as fully indigenous capability projects, and strictly military-oriented technologies as well as those featuring dual uses.[59] For instance, the new PLAN surface combatants revealed a pattern of propulsion, command and control, sensors and weapons components either purchased or reverse-engineered from foreign sources.

According to a 2012 US Defense Threat Reduction Agency report, there are five key Chinese acquisition strategies. First, "selective modernization," which includes acquiring foreign technology to meet certain short- to mid-term needs, while continuing to develop its indigenous R&D and production infrastructure over the long-term. This is the most cost-effective method of achieving rapid modernization. Second, the use of non-professional intelligence gatherers—such as research institutes and corporations—to illegally acquire certain technologies or information. Two prevalent tactics have been the "ethnic targeting" of Chinese Americans, and "actuarial intelligence" (the aggregation of small amounts of information from a wide variety of sources). Third, the practice of "reverse engineering." If successful this could allow temporary parity with sophisticated adversaries, whose continuing development of new capabilities presents a constantly moving target. However, the efficacy of this practice can be overstated, and reverse engineering comes at the expense of building up China's long-term capacity for indigenous innovation. Fourth, the reliance on domestic science and technology achievements, the cultivation of scientific talent at home, and enticing foreign-educated Chinese to return to China. However, successes have not extended beyond the realm of strategic weapons. Chinese R&D

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[58] J. D. Kenneth Boutin, "Arms and Autonomy: The Limits of China's Defense-Industrial Transformation," in *The Modern Defense Industry: Political, Economic, and Technological Issues,* ed. Richard A. Bitzinger (Santa Barbara: Praeger, 2009), 220.
[59] Boyd, "Advanced Technology Acquisition Strategies of the People's Republic of China," 1.

continues to rely on Western innovations and its defense industry suffers from several deficiencies including a lack of competition among major weapons producers. Lastly, China has acquired foreign dual-use technologies for use in PLA weapons platforms, which is often developed or acquired through the commercial sector. The principle method of acquiring such technology has been to enter commercial arrangements with foreign corporations that explicitly require technology-sharing.[60] Whilst the objective of the five strategies is to reduce Chinese foreign dependence on military technology, the outcomes are ironically dependent on foreign technologies.

A leading influence in China's military modernization program is Yang Wei, the chief Director of Chengdu Aircraft Design Institute (a civil sector state-owned enterprise [SOE]), who has become one of the most influential individuals in Chinese military aircraft development. He was a leading designer of two of China's most prominent aircraft—the stealth J-20 *Chengdu* and the Sino-Pakistani JF-17 *Thunder,* which has been marketed as a low-cost export alternative to other fourth generation fighters. It has been argued that Yang was a key thinker behind China's approach to designing and building combat aircraft: instead of designing and building brand-new aircraft from scratch, Beijing has "borrowed" from other countries' design, has integrated some imported and/or indigenous technology, and has produced systems at a fraction of the cost.[61] The US' National Security Agency (NSA) has identified numerous theft of design and technology from American aircraft since the early 2000s, including the B-2 bomber, the F-22 *Raptor* and the F-35 Joint Strike Fighter (JSF). Details of pervasive Chinese military cyber theft were revealed in classified documents made public by former contractor Edward Snowden.[62]

In 2013, US officials revealed a broad Chinese campaign of espionage that

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[60] Boyd, "Advanced Technology Acquisition Strategies of the People's Republic of China," 1-3.
[61] Robert Beckhusen, "China's Expert Fighter Designer Knows Jets, Avoids America's Mistakes," *War is Boring,* July 29, 2015, https://medium.com/war-is-boring/china-s-expert-fighter-designer-knows-jets-avoids-america-s-mistakes-8b326431be30#.3mnp3w9d0.
[62] Bill Gertz, "China's Armed Drones Appear Built from Stolen Data from US Cyber Intrusions," *Asia Times,* December 29, 2015, http://atimes.com/2015/12/chinas-armed-drones-appear-built-from-stolen-data-from-us-cyber-intrusions/.

had gained access to designs for two dozen major weapons systems critical to missile defenses, combat aircraft and naval ships.[63] A key example is the J-20 and the J-31 *Shenyang*, which feature a design based on American technology by way of stolen blueprints for the F-35 JSF and F-22. In 2007, the US intelligence operation "Operation Byzantine Hades" uncovered a large-scale multi-year Chinese cyber espionage program that targeted governments and industry to steal sensitive technology and weapons enhancements for the J-20. Then in 2015, in the first publicly-stated link to the Chinese army, two Chinese soldiers faced extradition to the US on charges of raiding secure databases of American military contractors. Working with a Chinese immigrant and aviation entrepreneur in Vancouver, who directed the pair toward email accounts of American aviation engineers, the hackers mined corporate networks for engineering manuals related to the F-35, C-17 and F-22 military aircraft.[64] US defense officials stated that the stolen data was passed on to a Chinese military unit called Technical Reconnaissance Bureau in Chengdu province, and that the data was then passed to the state-run Aviation Industry Corporation of China. The F-35 data theft was confirmed after photographs were published on Chinese websites showing a newer version of the J-20, which incorporated several design upgrades to its weapons systems, shortened exhaust nozzles, and tail and vertical fin modifications to reduce radar detection.[65]

Such theft has had the dual benefit of increasing the efficiency and lowering the cost of China's own military development, while also whittling away at the US' technological edge. It is important to note that China's defense companies are labeled a "strategic" industry by the CCP, and are thus SOEs

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[63] "Chinese Soldiers Tried to Steal F-35 Blueprints, Helped by Vancouver Immigrant, report claims," *South China Morning Post,* January 20, 2015, http://www.scmp.com/news/world/article/1903314/chinese-soldiers-tried-steal-f-35-blueprints-helped-vancouver-immigrant.

[64] "Chinese Soldiers Tried to Steal F-35 Blueprints, Helped by Vancouver Immigrant, Report Claims."

[65] Bill Gertz, "Top Gun Takeover: Stolen F-35 Secrets Showing up in China's Stealth Fighter," *The Washington Times,* March 13, 2014, http://www.washingtontimes.com/news/2014/mar/13/f-35-secrets-now-showing-chinas-stealth-fighter/?page=all.

where the state maintains absolute control.[66] While the pattern of development in China's civil SOE sector has involved the deepening integration of firms in globalized, transnational processes of R&D and production, this has not been mirrored in the defense sector SOEs. As the CCP retains absolute control, security-driven concerns, party-army business relations, potential conflicts of interest, and the level of resistance by Chinese defense industry with ongoing CCP reforms has limited the scope of development and innovation. To circumvent this problem the defense sector SOEs would have to rely on civil sector SOEs in order to access globalized industrial processes, without incurring political costs.[67]

The Chinese defense industry, through its civil sector SOEs, has predominantly stolen science and technology (S&T) and as much R&D as possible, in order to expedite the building of complete military platforms. This was evident in the development of the J-10 aircraft in which China bought Russian Su-27 flankers, kept the airframe, and invested significantly in software and hardware such as the avionics, radar, missile system and infrared target system.[68] However, it remains to be seen how much China can capitalize on stolen technology and information and leverage the technologies it acquires. "Beyond the mere acquisition of potentially useful technologies … China must also be able to effectively leverage—that is, to absorb, assimilate, and exploit—these technologies for military purposes."[69] Compared to the American defense industry, China also lacks significantly in

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[66] The top ten SOEs are: the China National Nuclear Corporation (CNNC), the China Nuclear Engineering & Construction Group Corporation (CNEC); the China Aerospace Science and Technology Corporation (CASC); the China Aerospace Machinery and Electronics Corporation (CAMEC); the China Aviation Industry Corporation I (AVIC I); the China Aviation Industry Corporation II (AVIC II), the China State Shipbuilding Corporation(CSSC); the China Shipbuilding Industry Corporation (CSIC), the China North Industries Group Corporation (CNGC); and the China South Industries Group Corporation (CSG). See Pening Zhao, "China: Top Ten Defense and Technology Industry," US Department of Commerce – National Trade Data Bank, December, 22, 1999, http://fas.org/nuke/guide/china/contractor/mark0055.htm.

[67] Boutin, "Arms and Autonomy: The Limits of China's Defense-Industrial Transformation," 217.

[68] Jesse Sloman and Lauren Dickey, "Why China's Air Force Needs Russia's SU-35," *The Diplomat,* June 1, 2015, http://thediplomat.com/2015/06/why-chinas-air-force-needs-the-su-35/.

[69] Richard A. Bitzinger, "Going Places or Running in Place? China's Efforts to Leverage Advanced Technologies for Military Use," in *People's Liberation Army After Next,* ed. Susan M. Puska (Carlisle: Strategic Studies Institute, US Army War College, August 2000).

innovative ability, and thus competitiveness. As such, the larger question remains as to how much progress has China made in the building and production of world-class indigenous defense capabilities. The development of indigenous capabilities traditionally involves a process typically depicted along the lines of (Figure 4.1):

Figure 4.1: Process of Indigenous Development of Capabilities

It is clear that China has invested in theft and reverse-engineering or RD/TE, however, this has come at the expense of producing its own S&T, which is the foundation of a self-reliant, indigenous and innovative defense industry. Consequently, Chinese defense industry has struggled with the production phase, as it has proven quite difficult to replicate and build the technology needed for advanced platforms. The Chinese defense industry still cannot emulate the significant role the US defense-industrial base provides the American armed forces in terms of innovation and building demonstrators. For instance, although there been progress in shipbuilding and China now possesses the capability to produce the hulls and propulsion of modern warships, the systems integration, propulsion design and manufacture capabilities have remained weak. Additionally, despite increased defense spending in R&D, rampant corruption and inefficient resource allocation has limited its ability to innovate and implement weapons contracts. [70] Consequently, much effort and money has been put into "trial-and-error" for production, and although there has been greater awareness of how commercial competition supports innovation, the imperatives of state security has continued to exert a restraining influence on China's success in defense-industrial development. China's objective of an independent, indigenous and innovative defense industry:

[70] Zachary Keck, "China's Defense Budget: A Mixed Bag," *The Diplomat,* March 8, 2014, http://thediplomat.com/2014/03/chinas-defense-budget-a-mixed-bag/.

> depends on the resolution of conflicts that are currently in play: desire to establish internationally competitive, national technology standards and various other efforts that involve wresting ever-more advanced technology transfers from foreign investors in order to aid creation of a more indigenous innovative society. The latter efforts will increasingly shape the type and amount of foreign investment in China. The conflict between open access to information and the national need to enforce political stability will also need to be addressed.[71]

For the foreseeable future, it is thus likely that the theft of foreign intellectual property and purchase of foreign platforms will continue to play a part in China's military modernization.[72]

Strategic Competition with the United States

The most significant influence on China's military modernization is strategic competition with the United States. In the 1990s, four key events involving the US necessitated the CCP's drive to increase the tempo of its military modernization. First, the announcement of sanctions by then-US President George W. Bush on China for violating human rights during the Tiananmen square ("June 4th") incident marked the lowest point in Sino-US relations and the beginning of a prolonged period of strained relations. The imposed sanctions suspended high-level exchanges between the two countries and the halt of the sales of all military equipment and weapons to China. This led to the "dissolution of the US-China grand bargain"[73] that had stabilized Sino-American relations for nearly two decades since the 1972 rapprochement between Richard Nixon and Mao Zedong.[74] The signing of the Three Communiqués and tacit understanding of policies, particularly regarding Taiwan, US security alliances in the Asia-Pacific, trade and human rights, had

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[71] US National Research Council, *S&T Strategies of Six Countries: Implications for the United States,* 22.

[72] For most analysts, the quantitative and qualitative progress of PLA forces has been impressive. Making sophisticated judgments about China's technological prowess is a specialized business and one characterized by differing views. For a detailed analysis on China's defense industry, see Richard A. Bitzinger, "Reforming China's defense industry," *The Journal of Strategic Studies* 39, nos. 5-6 (2016): 762-789.

[73] David M. Lampton, *Same Bed, Different Dreams: Managing US-China Relations, 1989-2000* (Berkeley: University of California Press, 2001), 2.

[74] See Evelyn Goh, "Nixon, Kissinger, and the 'Soviet Card' in the US Opening to China, 1971-1974," *Diplomatic History* 29, no. 3 (2005): 475-502; and Geoffrey Warner, "Nixon, Kissinger and the Rapprochement with China, 1969-1972," *International Affairs* 83, no. 4 (2007): 763-781.

led to a far-reaching understanding between Washington and Beijing, and was all dissolved by the American reaction to the violence unleashed in the Tiananmen incident.[75] China accused the US of interfering in its domestic affairs, supporting democracy activists, and using various sanctions to leverage improvements in China's human rights situation.[76]

Second, the First Gulf War (1990-1991) demonstrated to Chinese leaders the major advancements of the US military in regard to precision-strikes against Iraqi targets. Beijing's observation of *Operation Desert Storm* meant it was forced to confront the "disconcerting reality that China's armed forces were woefully inadequate for the demands of modern warfare." [77] The advancements by the Americans in precision-guided munitions and in putting "sensors and shooters" together, and the speed with which they could deliver the strikes highlighted the obsolescence of China's military equipment and doctrine.[78] The third event was the Taiwan Straits Crisis (1995-1996) during which two US aircraft carrier battle groups, led by the USS *Independence* and USS *Nimitz,* were moved closer to Taiwan.[79] In December 1995, in response to China firing missiles inside the ROC's territorial waters off the ports of Keelung and Kaohsiung to intimidate Taiwan's first democratic presidential election, the US sailed the USS *Nimitz* off the south coast of Taiwan.[80] This

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[75] Lampton, *Same Bed, Different Dreams,* 2-3.
[76] Robert L. Suettinger, *Beyond Tiananmen: The Politics of US-China Relations 1989-2000* (Washington DC: Brookings Institution Press, 2003), 1-3.
[77] David M. Finkelstein, "China's Military Strategy: An Overview of the 'Military Strategic Guidelines,'" *Asia Policy* 4, no. 1 (2007): 102.
[78] US General Accounting Office, "National Security: Impact of China's Military Modernization in the Pacific Region," Report to Congressional Committees, No. GAO/NSIAD-95-84 (June 1995), 4. See also, Theodore A. Postol, "Lessons of the Gulf War Experience with Patriot," *International Security* 16, no. 3 (Winter 1991-1992): 119-171.
[79] US Committee on International Relations, "Statement by Dr. Kurt M. Campbell, Deputy Assistant Secretary of Defense for Asian and Pacific Affairs, Before the House International Relations Committee, Subcommittee on Asia and the Pacific, 14 March 1996," in *Crisis in the Taiwan Strait" Implications for US Foreign Policy* (Papers from the Hearing before the One Hundred Fourth Congress, Second Session, Washington DC, March 14, 1996), 59. It is important to note that there were two previous Taiwan Straits Crises (1954-1955 and 1958-1959), in which the PRC bombed two islands (Kinmen and Matsu) controlled by the ROC. However, at this time the CCP's primary focus was on internal stability, and its bombardments of the islands were no match for US intervention. See H. W. Brands Jr., "Testing Massive Retaliation: Credibility and Crisis Management in the Taiwan Strait," *International Security* 12, no. 4 (Spring 1988): 124-151.
[80] Douglas Porch, "The Taiwan Strait Crisis of 1996: Strategic Implications for the United States Navy," *Naval War College Review* 53, no. 2 (Summer 1999): 19-20; and Suisheng Zhao, "Changing Leadership Perceptions: The Adoption of a Coercive Strategy," in *Across*

sent clear signals to China about the lack of its deterrent force to prevent foreign interference in what it considered its internal affairs.[81]

Lastly, in 1999, US aircraft accidentally bombed the Chinese embassy in Belgrade because of wrong target coordinates provided by the CIA. Never accepting the US versions of events, the Chinese believed the bombing of its embassy, killing three Chinese nationals, was a deliberate strike.[82] The Belgrade bombing proved to be a major impetus for Chinese military modernization efforts, with then-President Jiang Zemin and Vice Chairman of the CMC, General Zhang Wannian calling for a major breakthrough in "assassin's mace" weapons developments.[83] As Andrew Erickson has noted, "particularly after the Belgrade bombing, Jiang and Zhang would cite repeatedly the 'two bombs and one satellite' megaprojects as a model."[84]

Compared to many other regional states, the PLA's military modernization programs remain largely opaque, with much speculation regarding potential, capabilities and intent. On the one hand, scholars such as Timothy Heath and Andrew Erickson[85] have argued that the primary objective of its military

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the Taiwan Strait: Mainland China, Taiwan, and the 1995-1996 Crisis, ed. Suisheng Zhao (New York: Routledge, 1999), 119.

[81] See Andrew Scobell, "Show of Force: Chinese Soldiers, Statesmen, and the 1995-1996 Taiwan Straits Crisis," *Political Science Quarterly* 115, no. 2 (Summer 2000): 227-246.

[82] See Peter Hays Gries, "Tears of Rage: Chinese Nationalist Reactions to the Belgrade Embassy Bombing," *The China Journal* 46 (July 2001): 25-43.

[83] See Zhang Wannian Zhuan Xiezuozu [Biography of Zhang Wannian Writing Group], *Zhang Wannian Zhuan, Xia Ceng* [The Biography of Zhang Wannian, Final volume] (Beijing: Jiefangjun chubanshe, 2011), 416.

[84] Andrew S. Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development: Drivers, Trajectories and Strategic Implications* (Washington DC: The Jamestown Foundation, May 2013), 35-36.

[85] See Timothy Heath and Andrew S. Erickson, "Is China Pursuing Counter-Intervention?," *The Washington Quarterly* 38, no. 3 (Fall 2015): 143-156. See also Michael S. Chase and Arthur Chan, *China's Evolving Approach to "Integrated Strategic Deterrence"* (Santa Monica: RAND, 2016); Andrew S. Erickson, "Rising Tide, Dispersing Waves: Opportunities and Challenges for Chinese Seapower Development," *Journal of Strategic Studies* 37, No. 3 (2014): 372-402; Andrew S. Erickson and Joel Wuthnow, "Barriers, Springboards and Benchmarks: China Conceptualizes the Pacific 'Island Chains,'" *The China Quarterly* (January 2016): 1-22; Andrew S. Erickson and Timothy Heath, "China's Turn Toward Regional Restructuring, Counter-Intervention: A Review of Authoritative Sources," *China Brief* 15, no. 22 (2015); James R. Holmes and Toshi Yoshihara, *Chinese Naval Strategy in the 21st Century: The Turn to Mahan* (London: Routledge, 2008); Loro Horta, "China turns to the Sea: Changes in the People's Liberation Army Navy Doctrine and Force Structure," *Comparative Strategy* 31, no. 5 (2012), 393-402; Yves-Heng Lim, "Expanding the Dragon's Reach: The Rise of China's Anti-access Naval Doctrine and Forces," *Journal of Strategic Studies* (2016): 1-23; and Evan Braden Montgomery,

modernization is to enhance its warfighting capability to deter the US from intervening in the region, in particular the Taiwan Strait. In recent years, maritime territorial and EEZ disputes in both the East and South China Seas have further fueled demands for modernization of its naval and air capabilities. They have also stressed that despite the opacity of China's ruling elite, the evidence demonstrates that China's pursuit of military superiority is targeted towards coercing neighboring countries to accept Beijing's "rules." The key to the PLA's modernization and acquisition programs is the operational approach of "counter-intervention."[86] The 2016 Pentagon report on China's military power stated that the development in capabilities "serve to dissuade, deter, or if ordered, defeat possible third-party intervention during a large-scale theater campaign such as a Taiwan contingency."[87]

Other scholars, however, have argued that Chinese counter-intervention strategy is a "myth."[88] In their view, identifying counter-intervention as the focus of China's military modernization is a flawed assessment of Chinese military strategy and modernization, as it mistakes an "operational concept for a military strategy or even a grand strategy aimed at pushing the United States out of the Asian littoral."[89] It is also argued that while China is rising, the CCP is unsure of its trajectory and ultimate objective.[90] This is because of two key reasons. First, "even though China would strive to limit the role of

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"Contested Primacy in the Western Pacific: China's Rise and the Future of US Power Projection," *International Security* 38, no. 4 (Spring 2014): 115-149.

[86] Heath and Erickson, "Is China Pursuing Counter-Intervention?," 148.

[87] The report classifies these capabilities as "Anti-Access / Area Denial (A2/AD)." US Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2016* (Washington DC: Department of Defense, 2016), 59.

[88] M. Taylor Fravel and Christopher P. Twomey, "Projecting Strategy: The Myth of Chinese Counter-intervention," *The Washington Quarterly* 37, no. 4 (Winter 2015): 171-187. See also M. Taylor Fravel, "Securing Borders: China's Doctrine and Force Structure for Frontier Defense," *Journal of Strategic Studies* 30, No. 4-5 (2007): 705-737; M. Taylor Fravel, "China's Changing Approach to Military Strategy: The Science of Military Strategy from 2001 and 2013," *MIT Research Paper* 2016-15 (2016); and Christopher P. Twomey, "What's in a Name? Building Anti-Access/Area Denial Capabilities without Anti-Access/Area Denial Doctrine," in *Assessing the PLA under Hu Jintao,* ed. David Lai, Roy Kamphausen, Travis Tanner (Carlisle: Strategic Studies Institute, 2014), 129-171.

[89] Fravel and Twomey, "Projecting Strategy: The Myth of Chinese Counter-intervention," 171.

[90] See Thomas J. Christensen, *The China Challenge: Shaping the Choices of a Rising Power* (New York and London: W. W. Norton, 2015); and Michael Pillsbury, *The Hundred Year Marathon: China's Secret Strategy to Replace America as the Global Superpower* (New York: Henry Holt and Co., 2015).

the United States in a conflict over Taiwan, China's strategy, at least for now, does not seek to prevent US intervention much more broadly in the Western Pacific." Second, excessive focus on "counter-intervention" impeded consideration of other significant shifts in the PLAN's force structure, such as humanitarian and disaster relief efforts and blue water-capable forces. Third, "casting counter-intervention as China's strategy narrows the objective of China's military modernization to one primary mission, thereby overlooking the much broader range of goals that actually motivate China's defense policy." Moreover, "viewing China's military strategy as principally designed to counter the United States is particularly worrisome because it can intensify the effects of the security dilemma between the two countries."[91] Overall there remains consensus that Beijing is attempting to comprehensively transform its naval and associated air capabilities, and that the PLA's long-term objective is to challenge the qualitative and quantitative superiority of American forces in the Western Pacific.

The development of certain naval capabilities has been defended by Beijing as reactions to the American strategic rebalance to the region (which will be further discussed in Chapter 5: The United States in the Western Pacific). In this regard, the PLA's warfighting capabilities aim to deter the United States from interference in China's national and regional affairs. There is strong evidence that the PLA has sought to significantly raise the costs of American power projection in the region through "counter-intervention" operations. This strategic competition with the United States combines both material and ideational explanations. On the one hand, naval modernization is influenced by the aim of deterring American interference in China's national interests. On the other hand, what Beijing understands by being a "great power" (or a "super power") with commensurate military power is deeply informed by its observation of the United States and its supporting military apparatus and conduct of modern warfare. The prerequisites of "great power" status—power projection capabilities and a high-tech military with a robust innovative

[91] Fravel and Twomey, "Projecting Strategy: The Myth of Chinese Counter-intervention," 180-181.

capacity—are rooted in understanding the pillars of American hegemony.[92]

Indeed, the CCP—striving for the moral high ground—has largely denounced calls that its military modernization is for power projection and displacing American primacy. Beijing argues that the US force posture and offensive strategy in the region has necessitated advances in China's capabilities.[93] In China's domestic discourse, it has been common to argue that Washington's renewed commitment to the region is destabilizing.[94] The US has been viewed as inciting regional countries such as Japan, Taiwan, Australia and the Philippines to actively challenge China. Beijing has argued that the "dominant power should leave space for the rising rest."[95] The US' higher profile in Asia, including its deeper engagement with regional institutions such as the Association of Southeast Asian Nations (ASEAN), its strengthening of its commitments to its allies and friends (adding to its extant regional military preponderance) has provided a dominant strategic narrative for China's reactive military modernization.

At the 2013 IISS Shangri-La Dialogue in Singapore, the Director of the Center for China-America Defense Relations at the PLA's Academy of Military Sciences, Major General Yao Yunzhu, commented to Secretary of Defense Chuck Hagel that the American rebalance was viewed in China as an "attempt to contain China's rising influence and to offset the increasing military capabilities of the Chinese PLA." She further noted that despite American reassurances, China was "not convinced," as the US in Beijing's view had opposing objectives: on the one hand, positively engaging China, and on the other hand reassuring its allies. Consequently, Chinese officials held the view that "with all the enhanced deployment, 60 percent naval assets, 60 percent air force assets and military capabilities," the US and its allies and

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[92] Christopher Layne, "China's Role in American Grand Strategy: Partner, Regional Power, or Great Power Rival?" in *The Asia-Pacific: A Region in Transition*, ed. Jim Rolfe (Honolulu: Asia-Pacific Center for Security Studies, 2004), 66.
[93] See Susan V. Lawrence, "US-China Relations: An Overview of Policy Issues," Congressional Research Service Report R41108 (August 1, 2013), 18-19.
[94] See Ely Ratner, "Rebalancing to Asia with an Insecure China," *The Washington Quarterly* 36, no. 2 (Spring 2013): 23.
[95] Chen Weihua, "Dominant Power Should Leave Space for the Rising Rest," *China Daily,* November 14, 2015, http://www.chinadaily.com.cn/cndy/2015-11/13/content_22444701.htm.

partners were reacting to China's rise and attempts at containment.[96] In 2015, the state-controlled *China Daily* further claimed that "whether China and the US can avoid a confrontation largely depends on whether the US can rethink its 'dominant power' status."[97] Since the announcement of the US pivot to Asia in 2012, Chinese officials have repeatedly raised questions about whether this rebalance was an effort to contain China.

Efforts to transform the PLA into a technologically advanced military capable of projecting power have been presented as a reaction to Washington's efforts to strengthen its alliance system, advancing in ballistic missile defenses, and increasing the joint operating effectiveness of its naval and air units in the Western Pacific. In 2016, the PLAN had more than 75 major surface combatants (destroyers and frigates), and its naval acquisitions included two 8,000-ton *Sovremenny*-class destroyers purchased from Russia in 2000, with another two ordered in January 2002. Four Type 071 *Yuzhao*-class amphibious ships were added to the East Sea Fleet by 2016, and three Type 052D destroyers were delivered to the South Sea Fleet by 2015. Numerous Type 054A (*Jiangkai-II)* frigates are under construction. China's new destroyers and frigates "provide a significance upgrade to the PLAN's area air defense capability, which will be critical as it expands operations into distant seas beyond the range of shore-based air defense."[98] China now has the largest fleet of diesel attack submarines in the world (62) and the PLAN has put into service four new classes of indigenously built submarines including: a nuclear-powered ballistic submarine (SSBN) called the *Jin*-class or Type 094; a nuclear-powered general purpose attack submarine (SSN) design called the *Shang*-class or Type 093A; a SS design called the *Yuan*-class or Type 039A; and a SS design called the *Song*-class or Type 039/39G.

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[96] "The US Approach to Regional Security: Q&A," The IISS Shangri-La Dialogue 2013, First Plenary Session Q&A, Singapore, June 1, 2012, https://www.iiss.org/en/events/shangri%20la%20dialogue/archive/shangri-la-dialogue-2013-c890/first-plenary-session-ee9e/qa-f303.

[97] Wang Yusheng, "US will benefit by accepting China's rise," *China Daily,* December 31, 2015, http://europe.chinadaily.com.cn/opinion/2015-12/31/content_22877720.htm.

[98] US Department of Defense, *Annual Report to Congress on Military and Security Developments Involving the People's Republic of China 2015* (Washington DC: Department of Defense, 2015), 9.

China has made most of its advancements in the development of its anti-access and area-denial (A2/AD) capabilities, especially its anti-ship cruise missiles (ASCM) and ASBMs. While its short-range ballistic missiles, the DF-12s, are optimized for a Taiwan contingency,[99] the modernization of its ASCMs and ASBMs has targeted US and allied bases, as well as missile defense and forward operating ships and aircraft in the Western Pacific. Its most capable new ASCMs are indigenous variations of the Russian SS-N-22 *Sunburn* and SS-N-27 *Sizzler*—the YJ-62 ASCM fitted on its guided missile destroyers (DDG), and its long-range YJ-18 fitted on its *Song-, Yuan-* and *Shang*-class submarines.[100] One of its key ASBMs, the DF-21D "carrier killer," is a hypersonic medium-range ballistic missile equipped with a maneuverable re-entry vehicle (MaRV) designed to hit moving ships at sea, and is particularly targeted at aircraft carriers.[101] The basic support infrastructure—broad-area maritime surveillance and targeting systems—is already in place, which permits the PLAN to attack aircraft carriers, and other US and allied ships in the Western Pacific.[102] In September 2015, Beijing also unveiled its second type of ASBM, the DF-26, dubbed the "Guam Killer" as it is China's first ballistic missile capable of targeting Guam with conventional warheads. In December 2015, China confirmed its military had concluded tests of a new road-mobile ICBM, the DF-41, that is capable of hitting any part of the US with nuclear warheads.[103]

China's modernization has also increasingly included investments into space and hypersonic glide platforms in order to defeat US missile defense systems, such as Terminal High Altitude Area Defense (THAAD), and SM-3 and SM-

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[99] See Bill Gertz, "China Reveals New Short-Range Missile," *The Washington Free Beacon,* August 2, 2013, http://freebeacon.com/national-security/china-reveals-new-short-range-missile/.
[100] US Department of Defense, *Annual Report to Congress on Military and Security Developments Involving the People's Republic of China 2015,* 46.
[101] Ronald O'Rourke, "China's Naval Modernization: Implications for US Navy Capabilities – Background and Issues for Congress," Congressional Research Service Report RL33153 (Washington DC: Library of Congress, June 17, 2016), 9-10.
[102] Erickson, *Chinese Anti-Ship Ballistic Missile (ASBM) Development,* 4-5.
[103] Bill Gertz, "Chinese Defense Ministry Confirms Rail-Mobile ICBM Test," December 31, 2015, http://freebeacon.com/national-security/chinese-defense-ministry-confirms-rail-mobile-icbm-test/.

6 on Aegis destroyers and cruisers.[104] China is not subject to any missile control regime, compared to the US which has limited its development of nuclear-armed ground-launched ballistic and cruise missiles under the 1987 Intermediate-Range Nuclear Forces (INF) Treaty.[105] China can and has invested in intermediate-, medium- and short-range missiles—both the DF-21D and DF-26 can be armed with nuclear warheads—which, when operational, can pose significant problems for American deterrence and missile defense.[106] With regards to space, China has invested in anti-satellite (ASAT) systems that can blind the US' heavy reliance on satellite communication in the maritime theatre which would significantly impact US warfighting capabilities, and modern C4ISR capabilities.[107] The PLA has replicated the US' unmanned C4ISR capabilities and Beijing has long identified space technology as a national priority. To assist in this capability, for instance, in February 2016 it launched its new generation satellite, the *Beidou* Navigation Satellite System on its indigenous and most technologically advanced rocket, the Long March 5.[108] Such counter-space capabilities have included investments into direct-ascent anti-satellite missiles, co-orbital anti-satellite systems, computer network operations, ground-based jammers and directed energy weapons.[109]

However, there is much conjecture about whether the Chinese has been able

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[104] Benjamin Schreer, "US Conventional Prompt Strike: Potential Implications for the Asia-Pacific," *RSIS Policy Brief* (Singapore: S. Rajaratnam School of International Studies, June 2015), 10-11.

[105] For more detail see Daryl Kimball and Tom Z. Collina, "US-Russian Nuclear Arms Control Agreements at a Glance," *Arms Control Association*, April 2014, https://www.armscontrol.org/factsheets/USRussiaNuclearAgreementsMarch2010; and Federation of American Scientists, "Intermediate-Range Nuclear Forces [INF]," *FAS: Weapons of Mass Destruction*, http://fas.org/nuke/control/inf/.

[106] Petr Suchy and Bradley A. Thayer, "How to Save the INF Treaty (and Arms Control): Invite China," *Bulletin of the Atomic Scientists,* July 1, 2015, http://thebulletin.org/how-save-inf-treaty-and-arms-control-invite-china8487.

[107] Zachary Keck, "China's Next Super Weapon Revealed: Satellite Destroyers," *The National Interest,* April 15, 2015, http://www.nationalinterest.org/blog/the-buzz/chinas-next-superweapon-revealed-satellite-destroyers-12640.

[108] "China Launches 21st Century Beidou Satellite," *Xinhua,* February 1, 2016, http://news.xinhuanet.com/english/2016-02/01/c_135064994.htm; and "China Conducts Final Tests on Most Powerful Homegrown Rocket," *Space Daily,* February 7, 2016, http://www.spacedaily.com/reports/China_Conducts_Final_Tests_on_Most_Powerful_Homegrown_Rocket_999.html.

[109] Bill Gertz, "China Preps for Space Warfare," *The Washington Times,* December 30, 2015, http://www.washingtontimes.com/news/2015/dec/30/inside-the-ring-china-prep-for-space-warfare/?page=all.

to translate technology into capability and whether these weapons platforms represent quality.[110] It is clear that China's modernization efforts has been broad-based but uneven.[111] Despite the investments in surface combatants and submarines China has been far from developing the integrated combat capabilities of a carrier strike group. The purpose of its first aircraft carrier, the 60,000ton former Soviet *Kuznetsov*-class multi-role, the *Liaoning* has been a "starter carrier" for research, experiment and training purposes for the PLAN.[112] It has been used for the training of personnel, experimenting with new models of planes, and testing the reliability and compatibility of various systems—in order to make the second and subsequent carriers more advanced.[113] In January 2014, China announced that it was building its second aircraft carrier with intentions to build a six-carrier fleet. This would enable the PLAN to keep two vessels ready for sea at all times while sustaining a viable cycle of maintenance, training and sea duty.[114] The second carrier is being domestically developed based on lessons and experience from operating the *Liaoning.* The second carrier encompasses advancements on the propulsion system, the hull and communication systems, as well as being equipped with updated weapons systems such as short-range anti-aircraft missiles. It will also accommodate China's domestically developed J-15 fighter jets, like the *Liaoning.*[115] It apparently will feature a "Short Takeoff But Arrested Recovery" (STOBAR) system, allowing aircraft to generate its own force to launch. The system would be a stepping stone towards the catapult assisted take-off system (CATOBAR).[116] So far, the United States and France are the only two countries that operate CATOBAR-capable

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[110] See Layne, "China's Role in American Grand Strategy," 66-68; Andrew Scobell and Andrew J. Nathan, "China's Overstretched Military," *The Washington Quarterly* 35, no. 4 (2012): 135-148.
[111] O'Rourke, "China's Naval Modernization," 5.
[112] Andrew S. Erickson, Abraham M. Denmark and Gabriel Collins, "Beijing's 'Starter Carrier' and Future Steps," *Naval War College Review* 61, no. 1 (2012): 24.
[113] Zhang Zhouxiang, "Need for Second Aircraft Carrier is Real," *China Daily,* January 5, 2016, http://europe.chinadaily.com.cn/opinion/2016-01/08/content_23001413.htm.
[114] Ben Blanchard, "China Building Second Aircraft Carrier: Reports," *Reuters,* January 18, 2014, http://www.reuters.com/article/2014/01/19/us-china-carrier-idUSBREA0I02C20140119.
[115] "China's 2nd Aircraft Carrier Totally Different from *Liaoning*," *China Daily,* January 3, 2015, http://en.people.cn/n3/2016/0103/c90000-8998430.html; and "Details of China's New Aircraft Carrier Revealed," *The Maritime Executive,* January 3, 2016, http://www.maritime-executive.com/article/details-of-chinas-new-aircraft-carrier-revealed.
[116] "A Look at Progress on a Chinese Aircraft Carrier," *STRATFOR,* June 3, 2016, https://www.stratfor.com/analysis/look-progress-chinese-aircraft-carrier.

carriers.

Whilst the PLAN has maintained the desire to have a nuclear-powered aircraft carrier, such technology remains restricted to its submarine fleet.[117] To assist in the development of this capability, China General Nuclear (CGN) has started to develop China's first floating nuclear plant (ACPR50S), which would be able to travel to different sites and anchor offshore to generate power. The aim is to complete construction by 2020.[118] The ACPR50S had been approved by China's National Development and Reform Commission (NDRS) as part of the 13th Five Year Plan to accelerate technological innovation. The NDRS also urged CGN to launch the construction of the demonstration project to "meet batch development demands for marine nuclear power platforms" so as to "play an important role in the implementation of the strategy of a strong marine power."[119] If such technology is suitable for ship installation after testing and evaluation, it could be incorporated into the design of a ship by 2023-2024, which could lead to a nuclear carrier completed by 2027-2028 and fully operational by 2030.

Another weapons platform that is yet to be transformed into an advanced capability is the PLAN's submarine fleet. China has placed emphasis on modernizing its submarine force as a "critical element of regional deterrence, particularly when conducting "counter-intervention" against a modern adversary."[120] Since the mid-1990s, China has tried to modernize its poorly equipped submarines of the 1980s, acquiring 12 Russian *Kilo*-class conventional attack submarines, and put into service four to five new classes of indigenously built submarines—the *Jin, Shang, Yuan* and *Song*. These have benefited greatly from Russian submarine technology and design know-how.[121] The *Jin*-class are armed with 12 JL-2 nuclear-armed submarine-

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[117] "China's 2nd Aircraft Carrier Totally Different from *Liaoning*."
[118] James Conca, "China Plans a Floating Nuclear Power Plant," *Forbes,* January 18, 2016, http://www.forbes.com/sites/jamesconca/2016/01/18/china-builds-a-floating-nuclear-power-plant/#6de585ca254a.
[119] "CGN's ACPR50S Project Approved by NDRC," China General Nuclear Power Corp Press Release, January 12, 2016, http://en.cgnpc.com.cn/n1017152/n1017227/c1224892/content.html.
[120] O'Rourke, "China's Naval Modernization," 85.
[121] Dennis J. Blasko, "Evaluating Chinese Military Procurement from Russia," *Joint Forces Quarterly* (Autumn/Winter 1997-98): 91-96.

launched ballistic missiles, which potentially could give the PLA its first credible second-strike nuclear capability.[122] However, its SSBNs are far from constituting a sea-based nuclear deterrent, mainly due to its relative detectability which means they are vulnerable to well-developed ASW systems. Currently, its SSNs are well-known to have noisy reactors and poor radiation shielding, and its SSBNs struggle with launching missiles at speeds above 15 knots, leaving them vulnerable to attack (See Figure 4.2).[123] For example, the acoustics render the *Jin*-class too noisy for regular patrol.[124] The PLAN's most quiet submarine, the Type 095 nuclear-powered cruise missile submarines (SSGN)—an advanced variant of the *Shang*-class and the PLAN's third generation SSN—is only likely to be ready for delivery in 2020. Although it would be deployed with China's most advanced supersonic anti-ship missile, the class still would only be on par with 1980s NATO era SSNs with regards to acoustics and sonar—roughly three decades behind American technology, and well behind the US Navy's *Virginia*-class submarines (See Table 4.1).[125] Stealth technology is critical for submarine platforms, as it determines its survivability, and therefore is a prerequisite to the submarine's capability for effective area denial, power projection, and intelligence, surveillance and reconnaissance (ISR).

[122] Hans M. Kristensen, "China's Noisy Nuclear Submarines," *Federation of American Scientists Blog,* November 21, 2009, http://fas.org/blogs/security/2009/11/subnoise/.
[123] "Type 091 Han Class – ChangZeng / Long March," *GlobalSecurity.org,* October 30, 2013, http://www.globalsecurity.org/military/world/china/type-91.htm.
[124] Kristensen, "China's Noisy Nuclear Submarines,"; and US Office of Naval Intelligence, *The People's Liberation Army: A Modern Navy with Chinese Characteristics* (Suitland: Office of Naval Intelligence, August 2009), 21-22.
[125] See Franz-Stefan Gady, "Revealed: China's New 'Carrier Killer' Sub Simulator," *The Diplomat,* May 8, 2015, http://thediplomat.com/2015/05/revealed-chinas-new-carrier-killer-sub-simulator/.

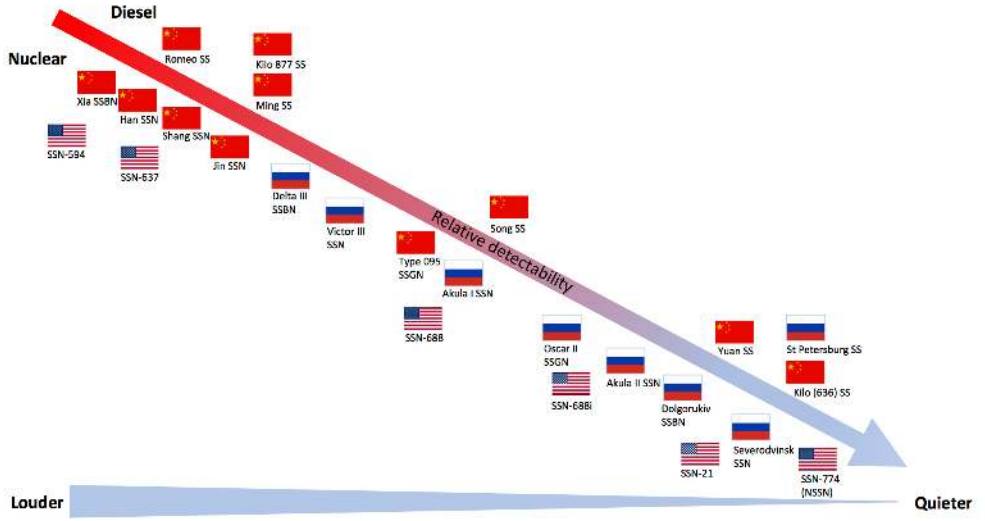

Figure 4.2: Acoustic Quietness of American, Chinese and Russian Nuclear-Powered and Diesel-Powered Submarines[126]

Rank	Submarine source	Decibels
1	Ocean background noise	90
2	SSN-774 (NSSN) *Virginia*-class	95
3	SSN-21 *Seawolf*-class	95
4	SSN *Akula II*-class	105
5	SSN-688i *Los Angeles*-class	105-110
6	SSN *Akula I*-class	110
7	SSGN *Shang*-class (Type 095)	110
8	SSN *Shang*-class (Type 093)	110
9	SSGB *Jin*-class (Type 094)	120

Table 4.1: Decibel Volume of American, Chinese and Russian Nuclear-Powered Submarines Compared to Ocean Background Noise

Additionally, the PLAN's air capability has relied on the re-modeled Russian Su-33 Flankers, the *Shenyang* J-15 or "Flying Shark," which operates off the *Liaoning.* The PLA has made significant investments into indigenously developing its fighter aircraft based on its understanding of its *Sukhois*, particularly the Su-35.[127] In 2010, it debuted the first prototype of a supersonic stealth jet, the *Chengdu* J-20. In January 2016, it was announced

[126] For Figure 4.2 and Table 4.1 see O'Rourke, "China's Naval Modernization," 15-16. Data on American submarine acoustics is based on Gabriel Collins et al, *Chinese Evaluations of the US Navy Submarine Force* (Newport: Naval War College Center for Naval Warfare Studies, 2008); and US Office of Naval Intelligence, *World Submarine Challenges 1996* (Suitland: Office of Naval Intelligence, 1996).

[127] Jesse Sloman and Lauren Dickey, "Why China's Air Force Needs Russia's SU-35," *The Diplomat,* June 1, 2015, http://thediplomat.com/2015/06/why-chinas-air-force-needs-the-su-35/.

that the fighter was close to batch production stage, however, the aircraft's operational capability remains unclear.[128] Only the US has war-ready stealth jets—its first stealth jet entered service in 1983 (the F-117) and the US military is now heavily investing in the fifth-generation F-35 JSF. Whilst it is certain the PLA and PLAN will soon deploy the J-20s, it is still not clear how effectively it will do so.[129]

This uneven military modernization demonstrates that China has faced limitations on a number of technological fronts. These include ASW capabilities. Whilst China is planning a second aircraft carrier and continues to upgrade its anti-ship cruise missiles, it has less than a dozen maritime patrol craft, not enough ships and logistical support to equip a carrier strike group, and its fleet has remained vulnerable to submarine attack.[130] Apart from technological concerns, there have also been questions surrounding the skills and experience of personnel. Reports have indicated that some commanders do not have sufficient experience in joint operation and joint training with multiple services; that the training of command and staff have lagged behind the training of combat units; and that personnel training has not kept pace with its military modernization.[131]

Additionally, whilst the DF-21D has represented a significant improvement in China's modernization of its hardware, the quality and sophistication of its software has remained unproven, particularly with regards to its C4ISR capability. Without a real-time C4ISR integrated network to support the DF-21D and J-20, such platforms are of limited utility during combat. In order to match US capabilities the PLA would need to make significant improvements to its integrated sensors (radar, imagery and underwater acoustics) and

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[128] Yao Jianing, "Expert: China's J-20 Stealth Fighter Close to Batch Production," *China Military Online,* January 8, 2016, http://english.chinamil.com.cn/news-channels/pla-daily-commentary/2016-01/08/content_6850117.htm.
[129] David Axe, "China Assembles its Stealth Jet Fleet," *The Daily Beast,* January 4, 2016, http://www.thedailybeast.com/articles/2016/01/04/china-assembles-its-stealth-jet-fleet.html.
[130] Lyle Goldstein, "Beijing Confronts Long-Standing Weakness in Anti-Submarine Warfare," *The Jamestown Foundation China Brief* 11, no. 14 (2011).
[131] Michael S. Chase and Andrew S. Erickson, "The Conventional Missile Capabilities of the Second Artillery Force: Cornerstone of Deterrence and Warfighting," *Asian Security* 8, no. 2 (2012): 115-137.

satellite communications, and all these surveillance systems would need to be in place and networked to provide a near-real time and real-time Common Operating Picture and Common Intelligence Picture (COP-CIP).[132]

To address these concerns, President Xi announced a major reorganization of the PLA on December 31, 2015, involving the redefinition of the roles, missions, authorities, and relationships between the CMC, the Services and the new joint warfighting commands.[133] At a political level, the military reform reasserted the primacy of the CCP over the military, specifically placing ultimate command authority in the person of the CCP Chairman.[134] At an institutional level, it replaced its seven military regions with five new theater commands—northern, southern, eastern, western and central replacing the Shenyang, Beijing, Jinan, Nanjing, Guangzhou, Chengdu and Lanzhou.[135] Many of the commanders were given theatres far from their original base of power, ensuring no one commander can maintain a network of personal loyalty that supersedes CCP authority.[136] Additionally, the reshuffling was justified as a shift from "regional defense" to "head-on proactive defense," and to "shake off the former 'big army' style and build the joint operational commanding institutions that are more suitable for modern warfare."[137] At an operational level, its strategic nuclear force, the Second Artillery Force, has been rebranded as the PLA Rocket Force (PLARF), with not much change to its objective of maintaining conventional and nuclear abilities to deter and strike.[138] The reform also inaugurated the

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[132] Carlo Kopp, "Advances in PLA C4ISR Capabilities," *Jamestown: China Brief* 10, no. 4 (February 2010), http://www.jamestown.org/programs/chinabrief/single/?tx_ttnews%5Btt_news%5D=36052&cHash=1e3d991d9b#.VrE6l7J97RY.

[133] David M. Finkelstein, "Initial Thoughts on the Reorganization and Reform of the PLA," *Center for Naval Analysis China Studies* (January 2016), 2, https://www.cna.org/CNA_files/PDF/DOP-2016-U-012560-Final.pdf.

[134] "China Releases Guideline on Military Reform," *Global Times,* January 1, 2016, http://www.globaltimes.cn/content/961442.shtml.

[135] "Military Reshuffle Carries Deeper Significance," *Global Times,* February 2, 2016, http://www.globaltimes.cn/content/966856.shtml.

[136] Shannon Tiezzi, "It's Official: China's Military Now Has 5 New Theatre Commands," *The Diplomat,* February 2, 2016, http://thediplomat.com/2016/02/its-official-chinas-military-has-5-new-theater-commands/.

[137] Zhang Tao, "Considerations for Replacing Military Area Commands with Theater Commands," *China Military Online,* February 3, 2016, http://english.chinamil.com.cn/news-channels/2016-02/03/content_6888462.htm.

[138] "Expert: Rocket Force a Core in Strategic Deterrence," *China Daily,* January 3, 2016, http://en.people.cn/n3/2016/0103/c90000-8998454.html; and Zhang Tao, "Expert: PLA

Strategic Support Force, whose aim and role is in counter-space capabilities in order to make the PLA more adept and combative through support in cyber, space and other sophisticated high-tech capabilities and development. [139] That is, a focus on using cyber and information dominance for attack, exploitation and defense via the 2PLA, 3PLA and 4PLA departments.[140]

Disputing Sovereignty in the East and South China Seas

The CCP has placed significant priority on its sovereign and territorial integrity—a rationale that has driven not only modernizing naval and air capabilities but also enhancements to China's maritime constabulary force. China is party to multiple maritime territorial disputes in the Western Pacific:

1. Taiwan and the Taiwan Strait, including the islands of Kinmen, Matsu and Penghu.
2. The Senkaku/Diaoyu Islands in the East China Sea—claimed by China, Taiwan and Japan; but administered by Japan.
3. The Ieodo/Suyan Islands in the East China Sea—claimed by China and South Korea; but administered by South Korea.
4. The Paracel Islands in the South China Sea—claimed by China and Vietnam; but occupied by China.
5. The Spratly Islands in the South China Sea—claimed entirely by China, Taiwan and Vietnam, and partly by the Philippines, Malaysia and Brunei; occupied in part by all these countries except Brunei.
6. Scarborough Shoal in the South China Sea—claimed by China, Taiwan and the Philippines; but controlled by China since 2012.

The CCP's sovereign maritime claims have been a consistent influence on

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Rocket Force May Have Strategic Nuclear Submarine, Bomber," *China Military Online,* January 8, 2016, http://english.chinamil.com.cn/news-channels/pla-daily-commentary/2016-01/08/content_6850119.htm.

[139] "New Combat Support Branch to Play Vital Role," *China Daily,* January 23, 2016, http://www.chinadaily.com.cn/china/2016-01/23/content_23209861.htm; and Yao Jianing, "Expert: PLA Strategic Support Force a Key Force to Win Wars," *China Military Online,* January 6, 2016, http://english.chinamil.com.cn/news-channels/pla-daily-commentary/2016-01/06/content_6846500.htm.

[140] See Bill Gertz, "Chinese Military Revamps Cyber Warfare, Intelligence Forces," *Washington Free Beacon,* January 27, 2016, http://freebeacon.com/national-security/chinese-military-revamps-cyber-warfare-intelligence-forces/.

China's naval modernization. On the one hand, maintaining China's territorial integrity has been intimately linked to the CCP's regime survival, as reflected in its decades-long effort to bring Taiwan under its control. Underlying its claims in the East and South China Sea is a historic narrative, tied closely with the CCP's nationalist rhetoric. China cites records dating back to the Xia (c. 2070 – c. 1600 BC) dynasty, in which China was the first state to discover, name, explore and exploit the Spratly (Nansha) and Paracel (Xisha) Islands. China claims "tropical sea produce such as pearl-carrying shellfish, turtles and hawksbill turtles had been submitted to the imperial court" at this time demonstrates their sovereignty.[141] The seafaring heritage embodied by Zheng He, a Chinese admiral who sailed an armada of treasure ships as far as Africa about 600 years ago, is also celebrated as the face of an era when China projected its power far beyond its own shores.[142] A further significant addition to this historic narrative is the triumph of the Qin state in 221BC to end the Warring States period (475–221BC), and the feting of its ruler as the First Emperor of China, whose totalitarian regime created a centralized state that stretched over much of what China is today. The desire for linkages to unifying moments stretching as far back as the Warring States has enriched the CCP's nationalist aspirations of unity by reclaiming "lost" territories in the East and South China Seas through enhanced military power and prestige.[143] Moreover, American security guarantees to Japan, South Korea, Taiwan and the Philippines have cemented the idea that the West's wrongs against China have never been redressed.[144] For instance, a 1993 Chinese government white paper, *The Taiwan Question and the Reunification of China*, asserted:

> it is clear… that the US Government is responsible for holding up the settlement of the Taiwan Question … One cannot fail to note that there are people in the US who still do not want to see a reunified China. They have cooked up various pretexts and

[141] "Historical Evidence of China's Sovereignty Over the South China Sea', *China Daily,* October 30, 2015, http://www.chinadaily.com.cn/china/2015-10/30/content_22328934.htm.
[142] Zhou Bo, "PLA Navy Ship Serves Civilians, Builds Friendly Ties," *China Daily,* February 10, 2016, http://usa.chinadaily.com.cn/epaper/2016-02/10/content_23446290.htm.
[143] This narrative underpins Beijing's historic title. Beijing also described the result of the South China Sea arbitration case at the Permanent Court of Arbitration, which ruled that China has no historic title over the South China Sea.
[144] Shelley Rigger, *Why Taiwan Matters: Small Island, Global Powerhouse* (Lanham: Rowman & Littlefield, 2011), 173.

exerted influence to obstruct the settlement of the Taiwan question.[145]

On the other hand, control of its "near seas" and "far seas" (See Figure 4.3) has been regarded essential for defending and advancing China's expanding economic and strategic objectives. The strategy of "near seas active defense" was first pronounced by Deng Xiaoping in July 1979 at a conference of the PLAN's Committee Standing Committee.[146] The plan was operationalized in December 1985 by Admiral Liu Huaqing concept of "defend actively, operate in the near seas" with the "first and second island chains" (See Figure 4.3) being important milestones for specific types of current and future naval deployments:[147]

1. By 2000, the PLAN would be capable to exert sea control and dominance out to the first island chain, defined by the Kuril Islands, Japan and the Ryukyu Islands, the Philippines and the Indonesian archipelago.
2. By 2020, sea control would be enforced in the first island chain and sea denial out to the second island chain, as defined by the Kuril Islands, Japan and the Bonin Islands, Palau and the Indonesian archipelagos.
3. By 2050, the PLAN would extend and influence out to the third island chain, and operate globally with aircraft carrier battle groups.[148]

In the late 1990s, the concept of "far seas" operations begun to be advanced with Jiang Zemin stating that while continuing to implement the "near seas active defense" strategy, the PLAN should also "in the long run pay attention to enhancing the far-seas defense and operations capabilities."[149] Hu Jintao

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[145] PRC Taiwan Affairs Office & Information Office of the State Council, *The Taiwan Question and Reunification of China* (Beijing: The People's Republic of China, August 1993), http://www.china.org.cn/english/taiwan/7953.htm.
[146] Deng Xiaoping, "Haijun jianshe yao jiang zhenzheng de zhandouli" [Real Combat Effectiveness Should be Stressed for Navy Construction], in *Deng Xiaoping lun guofang he jundui jianshe* [*Deng Xiaoping on National defense and Army Construction*] (Beijing: Military Science Press, 1992), 63.
[147] Erickson and Wuthnow, "Barriers, Springboards and Benchmarks," 18.
[148] Liu, *Liu Huaqing huiyilu,* 482-485. See also Bernard D. Cole, "Reflections on China's Maritime Strategy: Island Chains and the Classics," *EMC Chair Conference Paper* (Newport: US Naval War College, March 24-26, 2014), 3.
[149] Liu, *Liu Huaqing huiyilu,* 437.

then stressed the need for the PLAN to "make the gradual transition to far-seas defense, enhancing the far-seas maneuvering operations capabilities."[150] Operationally, this meant developing naval capabilities to project power from the Eastern Pacific Ocean to the Indian Ocean—with ports being developed in Sri Lanka (Hambantota), Pakistan (Gwadar) and Djibouti.[151] Such ports are critical for building a line of infrastructure for logistics facilities to resupply PLAN ships, however, the "far seas" concept goes beyond the defense of China and is more connected with demonstrating China's national pride through its naval projection powers. Consequently, Chinese naval modernization has been driven by the dual requirement to shore up the near seas and then move into the far seas—exerting sea control into the first and second island chains, and projecting power into the third island chain.

The 1992 Territorial Sea Law was Beijing's first official pronouncement of its "indisputable sovereignty" over islands in both the East and South China Seas (except for Taiwan, which is covered by China's 1992 "One China" Consensus and the 2005 Anti-Secession Law). Then-President of the PRC, Yang Shangkun, at a meeting of the PLA general staff stated that China needed an aircraft carrier to control the South China Sea, that Beijing would step up espionage to guard against further weapons sales to Taiwan, and it would concentrate further on testing and developing medium-range missiles.[152] As well, the maritime territorial claims are tied to the control of trade routes, fishing grounds, significant oil and gas exploration areas, and many of the disputed territories are and can be used as bases and support locations for military and maritime constabulary forces to support China's naval strategy.[153]

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[150] Hu quoted in Nan Li, "The Evolution of China's Naval Strategy and Capabilities: From 'Near Coast' and 'Near Seas' to 'Far Seas,'" *Asian Security* 5, no. 2 (2009): 160.
[151] See Jeremy Page and Gordon Lubold, "China to Build Naval Hub in Djibouti," *Wall Street Journal,* November 26, 2015, http://www.wsj.com/articles/china-to-build-naval-logistics-facility-in-djibouti-1448557719.
[152] John Kohut, "Yang Reportedly Says Carrier to be Purchased," *South China Morning Post,* December 14, 1992, print edition.
[153] Ronald O'Rourke, "Maritime Territorial and Exclusive Economic Zone (EEZ) Disputes Involving China: Issues for Congress," Congressional Research Service Report R42784 (Washington DC: Library of Congress, December 22, 2015), 2.

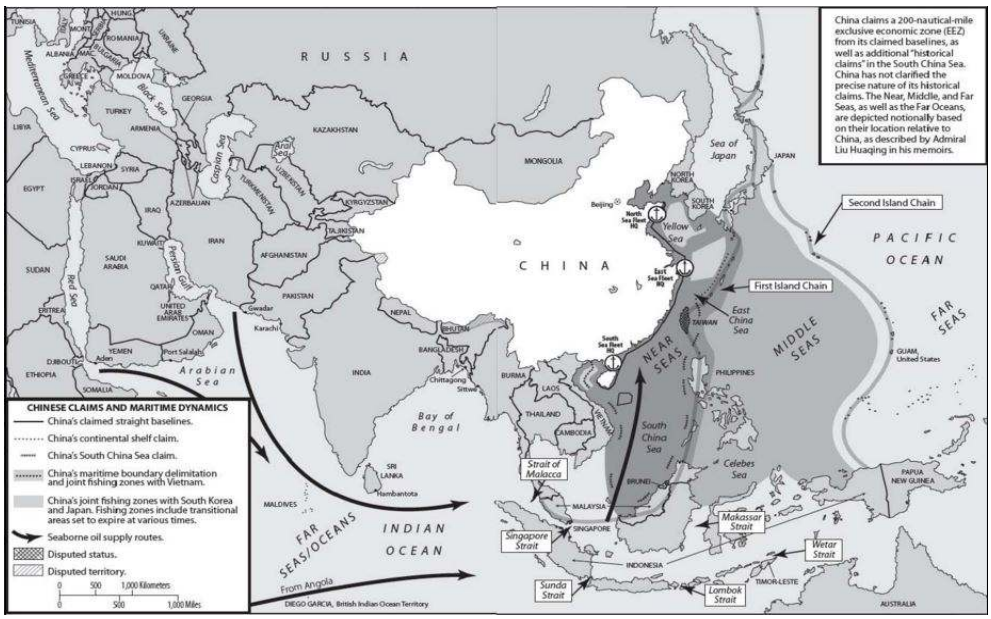

Figure 4.3: "Near Seas" and "Far Seas," and the "First and Second Island Chains"[154]

Critical to the success of such an ambitious naval strategy have been the naval and air capabilities to exert sea control and area denial, which would then uphold the CCP's maritime territorial claims in the East and South China Sea and protect its EEZs from perceived unlawful foreign intervention. For operational bounds this meant the "near seas" strategy would cover the first island chain; the Yellow Sea, East China Sea and South China Sea—that is, the three near seas within the inner rim of the second island chain; and the seas adjacent to the outer rim of the second island chain, as well as those of the north Pacific.[155] Moreover, many of the countries party to China's maritime disputes have formal and informal security guarantees with the United States: Japan, South Korea, Taiwan and the Philippines. As well, relations with Vietnam and Malaysia have fluctuated mainly due to China's incursions into those countries' claimed EEZs.[156] Therefore, as mentioned in the previous section, many requirements of China's military modernization have been influenced by Beijing's desire to deter American intervention in what it considers its "internal affairs."[157] This has led to Chinese naval

[154] Erickson, Denmark and Collins, "Beijing's 'Starter Carrier' and Future Steps," 22-23.
[155] Li, "The Evolution of China's Naval Strategy and Capabilities," 116.
[156] O'Rourke, "Maritime Territorial and Exclusive Economic Zone (EEZ) Disputes Involving China," 22.
[157] See Rigger, *Why Taiwan Matters,* 173; and Zhang Yunbi, "Minister: PLA will Protect Maritime Rights," *China Daily,* August 1, 2016, http://usa.chinadaily.com.cn/epaper/2016-08/01/content_26295830.htm.

modernization being driven by multiple actors (Figure 4.4):

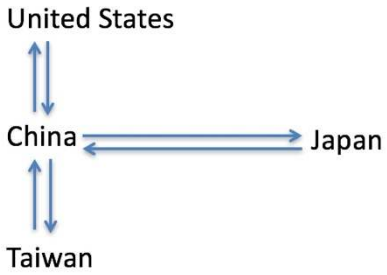

Figure 4.4: Interactive Arming Dynamics vis-à-vis Chinese Military Modernization

Contingency planning for its maritime territorial disputes in both the East and South China Sea has driven investments in cruise and ballistic missiles, airfields, and surface-to-air missile (SAM) systems. The PLA ground forces are being streamlined in favor of investments in the PLAN—euphemistically called "a strategic requirement of being lean and effective."[158] Leaving aside the CCP's concern for regime survival and associated increased expenditure on its internal security structure, after the neglect of the navy under Mao Zedong, the refocused attention instigated by Deng Xiaoping led to invigorated efforts (particularly by Xi Jinping) to build a leaner and meaner navy and air force. Since this reorientation, China's naval modernization program has encompassed a broad array of weapon acquisition programs, including anti-ship ballistic missiles (ASBM), submarines and surface combatants.[159] The PLAN has aimed to accelerate the modernization of its forces for comprehensive offshore operations, and to improve integrated electronic and information systems to enhance command and control. It also aided the development of blue-water capabilities for conducting mobile operations and enhanced its capabilities for strategic deterrence and counterattack. [160]

A particular focus has been the quantitative and qualitative improvements of surface combatants which would also improve air defense capability. This

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[158] PRC Ministry of National Defense, *China's Military Strategy* (Beijing: The State Council Information Office of the People's Republic of China, May 2015), Section 4.
[159] O'Rourke, "China Naval Modernization," Summary.
[160] PRC Ministry of National Defense, *The Diversified Employment of China's Armed Forces,* White Paper (Beijing: Information Office of the State Council, April 2013), http://eng.mod.gov.cn/Database/WhitePapers/index.htm.

would enable the PLAN to deploy independent task groups farther from China's shore in expeditionary operations, as well as build a carrier strike group capability.[161] For example, in 2012 the PLAN launched the *Jiangdao*-class corvette and a new *Houbei*-class patrol boat, both intended for littoral operations. This would allow the more advanced surface combatants to focus on operations farther from China.[162] To assist in supporting logistics, it also fielded the *Qiandaohu*-class replenishment ship which will improve the PLAN's endurance for long-range deployments.[163] The artificial islands in the South China Sea could also potentially be used for C4ISR, particularly if coupled with infrastructure for air and surface search, such as 3D Phased Array Radars, satellite communication dishes for connectivity, ASW aircraft and underwater acoustic sensors. In December 2016, the Asia Maritime Transparency Initiative revealed that China's militarization of the Spratly Islands consisted of anti-aircraft guns, anti-ship point-defense weapon systems (CIWS, close-in weapon systems) and radars.[164] Such systems "would be the last line of defense against cruise missiles launched by the United States or others against these soon-to-be operational air bases. They would back up the defensive umbrella provided by a future deployment to the Spratlys of mobile surface-to-air missile (platforms), such as the HQ-9 deployed to Woody Island in the Paracel Islands, …[and] components for SAM systems have been spotted at the southeastern Chinese port of Jieyang, possibly destined for the South China Sea."[165]

The PLA naval modernization has also been accompanied by the development of China's maritime constabulary force, the Chinese Coast Guard (CCG). CCG vessels send a softer political signal and have lighter armaments than the PLAN, but have been a significant force in reinforcing

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[161] See Heath, "Developments in China's Military Force Projection and Expeditionary Capabilities."
[162] Andrew S. Erickson, "China's Naval Modernization: The Implications of Seapower," *World Politics Review,* September 23, 2014, http://www.worldpoliticsreview.com/articles/14083/chinas-naval-modernization-the-implications-of-seapower.
[163] "AOR Fuchi / Qiandaohu Replenishment Oiler," *GlobalSecurity.org,* 2013, http://www.globalsecurity.org/military/world/china/qiandaohu.htm.
[164] "China's New Spratly Island Defenses," *CSIS Asia Maritime Transparency Initiative,* December 13, 2016, https://amti.csis.org/chinas-new-spratly-island-defenses/.
[165] "China's New Spratly Island Defenses."

China's sovereignty claims particularly around the Senkaku/Diaoyu Islands, and in the Spratly and Paracel Islands in the South China Sea. Such ships have been effective in asserting and defending maritime territorial claims, particularly, in terms of confronting or harassing foreign vessels that are unarmed, such as fishing ships.[166] In 2016, more than 100 ships served the CCG, making it the largest coast guard in the world. China also added a second mega-cutter—a 12,000ton vessel with 76mm rapid fire guns and two anti-aircraft machine guns to complement a 2015 version operating in the East China Sea.[167] The development and use of this force has increased China's capacity to assert and defend its maritime territorial claims. This has led to regional states, such as Vietnam and the Philippines, to create unified Coast Guards and to invest in offshore and littoral patrol and coastal combatants, most which are armed.

Additionally, Beijing has been involved in a dispute, primarily with Washington, over whether China has a right under international law to regulate the activities of foreign military forces operating within China's EEZ.[168] China has asserted its right to regulate foreign military activities within its EEZ, based on the view that it has a right to prevent any activity that directly or indirectly threatens its security or economic interests.[169] Beijing has interpreted this zone as its sovereign territory, even though the PLAN has frequently conducted such operations in other countries' EEZs.[170] This has been contrary to the US' and majority viewpoint that while UNCLOS[171] gives coastal states the right to regulate economic activities

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[166] O'Rourke, "Maritime Territorial and Exclusive Economic Zones (EEZ) Disputes Involving China," 23.
[167] David Tweed, "China's Giant New Coast Guard Ship to Carry Machine Guns, Shells," *Bloomberg Business,* January 12, 2016, http://www.bloomberg.com/news/articles/2016-01-12/china-s-giant-new-coast-guard-ship-to-carry-machine-guns-shells.
[168] Kimberly Hsu and Craig Murray, "China's Expanding Military Operations in Foreign Exclusive Economic Zones," US-China Economic and Security Review Commission Staff Research Backgrounder, June 19, 2013, 1.
[169] US Department of State, "China: Maritime Claims in the South China Sea," *Limits in the Seas No. 143,* Office of Ocean and Polar Affairs, Bureau of Oceans and International Environmental and Scientific Affairs, December 5, 2014, 12.
[170] See Hsu and Murray, "China's Expanding Military Operations in Foreign Exclusive Economic Zones"; O'Rourke, "Maritime Territorial and Exclusive Economic Zone (EEZ) Disputes Involving China"; and Mark J. Valencia, "Foreign Military Activities in Asian EEZs: Conflict Ahead?" *National Bureau of Asian Research Reports* (May 2011).
[171] UNCLOS states that a coastal state is entitled to an exclusive economic zone (EEZ), a 200nm zone extending from its coastline within which that state can exercise jurisdiction to

within their EEZ, it does not give coastal states the right to regulate foreign military activities in the parts of their EEZs beyond their 12nm territorial waters.[172] If China would be able to claim EEZs over inhabitable islands in the East and South China Seas, it could permit China to expand its territorial waters and increasingly regulate foreign military activities. Adding to this, in November 2013, China's defense ministry also unilaterally declared an Air Defense Identification Zone (ADIZ) over two-thirds of the East China Sea, encompassing the contested Senkaku/Diaoyu and Ieodo/Suyan Islands (See Figure 4.5).[173] It claimed the ADIZ covered its EEZ, and asserted that all foreign aircraft abide by identifying their flight plans within the area, and follow instructions from the Chinese military.[174] China's declaration of the zone, without consultation with Japan and South Korea, demonstrated confidence in its capability for air defense over a large maritime area.[175]

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explore and exploit natural resources, but it does not constitute sovereignty. See "Agreement Relating to the Implementation of Part XI of the Convention," *United Nations Convention on the Law of the Sea*, http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm.

[172] O'Rourke, "Maritime Territorial and Exclusive Economic Zone (EEZ) Disputes Involving China," 11.

[173] Jun Osawa, "China's ADIZ over the East China Sea: A 'Great Wall in the Sky'?," *Brookings Institution,* December 17, 2013, https://www.brookings.edu/opinions/chinas-adiz-over-the-east-china-sea-a-great-wall-in-the-sky/.

[174] Zhang Yao and Yao Jianing, "China Establishes East China Sea Air Defense Identification Zone," *China Military Online,* January 8, 2014, http://eng.mod.gov.cn/Photos/2014-01/08/content_4483036.htm.

[175] Zhu Feng, "China's First ADIZ Decision: One Year Later," *CSIS: Asia Maritime Transparency Initiative,* November 25, 2014, https://amti.csis.org/chinas-first-adiz-decision-one-year-later/.

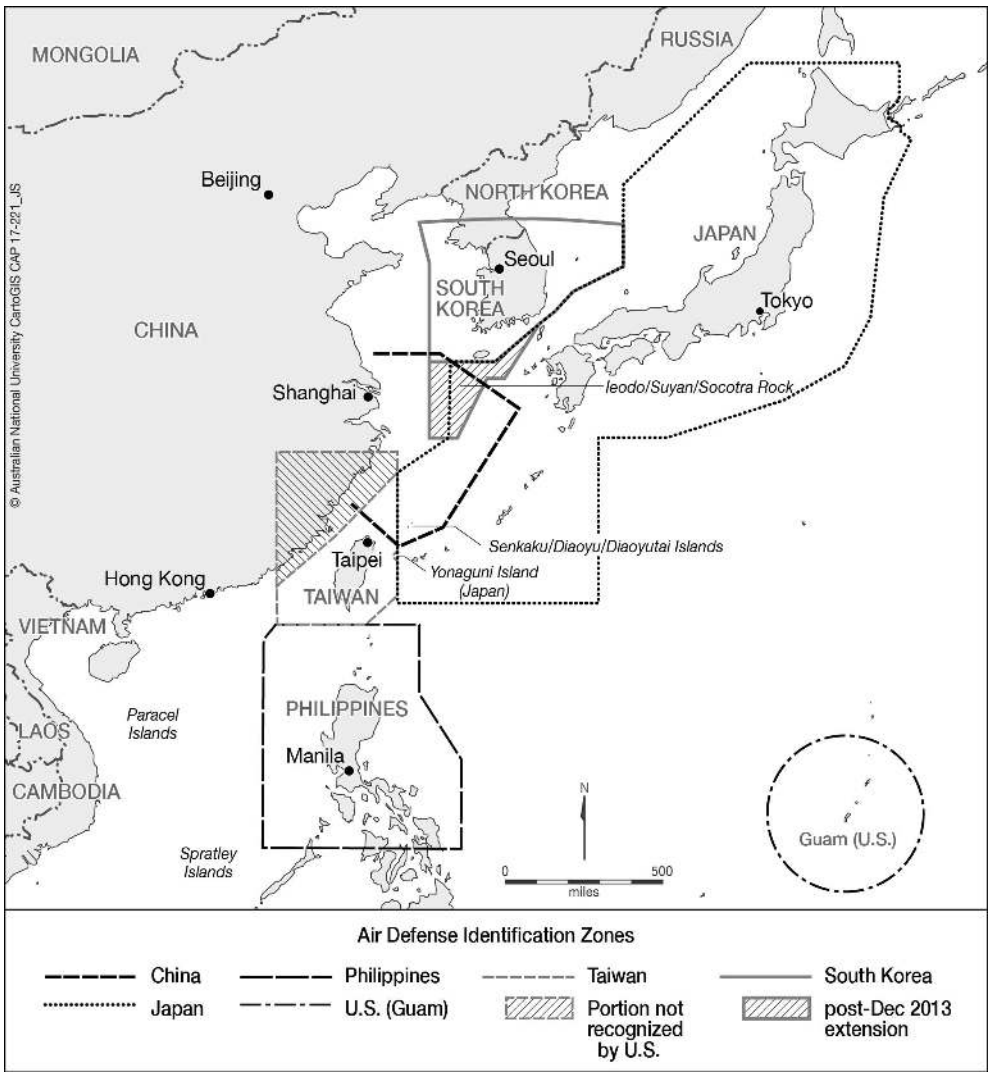

Figure 4.5: Northeast Asian Air Defense Identification Zones[176]

The US Department of Defense referred to an incident where "in August 2014, a Chinese J-11 fighter crossed directly under a US P-8A *Poseidon* operating in the South China Sea approximately 117nm east of Hainan Island. The fighter also performed a barrel roll over the aircraft and passed the nose of the P-8A to show its weapons load-out, further increasing the potential for collision."[177] Yet even if the maritime territorial disputes were resolved and none of China's claims were accepted, the problem would remain as China would continue to apply its concept of EEZ rights to its mainland coastal EEZ. And it is within this EEZ that past US-Chinese incidents at sea have occurred. For instance, in 2001 the US Navy's unarmed hydrographic survey vessel,

[176] CartoGIS, College of Asia and the Pacific, Australian National University.
[177] US Department of Defense, *The Asia-Pacific Maritime Security Strategy: Achieving US National Security Objectives in a Changing Environment* (Washington DC: Department of Defense, August 2015), 14-15.

USNS *Bowditch*, was collecting data in the Yellow Sea when it encountered the PLAN *Jianghu*-III vessel. The *Jianghu*-III forced the *Bowditch* to stop operating in China's EEZ and depart.[178] A week later, a US Navy EP-3 reconnaissance aircraft collided with a PLAN J-8II interceptor aircraft 110km away from Hainan Island, forcing the EP-3 to make an emergency landing and killing the Chinese pilot.[179] Moreover, contrary to its position that no foreign militaries should operate within its EEZ without permission, the PLAN has routinely conducted submarine operation, military survey operations, and surveillance-intelligence collection operations in foreign EEZs throughout the region. Indeed, in 2013 it was revealed that the PLAN had started "reciprocating" the US Navy's habit of sending ships and aircraft into the 200nm zone off China's coast by conducting patrols in the US' EEZ.[180]

Findings

Explanations that utilize traditional "arms race" theories emphasize the bilateral Sino-US relationship. However, China's military modernization also interacts and responds to not only developments in American military modernization, but also its assessments of Taiwan, Japan, and to a lesser extent its Southeast Asian neighbors. As Thomas Mahnken has argued, Chinese reactions to external developments are not simply a "tightly coupled action-reaction arms race" (H2).[181] Potential contingencies, particularly in the Taiwan Strait and the East China Sea, have necessitated not just a response to the US, but also an assessment of capabilities of American partners and allies that encircle China's access to the open seas (H3 and H4). The seriousness of its militarization of its artificial islands in the South China Sea have demonstrated China's willingness to deter major powers (that is, the United States) from interference in what it considers its domestic affairs, and to

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[178] Raul Pedrozo, "Close Encounters at Sea: The USNS *Impeccable* Incident," *Naval War College Review* 62, no. 3 (Summer 2009): 1.
[179] Pedrozo, "Close Encounters at Sea," 1.
[180] Kathrin Hille, "Chinese Navy Begins US Economic Zone Patrols," *Financial Times,* June 2, 2013, http://www.ft.com/intl/cms/s/0/02ce257e-cb4a-11e2-8ff3-00144feab7de.html#axzz3zvRwY99X.
[181] Thomas G. Mahnken, "Conclusion," in *Competitive Strategies for the 21st Century: Theory, History, and Practice,* ed. Thomas G. Mahnken (Stanford: Stanford University Press, 2012), 303.

coerce smaller powers into accepting the change in the South China Sea status quo. The PLA's development of naval and associated air capabilities has been backed by political support and a realignment of its force structure—subtleties not captured by pure "action-reaction" dynamics (H1). This transformation of its capabilities and force structure has been both reactive to its strategic environment, as well as the concerns for national prestige and status. However, such "interactive arming" dynamics, despite the rapid development in the past 15 years, and the opacity of the CCP regime which could cause misperception, has not led to Sino-US competition becoming so intense as to threaten conflict (H6). The following chapter examines China's "peer competitor," the United States in the Western Pacific, explanations for its military modernization, and the influence its capability development has had on the region.

Chapter 5:
The United States in the Western Pacific

Key Impulses

Perceptions of American commitment or introversion and detachment have a clear influence on regional countries shoring up their defense capacities, including purchasing sophisticated weapons platforms. However, America's direct influence on regional military modernization—and possible involvement in any interactive arming dynamics—is not self-evident. The United States retains a global force posture to meet global requirements which requires a continuous process of military modernization. The US has sustained this posture–which entails an aspiration to match or lead all other states across the full spectrum of military capabilities–since the end of World War II. Due to its overwhelming superiority in military capabilities, and for the standards it sets in the technological sophistication of its weapons platforms, the case of the United States demonstrates that the sustainment of military capabilities is a long-term and continual process. Acquisitions of aircraft carriers and fighter aircraft cannot be viewed for example as "sudden increases in defense expenditure that target China," but rather should be viewed as part of a modernization cycle that supports long-term capabilities. For instance, a nuclear-powered aircraft carrier—combined with its supporting escort ships and air wing—is a 50-year capability. An advanced fighter aircraft is an approximately 20-year capability. Upgrades to weapons platforms and the funding of weapons programs certainly intersect with spikes and dips in military expenditure, but these cannot be viewed sensibly in isolation from the overall strategic environment.

Overall, American military modernization has been driven by three key impulses. First, due to its global responsibilities, the US pursues qualitative modernization and military innovation to maintain technological superiority. The US has aspired to be alert to all the possibilities that evolving technology opens up and to make sensible choices about the possibilities that are most consequential for the business of war. The upgrading of platforms and the development of AI and autonomous weapons systems has utility across a full

spectrum of conflict beyond the Western Pacific theatre. However, the Pentagon is aware that its qualitative superiority is being gradually eroded by the PLA's qualitative and quantitative improvements, and that this will have a lasting effect not just on American security commitments to the region, but also its global command of the commons. As opposed to "pork barrel politics," its modernization resembles that of a "bow wave"—post-GFC fiscal prudence is restraining the objectives to continue building ships and adding to American technological superiority.

Third, it aims to preserve the regional status quo that has been conducive to American economic and strategic interests. The recovery of the American economy is dependent on its access to Asian markets and capital. Consequently, it has been vested in maintaining a favorable regional balance of power that allows freedom of navigation, and unrestricted access to Asian markets. Much of this is focused on bolstering the capabilities of partners and allies, for both self-defense and joint operational contingencies. Lastly, the strategic competition between the US and China is driving an intensifying interactive dynamic directed in particular at naval and associated air capabilities. It remains unclear whether the US and China have the long-term wherewithal to sustain such an expensive technological competition. On the one hand, despite China's economic growth remaining stable and its ability to sustain higher defense spending seemingly assured, its capacity to innovate, deploy and operate advanced weapons systems remains an open question. On the other hand, while the US has set the bar for sustained military-technological innovation in the post-WWII era, it remains an open question as to whether bipartisan politics and fiscal dilemmas can sustain the necessary levels of expenditure, particularly given America's global responsibilities.

"Bow Wave" Modernization, not "Pork Barrel" Politics

A key criticism of the US' commitments to the Asia-Pacific has been that its fiscal situation and turbulent acquisition process severely constrains its capacities, qualitatively as well as quantitatively, to sustain forward deployment and an innovative edge in future warfare, and its ability to support partners and allies. However, despite USD487 billion budget cuts mandated over the next ten years by the Budget Control Act of 2011 (BCA),

Washington has assured its allies and partners in the region that its rebalance is real.[1] It reviewed the Defense Guidelines underpinning the alliance with Japan, strengthened its alliances with the ROK and Australia (ANZUS), and signed a 10-year Enhanced Defense Co-operation Agreement (EDCA) in 2014 with the Philippines.[2] However, the political debate over national security and the pressures placed on military expenditure have left persistent doubts in the minds of allies and partners over whether Washington's commitment is credible.[3] These domestic constraints have had the dual effect of, first, increasing the perception of a US decline and thus increasing the chances of misadventure and miscalculation on behalf of Chinese decision-makers. Second, they have increased uncertainty amongst its regional allies and partners of American wherewithal to maintain its focus and commitment. This has led to some regional partners accelerating their modernization programs and aspiring to enhanced self-reliance, as well as acquisitions of American weapons platforms with a view towards interoperability and keeping the US enmeshed in the region. The rising budget deficit, and increasingly volatile relationship between Republicans and Democrats has further damaged the credibility backing the rebalance to Asia. Such factors impact on Washington's ability to remain engaged in the Asia-Pacific and respond to shifts in the balance of power. However, as will be argued, the effects on current American capabilities and effectiveness should not be overstated.

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[1] Data is presented here to demonstrate the global nature of the US military, that is, USPACOM capabilities are often deployed outside its AOR and therefore US capabilities and expenditures cannot be separated regionally. See Amy Belasco, "Defense Spending and the Budget Control Act Limits," Congressional Research Service Report R44039 (Washington DC: Library of Congress, July 22, 2015), 1.

[2] See Andrew Davies et al, "Expanding Alliance: ANZUS Cooperation and Asia-Pacific Security," *ASPI: Strategy* (Barton: Australian Strategic Policy Institute, December 2014); Japan Ministry Of Defense, *The Interim Report on the Revision of the Guidelines of Japan-US Defense Cooperation* (Tokyo: Ministry of Defense, October 8, 2014), http://www.mod.go.jp/e/d_act/anpo/20141008.html; "Document: Enhanced Defense Cooperation Agreement between the Philippines and the United States," Official Gazette of the Republic of the Philippines, April 29, 2014, http://www.gov.ph/2014/04/29/document-enhanced-defense-cooperation-agreement/; and James P. Zumwait, "US-Republic of Korea Alliance," Statement before the House Committee on Foreign Affairs Subcommittee on Asia and the Pacific, Washington DC, June 6, 2012, http://www.state.gov/p/eap/rls/rm/2012/06/191869.htm.

[3] G. John Ikenberry, "Between the Eagle and the Dragon: America, China, and Middle State Strategies in East Asia," *Political Science Quarterly* 131, no. 1 (2016): 9-44; and Van Jackson, "Red Teaming the Rebalance: The Theory and Risks of US Asia Strategy," *Journal of Strategic Studies* 39, no. 3 (2016): 365-388.

The US modernization process is unique in that the American defense industries combine to make the US by far the world's largest arms manufacturer (31 percent share of the global total)[4] and the dominant source of innovation in military technology. For these reasons, the US has been a major influence on the military modernization process in most other countries. The defense industry that emerged from World War II created new political interests particularly in rural and semi-rural areas which became economically reliant on defense-sector jobs and capital, giving legislators representing them powerful incentives to press for ongoing defense spending regardless of national security circumstances or goals.[5] Political factors have had varying degrees of influence on different aspects of US force structure. Under the US Constitution, the armed forces are precluded from playing a role in domestic politics, and national command and control are firmly in the hands of the civilian leadership. Civilian control is most prevalent with regards to US Congress and its decision-making power over defense spending. The Department of Defense (DOD) must justify its funding requests to Congress, and debates over the defense budget and weapons programs are an annual exercise in American politics.[6]

Yet logistics, weapons production and R&D facilities affect large segments of the population, with military contracts clustered in contracting sites on the East and West coasts, the Great Lakes region, and several locations in the South.[7] Legacies of the Cold War, contractual arrangements and employment implications have historically been a significant political barrier to the cancellation of outdated or problem-ridden military modernization programs.[8] Almost every administration in the post-WWII era has attempted to reform the acquisition process to become more effective, efficient, and aligned to meet US' fiscal dilemmas. Therefore, apart from strategic demands, US force structure and its military modernization are also subject to

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[4] "The United States Leads Upward Trend in Arms Exports, Asian and Gulf States Arms Imports Up, Says SIPRI," *SIPRI Blog,* March 16, 2015, http://www.sipri.org/media/pressreleases/2015/at-march-2015.
[5] Rebecca U. Thorpe, *The American Warfare State: The Domestic Politics of Military Spending* (Chicago: University of Chicago Press, 2014), 11.
[6] Weeks and Meconis, *The Armed Forces of the USA in the Asia-Pacific Region,* 2-3.
[7] Thorpe, *The American Warfare State,* 15.
[8] See Eugene Gholz and Harvey M. Sapolsky, "Restructuring the US Defense Industry," *International Security* 24, no. 3 (Winter 1999/2000): 5-51.

Washington's competing fiscal priorities, the domestic politics of electoral votes, jobs and bases, and the defense industry lobby.

However, claims that "pork-barrel" politics are a major determinant—as opposed to operational requirements and force structure—in the US weapons acquisition and modernization cycle are exaggerated, as there are legal and bureaucratic restraints on the defense industry. As well, US economic interests are tied to its security interests, particularly in the Asia-Pacific. Instead of "pork-barreling," US modernization has faced the problem of a "bow wave." Bow wave modernization forms when:

> the overall defense budget declines and modernization programs are delayed or stretched into the future. As this happens the underlying assumption is that funding will become available to cover these deferred costs, often peaking just beyond the five-year planning horizon. The "bow wave" metaphor is appropriate because, much like the bow wave pushed in front of a ship, the modernization bow wave is routinely pushed further into the future with each successive budget cycle as projected funding increases do not materialize as expected.[9]

The emergence of this phenomenon has been a result of several contributing factors: the slow pace of US economy recovery, rising public debt, the extent of the country's war-weariness after operations in Afghanistan and Iraq, and defense sequestration which is constraining the modernization cycle.

Since 2001, the US economy as the market-leader has faced the prospect of an unsustainable debt burden, unprecedented federal budget deficits, huge imbalances in international trade and capital flows and high rates of unemployment.[10] The Global Financial Crisis and consequent recession highlighted the trade-off between "spending to protect against external threats and spending to provide jobs and incomes for citizens at home," and the related question of how much defense spending is appropriate and

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[9] Todd Harrison, *Defense Modernization Plans through the 2020s: Addressing the Bow Wave* (Washington DC: CSIS International Security Program, January 16, 2016), 1.
[10] For a non-partisan analysis of the American budget outlook see, US Congressional Budget Office. "The Budget and Economic Outlook: 2017 to 2027." *CBO Report*, January 24, 2016, https://www.cbo.gov/publication/52370#section1.

necessary.[11] Despite the easing of America's market recession, recent trends are still worrisome. In 2016, the federal budget deficit was predicted to reach USD552 trillion, raising the debt held by the public to 76 percent of GDP. This would be the first increase in budget deficit in relation to the size of the economy since 2009—and this is on the back of federal outlays projected to rise by six percent in the 2016 fiscal year to USD4.2 trillion, or 22.4 percent of GDP.[12] The Congressional Budgetary Office (CBO) predicted that 2016 mandatory outlays would be USD168 billion higher than in 2015, due to the significant investment in Social Services particularly, federal spending on major health care programs and subsidies for health insurance. Expected revenue was only expected to rise by four percent to USD3.4 trillion, and growing trends were expected to push the public debt to 86 percent of GDP by 2026.[13]

Economic constraints are therefore central to discussions of national security. This is due to its impact on the long-term sustainability of America's global force posture and warfighting strategies, which depend greatly on a growing and innovative economy.[14] The 2010 *National Security Strategy* stated that in order to achieve its security objective the United States had to achieve economic growth, reduce the federal budget deficit, pursue science and innovation, and build capabilities and alliances to pursue interests shared with other countries.[15] American fiscal pressures have influenced debates on the funding of defense, the efficacy of the military-industrial base, and the use of its economy as a coercive instrument and as a tool for soft power. Moreover, the reputation of its economy depends on the long-term potential of human capital, science and technology, and innovative capacity—all of which contributes to economic growth and increasing the resource base for

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[11] Dick K. Nanto, "Economics and National Security: Issues and Implications for US Policy," Congressional Research Service Report R41589 (Washington DC: Library of Congress, January 4, 2011), Summary.
[12] "2016 United States Budget Estimate" (White House Office of Management and Budget and Council of Economic Advisers), *Graphiq,* 2016, http://federal-budget.insidegov.com/l/119/2016-Estimate; and
US Congressional Budget Office, "The Budget and Economic Outlook: 2016 to 2026," *CBO Report*, January 25, 2016, https://www.cbo.gov/publication/51129.
[13] US Congressional Budget Office, "The Budget and Economic Outlook: 2016 to 2026."
[14] Nanto, "Economics and National Security," Summary.
[15] President of the United States of America, *National Security Strategy,* (Washington DC: The White House, May 2010), 1.

defense.[16] This relationship of interdependence between economy and security—that the American economy serves as both an enabler of and restraint on its global strategic and political objectives—is true in some form of all countries but its current prominence has been a new phenomenon for the United States.

With the effects of the Global Financial Crisis, the costly wars in Afghanistan and Iraq, and the add-on cost of domestic social welfare programs ("Obamacare"), the US budget has been pushed deeper into deficit. In August 2010, Admiral Mike Mullen, then-Chairman of the Joint Chiefs of Staff, stated that the national debt was the single biggest threat to national security.[17] Under current policies, federal debt—as a consequence of long-term and persistent budget deficits—has been projected to grow to levels that may threaten the government's ability to meet its security obligations. Added to this, the BCA has set limits on the base budget for national defense spending each year from FY2012-FY2021. Each year, if Congress enacts a spending level that exceeds BCA caps for the defense base budget, the President is required to sequester or levy across-the-board cuts to each type of defense spending to meet the BCA caps.[18] In 2013, then-Deputy Secretary of Defense Ashton Carter testified that the Defense department's planned budget had met its target of three-quarters of the savings needed to comply with the BCA.[19] However, the remaining reductions would have serious consequences on the US Navy's rather optimistic goal of a 306-ship fleet by 2020.[20]

Historical experience suggests that the actual costs of current shipbuilding plans will be higher than what DOD's budget forecasts, and here the military modernization cycle again has significance. In the US Navy, a ship may be

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[16] Nanto, "Economics and National Security," Summary.
[17] Geoff Cullen, "Adm. Mike Mullen: Debt is still the Biggest Threat to US Security," *Fortune,* May 10, 2012, http://fortune.com/2012/05/10/adm-mike-mullen-debt-is-still-biggest-threat-to-u-s-security/.
[18] Belasco, "Defense Spending and the Budget Control Act Limits," Summary.
[19] Ashton B. Carter, "President Obama's Fiscal 2016 Budget Request for Defense," Testimony by Deputy Secretary of Defense Ashton B. Carter before Senate Appropriations Committee, Subcommittee on Defense, transcript, Washington DC, May 6, 2013.
[20] US Deputy Chief of Naval Operations, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for FY2015* (Washington DC: Office of the Chief of Naval Operations, June 2004), http://navylive.dodlive.mil/files/2014/07/30-year-shipbuilding-plan1.pdf.

retired before the end of its service life to save money or may be kept beyond that span to maintain a desired force level. The Navy currently assumes a 35- or 40-year service life for its large surface combatants; yet in the past, ships of similar capability were hardly in the fleet for longer than 30 years.[21] The CBO has been quite pessimistic as to how the DOD could achieve its modernization plans within a constrained budget. It argued:

> several areas of DOD's budget have frequently turned out to cost more than originally planned or to increase more rapidly than expected from extrapolation of recent trends. Those areas include the following: costs to develop and purchase weapons systems; compensation costs for military and civilian personnel (including military health care); and operation and maintenance costs."[22]

The Congressional Research Service (CRS) also highlighted the concern with an overall declining budget, in which the BCA caps would reduce defense spending for the base budget by USD1 trillion or about 16 percent over 10 years (until 2021). Historically, procurement accounts have been tapped in order to adjust to overall reductions to protect O&M, which partly funds the readiness of current forces. Procurement is often called the "bill payer" and varies in consonance with overall increases and decreases in total defense expenditure (See Figure 5.1). Faced with reductions, the Pentagon has often delayed weapon system purchases by stretching out programs, purchasing fewer units than planned in the near-term but generally retaining the original acquisition objective or total buy.[23]

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[21] US Congressional Budgetary Office, "An Analysis of the Navy's Fiscal Year 2016 Shipbuilding Plan," *CBO Report*, October 29, 2015, https://www.cbo.gov/publication/50926.
[22] US Congressional Budgetary Office, "Long-Term Implications of the 2016 Future Years Defense Program," CBO Report, January 14, 2016, https://www.cbo.gov/publication/51050.
[23] Belasco, "Defense Spending and the Budget Control Act Limits," 26.

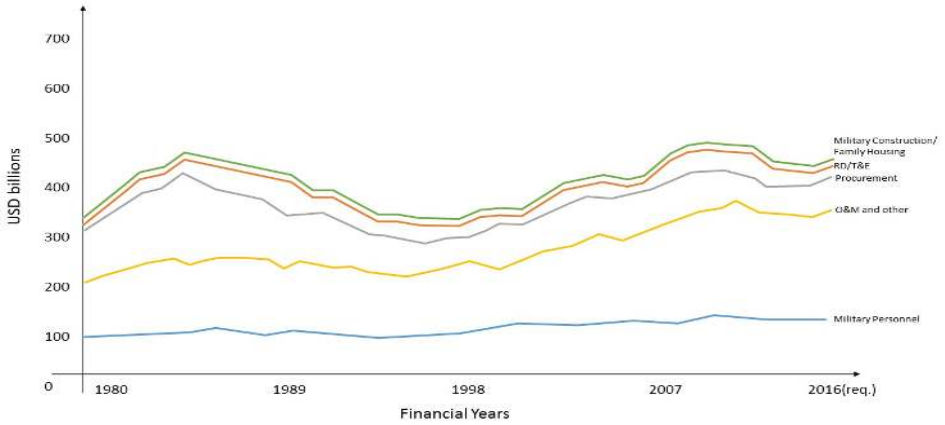

Figure 5.1: Trends in Types of DOD Spending in the Base Budget[24]

The effects have been mainly negative: "stretching out" delays improvements in capabilities and requires services to rely on older systems for longer periods. Small decreases in quantity may yield significant savings in the short-term but have limited effects on overall unit costs if the acquisition objective remains the same. This "stretching out" has also created a bow wave[25]—delays in the original acquisition objective place pressure on overall procurement budgets, with the long-term result of peak production rates for multiple major weapon platforms converging. Defense modernization thus becomes increasingly dependent on significant surges in future funding. The naval and air services have adjusted long-term acquisition objectives in response to budgetary pressures, meaning the modernization of key platforms will coincide.[26] For example, the DOD developed plans to modernize all legs of the nuclear triad (nuclear-capable bombers, intercontinental ballistic missiles and ballistic missile submarines) at the same time, in addition to many other modernization programs for conventional forces.[27]

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[24] Belasco, "Defense Spending and the Budget Control Act Limits," 20.
[25] See Stephen Dagget, "Defense Budget: Long-Term Challenges for FY2005 and Beyond," Congressional Research Service Report RL32877, April 20, 2005; and Todd Harrison, "Defense Modernization Plans through the 2020s: Addressing the Bow Wave," *CSIS International Security Program,* January 16, 2016, https://www.csis.org/analysis/defense-modernization-plans-through-2020s.
[26] See Sandra I. Erwin, "Next Pentagon Procurement 'Bow Wave' Will Be a Tsunami," *National Defense Magazine,* September 2012, http://www.nationaldefensemagazine.org/archive/2012/september/Pages/NextPentagonProcurement%E2%80%98BowWave%E2%80%99WillBeaTsunami.aspx; "Kendall: Current Strategic Forces Modernization Plans Unaffordable without Topline Relief," *Inside Defense*, April 14, 2015, http://insidedefense.com/defensealert/kendall-current-strategic-forces-modernizationplans-unaffordable-without-topline; and Gene H. Porter et al, "Affordability of Defense Acquisition Programs," *Institute for Defense Analyses Paper* P-5243 Redacted (February 2015).
[27] See Harrison, "Defense Modernization Plans Through the 2020s."

Although there is more discretion to adjust the pace of modernization than to make changes to ongoing training and support costs, there has been a widening gap between what the US would like to deploy to the Western Pacific and its ability to do so. While there is no current crisis in US military effectiveness and capabilities,[28] the 2020 objective of deploying 60 percent of the Navy's assets into the region could actually represent a decrease in hull numbers. This is significant, as compared to China's substantial qualitative and quantitative investments, the numbers and level of sophistication of American platforms matter. Particularly in the maritime theatre, the bow wave modernization cannot be pushed into the future indefinitely, as some systems will soon reach their life expectancy. Left unaddressed, force levels might have to be reduced, impacting negatively on overall force structure and capability. For example, the current fleet of *Ohio*-class ballistic missile submarines has already had their service lives extended from 30 to 42 years through Service Life Extension Programs (SLEP), and the Navy has pointed out that it is not practical to extend their lives further due to structural limitations.[29] Indeed, to maintain forward deployed forces for Unified Combatant Commands (COCOM), Navy ship deployment times in recent years have been extended from a limit of seven months, to eight months or more.[30]

Therefore, although it may seem that the US is making large investments in naval platforms, the trends are instead reflective of bow wave modernization. The upfront pressures to find savings has resulted in cuts in procurement

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[28] David Petraeus and Michael O'Hanlon, "The Myth of a US Military 'Readiness' Crisis," *The Wall Street Journal,* August 9, 2016, http://www.wsj.com/article_email/the-myth-of-a-u-s-military-readiness-crisis-1470783221-lMyQjAxMTE2ODE4MDExNDA2Wj. See for example, David Alexander, "US Budget Cuts Erode Crisis Response of Navy, Marines: Officials," *Reuters,* March 10, 2015, http://www.reuters.com/article/us-usa-defense-navy-idUSKBN0M61V520150310; and David Larter, "CNO Warns Budget Cuts will Hurt Morale, Readiness," *NavyTimes,* January 28, 2015, http://www.navytimes.com/story/military/capitol-hill/2015/01/28/greenert-senate-navy-retention-falling/22480849/.

[29] Ronald O'Rourke, "Navy Ohio Replacement (SSBN[X]) Ballistic Missile Submarine Program: Background and Issues for Congress," Congressional Research Service Report R41129 (Washington DC: Library of Congress, April 5, 2016), 2.

[30] Ronald O'Rourke, "Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress," Congressional Research Service Report RL32665 (Washington DC: Library of Congress, January 8, 2016), 4.

budgets as opposed to personnel and O&M budgets. This has converged modernization and acquisition cycles. The funding instability due to BCA budget caps and the potential for cost overruns in some programs has made it more difficult to execute long-term plans and maintain support for capabilities.[31] In November 2013, the then-Chief of Naval Operations, Admiral Jonathan Greenert warned in a statement to the Senate Armed Service Committee that if fiscally constrained the Navy would not be able to increase its presence in the Asia-Pacific. He added that this would largely negate the ship force structure portion of the Pentagon's plan to rebalance to the region.[32] In an October 2015 study, the CBO also warned that the Navy's 2016 shipbuilding plan was 32 percent above the historical average annual funding of USD13.9 billion. Therefore, if funding were to only be at the average level, the Navy's target of 306 ships would be cut short by approximately 70 ships.[33]

This target changed in November 2016, when the US elected Donald J. Trump as President. During his election campaign Trump announced a nationwide ship-building plan harnessing "American workers, American know how, and American materials" to create a 350-ship navy to showcase the "Navy's role as the most effective instrument of American power projection."[34] This would reverse decades of fleet contraction and restore the Navy to a size it last enjoyed in 1998, in a move the Trump administration described as reflective of Reagan's doctrine of "peace through strength."[35] Despite criticizing budget defense sequestration, Trump did not provide details on what kinds of platforms would be acquired, or how to pay for them. To achieve a 350-ship navy would mean increasing acquisitions of USD10 billion *Ford*-class carriers, USD3 billion *Virginia*-class submarines, and USD500 million

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[31] Harrison, "Defense Modernization Plans Through the 2020s," 17.
[32] Jonathon Greenert, "Before the Senate Armed Committee on the Impact of Sequestration on the National Defense," Testimony of the US Navy Chief of Naval Operations Admiral Jonathon Greenert, Washington DC, November 7, 2013, http://www.armed-services.senate.gov/hearings/impact-of-sequestration-on-the-national-defense.
[33] US Congressional Budget Office, "An Analysis of the Navy's Fiscal Year 2016 Shipbuilding Plan."
[34] Alexander Gray, "Memo: Trump Announces Nationwide Ship-building Plan to Create 350 Ship Navy," *Trump Press Releases,* October 21. 2016, https://www.donaldjtrump.com/press-releases/trump-announces-nationwideship-building-plan-to-create-350-ship-navy.
[35] Gray, "Memo."

littoral combat ships, as well as increasing personnel from 330,000 to 350,000.[36] Increasing defense costs would have to be balanced against Trump's wish list of big tax cuts for corporations, increasing infrastructure spending, no cuts to entitlements—all of which would have to pass through Congress.[37] Such plans therefore may or may not eventuate, and it is impossible to gage the regional effects of Trump's proposed policies until they are approved, and well into his administration.

The realistic scenario in the short to medium term remains the development of a 255-260-ship navy, which would still not meet the requirements for the US Navy mission to "Provide a Stabilizing Presence" in the region.[38] Air and missile defense improvements and some undersea capabilities will remain slow, and despite the ability to maintain an effective nuclear deterrent the extent of fiscal changes will mandate force structure capacity limits. Consequently, the underlying question behind such fiscal and political constraints is how many forces the US will be able to forward deploy. At some point, the US Navy will be unable to place more assets in the Asia-Pacific. Conversely, unless there is an unforeseen socio-economic crisis within China, the PLA and PLAN can continue to increase relative to the US Navy, both quantitatively and qualitatively.

The Defense-industrial Base: Innovating to Compete

The defense acquisition process has been transformed not only due to fear of losing American technological superiority to regional adversaries, but also to find more cost-effective weapons platforms to meet both Washington's fiscal dilemmas and strategic requirements.[39] Washington has faced the dual challenge of how to balance defense sequestration with not only maintaining

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[36] David B. Larter, "Donald Trump Wants to Start the Biggest Navy Build-up in Decades," *NavyTimes,* November 15, 2016, https://www.navytimes.com/articles/donald-trumps-navy-bigger-fleet-more-sailors-350-ships.
[37] Larter, "Donald Trump Wants to Start the Biggest Navy Build-up in Decades."
[38] Greenert, "Statement Before the Senate Armed Committee on the Impact of Sequestration on the National Defense," 7-11.
[39] In the 1990s, the RMA literature posited radical changes to maintain the US' technological edge. However, it is highly contested whether the RMA concept gave the US a significant strategic advantage as opponents are constantly adapting, and it was technologically deterministic. See Colin S. Gray, *Strategy for Chaos: Revolutions in Military Affairs and The Evidence of History* (London: Frank Cass, 2002), 45.

its competitive defense industry, but also sustaining capability through training and equipping personnel. Washington has recognized that maintaining its technological sophistication in modern warfare is the most cost-effective way to maintain its competitive edge. This is particularly the case at a time when the distribution of material capabilities in the Western Pacific threatens to gradually change towards a more favorable balance of power for Beijing.[40] Much of the reform of the defense acquisition process has centered on maintaining its military technological superiority and qualitative advantages, which is a key pillar of American primacy in the Asia-Pacific.

Traditionally, the competitiveness of the US military-industrial complex has guaranteed the innovative and technological edge in American capabilities. The desire to innovate and the dual-use (military-civilian) character of such technologies have certainly played a part in American military modernization. Some observers have expressed the view that the supply-side of the acquisition process has a greater influence in driving modernization and acquisition cycles, due to the nature of US electoral politics, lobbying and Congressional funding.[41] Defense industry benefits from the DOD "tick of approval" that guarantees a certain level of capability and often results in the increased capacity to export weapons platforms overseas. Moreover, there have been instances of senators blocking termination of certain weapons programs in their electorates due to a negative effect for defense-industrial jobs, and thus losing electoral votes.[42] The more than USD100 billion industry in exporting aerospace and defense sales is an important source of

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[40] US Under Secretary of Defense for Acquisition, Technology and Logistics, *Performance of the Defense Acquisition System: 2015 Annual Report* (Washington DC: Department of Defense, October 2015), ii.

[41] See Christopher J. Coyne, Courtney Michaluk and Rachel Reese, "Unproductive Entrepreneurship in US Military Contracting" (George Mason University Working Paper in Economics, No. 15-50, September 30, 2015); Ann Marksuen, "Dismantling the Cold War Economy," *World Policy Journal* 9, no. 3 (Summer 1992): 389-399; and Thorpe, *The American Warfare State*

[42] See Stew Magnuson, "Over Army Objections, Industry and Congress Partner to Keep Abrams Tank Production 'Hot,'" *National Defense Magazine,* October 2013, http://www.nationaldefensemagazine.org/archive/2013/October/pages/OverArmyObjections,IndustryandCongressPartnertoKeepAbramsTankProduction%E2%80%98Hot%E2%80%99.aspx; and Loren Thompsn, "Voters Hate Congress, And Sequestration Will Make Them Madder," *Forbes,* July 30, 2013, http://www.forbes.com/sites/lorenthompson/2013/07/30/voters-hate-congress-and-sequestration-will-make-them-even-madder/#5c1acdc752bd.

employment in several Congressional districts. The three largest military companies in the world, Lockheed Martin, Northrop Grumman and Boeing, are American-owned. In 2015, the Defense Security Cooperation Agency (DSCA) handled USD46.6 billion alone in foreign military sales. However, the great bulk of the value of US military sales, production and contracts lie in domestic procurement rather than export.[43]

Therefore, the supply-side influence of determining acquisitions based on jobs and Congressional lobbyists—as opposed to strategic and operational requirements—has generally been exaggerated. A comprehensive reform process of how Washington acquires arms has been ongoing since the 1986 Goldwater-Nichols Act, which sought to address overruns, schedule delays and inability to provide troops in the field with necessary logistics, equipment and weapons.[44] From concept to deployment, a weapon system must go through a three-step process: first, the Joint Capabilities Integration and Development System to identify requirements; second, the Planning, Programming, Budgeting and Execution System to allocate resources and budgeting; and third, the Defense Acquisition System to develop and/or acquire the item.[45] The DOD acquires goods and services from contractors, federal arsenals and shipyards to support military operations. The defense acquisition process has been a persistent Congressional concern. As the 2007 House Armed Service Committee report of the FY Defense Authorization Bill stated:

> Simply put, the Department of Defense (DOD) acquisition process is broken. The ability of the Department to conduct the large scale acquisitions required to ensure

[43] For a detailed breakdown of US arms sales to its domestic market see: "The US defense industry and arms sales," *Stanford University,* https://web.stanford.edu/class/e297a/U.S.%20Defense%20Industry%20and%20Arms%20Sales.htm#_edn50; Joe Gould, Jen Judson and Aaron Mehta, "Pentagon Agency Handled Record Foreign Arms Sales in 2015," *Defense News,* October 18, 2015, http://www.defensenews.com/story/defense/2015/10/18/pentagon-agency-handled-record-foreign-arms-sales-2015/74003606/; and Michael E. O'Hanlon, "Dollars at Work: What Defense Spending Means for the US Economy," *Brookings,* August 19, 2015, https://www.brookings.edu/blog/order-from-chaos/2015/08/19/dollars-at-work-what-defense-spending-means-for-the-u-s-economy/.

[44] Schwartz, "Defense Acquisitions," 14-15. See also Stephen Howard Chadwick, "Defense Acquisition: Overview, Issues, and Options for Congress," Congressional Research Service Report RL34026, (Washington DC: Library of Congress, June 4, 2007).

[45] Schwartz, "Defense Acquisitions," 3.

> our future national security is a concern of the committee. The rising costs and the lengthening schedules of major defense acquisition programs lead to more expensive platforms fielded in fewer numbers. The committee's concern extends to all three key components of the Acquisition process including requirements generation, acquisition and contracting, and financial management.[46]

The acquisition process is highly complex. Although it does not always produce systems that meet estimated cost or performance expectations, on balance it has been markedly successful.[47] The naval acquisition process involves numerous agencies in a complicated network (See Figure 5.2), where requirements are determined by threat assessments (STARs) in the Navy and capabilities assessments (JWCAs) in PACOM, and are budgeted for by the Joint Chiefs of Staff, and not by defense contractors. In the weapons acquisition process, "effective competition" to generate innovation is encouraged through the following process. S&T is conducted by government agencies (NRC and DARPA), and this is then taken to the research and development, and testing and evaluating (RD&TE) phase. Defense contractors use RD&TE information to compete for building demonstrators. Once a company has won a contract and built the test demonstrators, it is not guaranteed it will be awarded contracts for full-scale development and production. Rather, the company that builds the demonstrators must share information with other bidders (such as operational test conditions, performance criteria, life cycle cost factors), and all defense contractors can again bid for development and production contracts. Different parts of a weapons platform—such as, sensors, shooters and the frame—are all put up for tender, and inevitably one platform is a combination of systems by different companies.[48]

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[46] US House of Representatives 109-452, "Report of the Committee on Armed Services, House of Representatives on H.R. 5122," May 5, 2006, 350.
[47] Schwartz, "Defense Acquisitions," 1.
[48] See US Department of Defense, "Subpart 3.4—General," *Federal Acquisition Regulation (FAR),* No. 2005-94, 2005-95, last modified January 19, 2017, https://www.acquisition.gov/?q=browsefar.

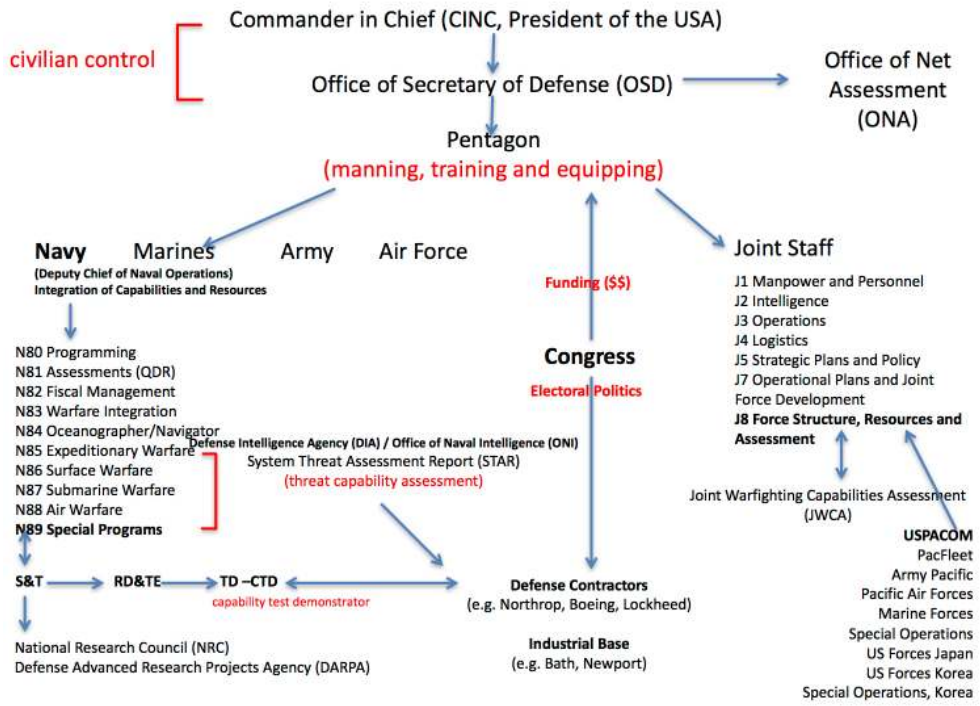

Figure 5.2: The Complex Process of Writing Requirements for US Defense Acquisitions[49]

On top of a comprehensive reform effort, the DOD has sought to end the consolidation of the defense industry (in 1980 there were 51 separate US defense companies which was reduced to four by 2001).[50] In 1998, Lockheed Martin abandoned its attempted acquisition of Northrop Grumman after it became clear that the Department of Justice and the Pentagon would not support such a move based on anti-trust grounds. It further signaled that any further attempts to merge Lockheed Martin, Boeing and Northrop Grumman would be actively discouraged.[51] In 2001, the DOD rejected a proposed acquisition of Newport News by General Dynamics in the interest of competition in the US shipbuilding and nuclear technology arenas.[52]

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[49] Graphic based on US Department of Defense agencies organizational charts.
[50] US Under Secretary of Defense for Acquisition, Technology and Logistics, *Annual Industrial Capabilities Report to Congress* (Washington DC: Department of Defense, October 2002), 40.
[51] See Greg Schneider, "US Sues to Block Lockheed: Antitrust Suit Aims to Halt its Purchase of Northrop Grumman," *The Baltimore Sun,* March 24, 1998, http://articles.baltimoresun.com/1998-03-24/news/1998083086_1_northrop-grumman-lockheed-martin-military-electronics; and Leslie Wayne, "Lockheed Cancels Northrop Merger, Citing US Stand," *The New York Times,* July 17, 1998, http://www.nytimes.com/1998/07/17/business/lockheed-cancels-northrop-merger-citing-us-stand.html.
[52] Kenneth N. Gilpin, "US Moves to Block General Dynamics Bid for Shipbuilder," *The New York Times,* October 24, 2001, http://www.nytimes.com/2001/10/24/business/us-moves-to-block-general-dynamics-bid-for-shipbuilder.html; and Andy Pasztor, "General Dynamics Seeks Other Targets After Block of Newport News Acquisition," *The Wall Street Journal,* April 15, 1999, http://www.wsj.com/articles/SB924127457763159696.

Since Goldwater-Nichols, reforms of the defense acquisition process have been ongoing, and have overshadowed the organic process of innovating and acquiring defense technologies that has resulted in platforms, such as MIRV, stealth and energy-directed weapons. Indeed, the DOD has repeatedly attempted to focus attention on arresting the decline of American qualitative superiority vis-à-vis the increasing qualitative and quantitative capabilities of the PLA. As the 2015 DOD report on Defense Acquisitions Systems stated:

> Beyond these operational acquisition questions, there is evidence that we have been pursuing less complex systems with about the same or less risk since 2009. This aligns with my concern that in some areas we may not be pushing the state-of-the-art enough in terms of technical performance. This endangers our military technical superiority. In my view our product pipeline is not as robust as it should be in a time when our technological superiority is being seriously challenged by potential adversaries. … The broader challenge of adapting to threats while fielding warfighting capabilities is intertwined and concurrent with defense acquisition. Simply delivering what was initially required on cost and schedule can lead to failure in achieving our evolving national security mission—the reason defense acquisition exists in the first place.[53]

Aware of the increasing diffusion of sophisticated technologies and capabilities particularly in the Asia-Pacific, in 2010, the then-Under Secretary of Defense Ashton Carter initiated the first iteration of *Better Buying Power* to increase the productivity, efficiency, and effectiveness of the DOD's acquisition, technology and logistics efforts. In its third iteration, *Better Buying Power 3.0* recognized:

> the technological superiority of the United States is now being challenged by potential adversaries in ways not seen since the Cold War. Efficiency and productivity are always important, but the military capability that [the DOD] provides to [its] Warfighters is paramount. [The US'] operational effectiveness is based on the quality of [its] people and the quality of [its] products. The former is not in doubt; the latter depends on [DOD] efforts and those of the industrial base.[54]

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[53] US Under Secretary of Defense for Acquisition, Technology and Logistics, *Performance of the Defense Acquisition System: 2015 Annual Report*, iv.
[54] US Under Secretary of Defense Frank Kendall, "Implementation Directive for Better Buying Power 3.0 – Achieving Dominant Capabilities through Technical Excellence and

There have been three key efforts to preserve US military superiority. First, the 2012 establishment of the Strategic Capabilities Office (SCO) to "re-imagine existing DOD and intelligence community and commercial systems by giving them new roles and game-changing capabilities to confound potential enemies."[55] Second, in 2014 the Defense Innovation Initiative was created to help arrest and reverse an assessed decline in the US military's technological and qualitative edge.[56] Lastly, also announced in 2014, the *Third Offset Strategy* was launched. Its primary objective is maintaining US superiority over opposing armed forces that are both numerically large and armed with precision-guided weapons.[57] As part of the *Third Offset Strategy* and on top of the Defense Innovation Initiative, the Pentagon created the Defense Information Unit Experimental in 2015 to help leverage lessons from

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Innovation," Memorandum for Secretaries of the Military Departments and other DOD Officials, US Department of Defense: Acquisition, Technology and Logistics, Washington DC, April 9, 2015.

[55] See Colin Clark and Sydney J. Freedberg Jr., "Robot Boats, Smart Guns & Super B-52s: Carter's Strategic Capabilities Office," *Breaking Defense,* February 5, 2016, http://breakingdefense.com/2016/02/carters-strategic-capabilities-office-arsenal-plane-missile-defense-gun/; Sam LaGrone, "Little Known Pentagon Office Key to US Military Competition with China, Russia," *USNI News,* February 2, 2016, https://news.usni.org/2016/02/02/little-known-pentagon-office-key-to-u-s-military-competition-with-china-russia; Dan Lamothe, "Veil of Secrecy Lifted on Pentagon Office Planning 'Avatar' Fighters and Frone Swarms," *The Washington Post,* March 8, 2016, https://www.washingtonpost.com/news/checkpoint/wp/2016/03/08/inside-the-secretive-pentagon-office-planning-skyborg-fighters-and-drone-swarms/; Cheryl Pellerin, "DoD Strategic Capabilities Office Gives Deployed Military Systems New Tricks," *DOD News,* April 4, 2016, http://www.defense.gov/News-Article-View/Article/712938/dod-strategic-capabilities-office-gives-deployed-military-systems-new-tricks; and "Remarks by Secretary Ashton B. Carter on the Budget at the Economic Club of Washington DC," February 2, 2016, http://www.defense.gov/News/News-Transcripts/Transcript-View/Article/648901/remarks-by-secretary-carter-on-the-budget-at-the-economic-club-of-washington-dc/.

[56] See "Memorandum from Secretary of Defense Chuck Hagel to the Deputy Secretary of Defense and other DOD recipients on the Defense Innovation Initiative," November 15, 2014, http://www.defense.gov/Portals/1/Documents/pubs/OSD013411-14.pdf; Cheryl Pellerin, "Hagel Announces New Defense Innovation, Reform Efforts," *DOD News,* November 15, 2014, http://www.defense.gov/News-Article-View/Article/603658; and Jake Richmond, "Work Explains Strategy Behind Innovation Initiative," *DOD News,* November 24, 2014, http://www.defense.gov/News-Article-View/Article/603717/work-explains-strategy-behind-innovation-initiative.

[57] Robert Martinage, *Toward a New Offset Strategy: Exploiting US Long-Term Advantages to Restore US Global Power Projection Capability* (Washington DC: Center for Strategic and Budgetary Assessments, 2014); Aaron Mehta, "Work Outlines Key Steps in Third Offset Tech Development," *Defense News,* December 14, 2015, http://www.defensenews.com/story/defense/innovation/2015/12/14/work-third-offset-tech-development-pentagon-russia/77283732/; and See US Deputy Secretary of Defense Bob Work, "Deputy Secretary of Defense Speech: The Third US Offset Strategy and its Implications for Partners and Allies," Speech at Willard Hotel, Washington DC, January 28, 2015, http://www.defense.gov/News/Speeches/Speech-View/Article/606641/the-third-us-offset-strategy-and-its-implications-for-partners-and-allies.

Silicon Valley on issues like big data, analytics, autonomy and robotics.[58] Compared to the 1970s, when Pentagon programs drove innovative technological developments, much innovation has been driven in recent times by business and many dual-use capabilities that have had their origins in the commercial sectors.[59] To meet operational requirements as well as fiscal demands, the Pentagon has focused on artificial intelligence and autonomous systems—less a weapons platform and more a "general purpose technology"[60] which has a broad applicability across the full range of platforms and systems used by the US military and intelligence agencies.[61] The five key technologies identified by the Pentagon in the *Third Offset Strategy* are:

1. Learning machines;
2. Human-machine collaboration (using advanced computers and visualization to help people make faster, better and more relevant decisions);
3. Assisted human operations (which means plugging every pilot, soldier, sailor and Marine into the battle network);
4. Human-machine combat teaming (creating new ways for manned and unmanned platforms to operate); and
5. Network-enabled autonomous weapons (all connected on a learning command, control, communications and intelligence [C3I] network).[62]

These systems are designed to counter China's investments in systems, doctrine and asymmetric capabilities that match or counter US capabilities.[63]

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[58] Cheryl Pellerin, "DoD's Silicon Valley Innovation Experiment Begins," *DOD News,* October 29, 2015, http://www.defense.gov/News-Article-View/Article/626602/dods-silicon-valley-innovation-experiment-begins.
[59] IISS, *The Military Balance 2016,* 2.
[60] Timothy F. Bresnahan and Manuel Trajtenberg, "General Purpose Technologies: 'Engines of Growth?'" *Journal of Econometrics* 65, no. 1 (January 1995): 83-108.
[61] Peter Dombrowski, "Third Offset Strategy and Arms Racing in Asia" (Arms Racing in Asia: The Naval Dimension, RSIS Maritime Security Programme-Military Transformation Programme Workshop, November 18, 2016, Singapore).
[62] Cheryl Pellerin, "Deputy Secretary Discusses Third Offset, First Organizational Construct," *DoD News, Defense Media Activity,* September 21, 2016, https://www.defense.gov/News/Article/Article/951689/deputy-secretary-discusses-third-offset-first-organizational-construct.
[63] Peter Dombrowski, "America's Third Offset Strategy: New Military Technologies and Implications for the Asia Pacific," *RSIS Policy Report* (June 2015), 8.

The technologies identified for development reflect that the "most dangerous, if not most likely, potential adversaries for high-end combat with the United States will exploit American reliance on integrated military systems,"[64] in particular disrupting American C4ISR networks.[65]

The Asia-Pacific Rebalance

Washington's 2014 Quadrennial Defense Review (QDR) stated that the "United States has been a Pacific power for more than a century, with deep and enduring economic and security ties to the region … [and] the Asia-Pacific region is increasingly central to global commerce, politics, and security."[66] The Asia-Pacific is the US's largest regional trading area, both as a supplier of American imports and export market.[67] In 2015, US exports to Asia totaled USD458 billion, while imports were worth USD1 trillion.[68] The region's SLOCs are vital to American commercial interests: about a third of the world's shipping passes through Southeast Asian SLOCs in the Indonesian archipelago and the South China Sea, and the Malacca Strait serves as the primary link between the Indian and Pacific Oceans.[69]

Washington's presence in Asia has been underpinned by the "San Francisco System," a comprehensive structure of interrelated political-military and economic commitments between the US and its Pacific allies that was catalyzed by the San Francisco Peace Treaty process of 1950-51 with Japan.[70] Some elements such as the US alliance with Australia (ANZUS) of July 1951[71] and the US-Philippine Mutual Security Treaty of August 1951 were

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[64] Dombrowski, "America's Third Offset Strategy," 7.
[65] Martinage, *Toward a New Offset Strategy,* 34.
[66] US Department of Defense, *Quadrennial Defense Review 2014* (Washington DC: Department of Defense, 2014), 4.
[67] Marcus Noland, "American Economic Relations with Asia," *Asian Economic Policy Review* 4 (2009): 181-199.
[68] US Census Bureau, "Trade in Goods with Asia," 2016, https://www.census.gov/foreign-trade/balance/c0016.html.
[69] John Bradford, "US Strategic Interest and Cooperative Activities in Maritime Southeast Asia," *Maritime Security in Southeast Asia: US, Japanese, Regional, and Industry Strategies,* NBR Special Report No. 24 (November 2010), 20.
[70] Kent E. Calder, "Securing Security through Prosperity: the San Francisco System in Comparative Perspective," *The Pacific Review* 17, no. 1 (March 2004): 135.
[71] The original ANZUS treaty included New Zealand, however, left in 1985 after Wellington opposed American nuclear ship visits. See Amy L. Catalinac, "Why New Zealand Took Itself out of ANZUS: Observing 'Opposition for Autonomy' in Asymmetric Alliances," *Foreign Policy Analysis* 6 (2010): 317-388.

originally conceived as reassurance for their allies' uneasiness with the potential for a re-emergence of a militarized Japan. The mutual security treaties with South Korea (1953) and Taiwan (1955), South Vietnam (1956) and Thailand (1966) came in the wake of San Francisco, expanding the system's logic more broadly throughout the Western Pacific.[72] Since then, despite the termination of Washington's treaty with Taiwan in 1980, the US has maintained an informal security guarantee with Taiwan through the 1979 Taiwan Relations Act (TRA).[73] At present, the US possesses the most powerful naval and air forces in the Western Pacific through USPACOM. It has also maintained the highest defense outlay worldwide, spending USD597.5 billion in FY2015—almost four times higher than that of China in second-place at USD145.8 billion.[74] The significance of American naval power to its economic and strategic interests is enshrined in the first article of the US Constitution which commands the government to "provide and maintain a Navy."[75] Moreover, Washington has been not only a critical actor in the region but also a key influence on the region's military modernization and acquisition programs.

Washington has faced an enduring Cold War legacy challenge of a major drawdown in forces to reduce its military footprint, as well as how to streamline its defense strategy and force structure to address the harsh fiscal realities imposed by the Global Financial Crisis.[76] However, despite these challenges, the demands arising from China's military modernization has resulted in the US focusing on the "strategic rebalance"[77] to Asia as a way to reassure regional allies and partners about America's ongoing defense commitment.[78] In 2011, Washington announced that it would move 60 percent of the US Navy to the Pacific by 2020. This goal meant that some of

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[72] Calder, "Securing Security through Prosperity," 136.
[73] See Steven M. Goldstein and Randall Schriver, "An Uncertain Relationship: The United States, Taiwan, and the Taiwan Relations Act," *The China Quarterly* 165 (March 2001): 141-172.
[74] Based on figures from *The Military Balance 2016*, 19.
[75] US Constitution, "US Constitution – Article 1 Section 8," http://www.usconstitution.net/xconst_A1Sec8.html.
[76] Stanley B. Weeks and Charles A. Meconis, *The Armed Forces of the USA in the Asia-Pacific Region,* The Armed Forces of Asia Series (St. Leonards: Allen & Unwin, 1999), 2.
[77] Hilary Clinton, "America's Pacific Century," *Foreign Policy,* October 11, 2011, http://foreignpolicy.com/2011/10/11/americas-pacific-century/.
[78] US Department of Defense, *Quadrennial Defense Review,* viii.

its most advanced naval and air platforms have already been forward-deployed or assigned to the region. This has included six aircraft carriers, the majority of its surface combatants, including *Aegis*-equipped destroyers (including the new *Zumwalt*-destroyer), F-22 *Raptors* combat aircraft and *Virginia*-class submarines.[79]

America's Asia-Pacific defense policy and strategy have been the subject of extensive debate since the end of the Cold War.[80] This debate has rested on how to prioritize Washington's global commitments, and the resulting US' waxing and waning relationship with regional states. Amongst regional states this has created mixed feelings and experiences of intense involvement, unwelcomed intrusion into Asian security matters, and sometimes even pronounced disengagement.[81] Such fluctuations have impacted the credibility of Washington's commitments and resolve, and thus regional states have become particularly sensitive to any incremental change to Washington's force structure, declaratory policy and military strategy.

American military preponderance has been based on global "command of the commons," which includes the Asia-Pacific. The US has had a unique set of assets to sustain this commanding position: a large scientific and industrial base; the specific mix of military systems accumulated over the past decades of procurement; the ability to coordinate the production of new weapons systems; and the skills and associated technological infrastructure to effectively employ these weapons in a coordinated manner.[82] US Cold War military expenditure consistently exceeded the expenditure of the world's other major military powers combined—most of which were US allies. During the Cold War, its main forward presence was concentrated on the

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[79] Benjamin Schreer, "The United States' Evolving Regional Military Posture," in *IISS Asia-Pacific Regional Assessment 2015: Key Developments and Trends* (London: IISS, 2015), 9.
[80] See Barry R. Posen and Andrew L. Ross, "Competing Visions for US Grand Strategy," *International Security* 21, no. 3 (Winter 1996/1997): 5-53.
[81] Robert G. Sutter, *The United States and Asia: Regional Dynamics and Twenty-First Century Relations* (Lanham: Rowman & Littlefield, 2015), 3.
[82] Stephen G. Brooks and William C. Wohlforth, "The Rise and Fall of the Great Powers in the Twenty-first Century: China's Rise and the Fate of America's Global Position," *International Security* 40, no. 3 (Winter 2015/16): 34; and Barry Posen, "Command of the Commons: The Military Foundation of US Hegemony," *International Security* 28, no. 1 (Summer 2003): 10.

European theatre in the context of NATO. However, the US also maintained a large presence in the Asia-Pacific. In the post-Cold War era, the largest concentrations of its forward deployed forces remain in this region, primarily in Japan and South Korea.

Currently, the US operates the largest navy, air force and second largest air force (the naval air-wing) in the Asia-Pacific, and its military strength is the overriding contributor to American regional preponderance.[83] These forces are mainly operated through USPACOM, which has five carrier strike groups at its disposal, with one forward deployed in Japan. It commands approximately 200 ships, 2,000 aircraft and 330,000 military and civilian personnel. It has an area of responsibility that covers 36 countries—five of which are treaty allies—reaching from Alaska to Madagascar, and from India to the South Pacific. [84] To support the 100,000 forward deployed forces, it has bases in Japan, South Korea, Guam and Hawaii with additional support provided from the continental United States (California, Alaska, Washington and Arizona). In addition, it has several access agreements, a policy known as "places not bases."[85] For instance, Changi Naval Base in Singapore is the only location in the Western Pacific which can service the largest versions of US aircraft carriers (or "super carriers").[86] From 2013, Singapore also agreed to host up to four US Navy Littoral Combat Ships (LCS).[87] A rotational deployment of US Marines has started in Darwin, Australia, with a full contingent of up to 2,500 planned by 2020, pending upgrades to installations. Further access agreements for naval and air forces are in place with Thailand,

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[83] Service components include US Pacific Fleet, US Army Pacific, US Pacific Air Force and US Marine Forces Pacific; and it also has subordinate unified commands including US Forces Japan, US Forces Korea and Special Operations Korea.
[84] For a brief history see, Andrew Feickert, "The Unified Command Plan and Combatant Commands: Background and Issues for Congress," Congressional Research Service Report R42077 (Washington DC: Library of Congress, January 3, 2013), 47-51.
[85] Michael W. Pietrucha, "Making Places, Not Bases a Reality," *US Naval Institute Proceedings Magazine* 141/10/1, no. 352 (October 2015), http://www.usni.org/magazines/proceedings/2015-10/making-places-not-bases-reality.
[86] "Changi Naval Base, Changi East, Singapore," *naval-technology.com*, 2016, http://www.naval-technology.com/projects/changi-naval-base/.
[87] Singapore Ministry of Defense, "Fact Sheet: Frequently Asked Questions – Deployment of the Littoral Combat Ship to Singapore," *MINDEF Singapore: Offical Releases,* March 12, 2013, https://www.mindef.gov.sg/imindef/press_room/official_releases/sp/2013/12mar13_speech/12mar13_fs.html.

Philippines, Malaysia and Indonesia.[88] As well, in 2015 the US had forward deployed 14 SSBNs, four SSGNs and 59 SSNs.[89] Efforts have also been underway to enhance the flexibility of American forces in Asia. The combination of weaponry, training, operational experience and the ability to rapidly deploy additional forces from the continental United States makes US forces the most powerful force in the region and beyond.[90] No other county in the world can operate, sustain and secure a global command and control structure, specifically with regards to C4ISR.

However, Washington's focus has increasingly shifted towards the emerging peer competition with China[91] and rebalancing to the Western-Pacific.[92] The 2006 QDR stated the need to address "near peer competitors" and went on to predict that "of the major and emerging powers, China has the greatest potential to compete militarily with the United States and field disruptive military technologies that could over time offset traditional US military advantages absent US counter strategies."[93] On the one hand, it can be argued that upgrading platforms has utility across a full spectrum of conflict beyond the Western Pacific theatre. On the other hand, current modernization has focused on the requirements for its rebalance to the Asia-Pacific, interoperability of its forces with allies, and maintaining high levels of its capability through the "manning, training and equipping" of its personnel.[94] The overarching economic and geostrategic importance of the Asia-Pacific has meant that Washington has aimed to maintain a balance of power that prevents the rise of any regional hegemonic state that could threaten US interests by seeking to obstruct American access or dominate the maritime theatre. Its leading edge in naval and associated air capability has been a key determinant in maintaining regional stability through its provision of

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[88] Weeks and Maconis, *The Armed Forces of the USA in the Asia-Pacific Region,* 82-98.
[89] USPACOM, "Headquarters, United States Pacific Command," *US Pacific Command,* 2015, http://www.pacom.mil/AboutUSPACOM.aspx.
[90] Bruce Vaughn, "US Strategic and Defense Relationships in the Asia-Pacific Region," Congressional Research Report RL33821 (Washington DC: Library of Congress, January 22, 2007), 10-11.
[91] See Thomas J. Christensen, "Posing Problems without Catching Up: China's Rise and Challenges for US Security Policy," *International Security* 25, no. 4 (Spring 2001): 5.
[92] US Department of Defense, *Quadrennial Defense Review 2014,* viii.
[93] US Department of Defense, *Quadrennial Defense Review 2006* (Washington DC: Department of Defense), vi, 29.
[94] IISS, *The Military Balance 2016,* 6.

extended deterrence to and reassurance of its allies and partners.

Earlier traces of Washington's re-alignment to the Western Pacific began in the mid-1990s. In 1995, Bill Clinton's administration published the third iteration of the *East Asian Strategy Report*, dubbed the *Nye Report* after its author, Joseph S. Nye, then-Assistant Secretary of Defense for International Security Affairs.[95] The *Nye Report* outlined a four-part strategy: "(i) maintain the forward presence of American troops; (ii) try to develop multilateral institutions as reinforcing mechanisms; (iii) put [US] alliances, particularly with Japan, on a firm basis after the Cold War; and (iv) from that position of strength, encourage China to define its interests in ways that could be compatible with ours."[96] This report was distinct in that it was the first report to highlight "continuing areas of uncertainty and tension" and the requirement to reaffirm American security commitments to the region.[97] For instance, the Third Taiwan Straits Crisis (1995-1996) was a practical demonstration of friction between Washington and Beijing—it signaled US resolve to use force, and the limited Chinese capacity to prevent interference in what it considers "domestic affairs." The 1998 *East Asian Strategy Report* reaffirmed its commitment to maintain a military presence of "approximately 100,000 in the region, while harnessing new technology to retain our lead in capabilities."[98] The Clinton administration also decided to forward deploy two SSNs and homeport them in Guam by 2002, essentially re-establishing Guam as a strategic location.[99] This silent "pivot before the pivot" reflected Washington's caution over Chinese intentions and the George W. Bush's

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[95] The first two reports of 1990 and 1992 broadly outlined changes the US would make in strategy and force structure in response to the end of the Cold War. See US Secretary of Defense, *The United States Security Strategy for the East Asia-Pacific Region [East Asian Strategy Report]* (Washington DC: Department of Defense 1998), 5.
[96] Joseph S. Nye, "The Nye Report: Six Years Later," *International Relations of the Asia-Pacific* 1, no. 1 (2001): 98.
[97] US Secretary of Defense, "The United States Security Strategy for the East Asia-Pacific Region," 5.
[98] US Secretary of Defense, "The United States Security Strategy for the East Asia-Pacific Region," 6.
[99] Ron Huisken, "The Outlook for US-China Relations," in *Rising China: Power and Reassurance,* ed. Ron Huisken (Canberra: ANU Press, 2009), 14; and Andrew S. Erickson and Justin D. Mikolay, "Guam and American Security in the Pacific," in *Rebalancing the Force: Basing and Forward Presence in the Asia-Pacific,* ed. Carnes Lord and Andrew S. Erickson (Annapolis: Naval Institute Press, 2014), Google e-book, Introduction.

administration's deliberate decision to avoid antagonizing Beijing.[100]

By the late 2000s, growing concerns over China's military and economic advancements, and its increasing assertiveness in its maritime territorial disputes resulted in American allies and partners seeking greater US presence and leadership.[101] This situation provided the backdrop for the Barack Obama administration to officially declare a rebalancing of strategic priorities to the Asia-Pacific. In October 2011, Secretary of State Hillary Clinton announced a "pivot" (later renamed the "strategic rebalance") to the Asia-Pacific. Prior to this, the public narrative in the region was one of US lack of strategic focus and decline due to the costly wars in Iraq and Afghanistan, as well as competing domestic and fiscal priorities particularly after the Global Financial Crisis. Secretary Clinton reiterated that the US was a "Pacific power" and outlined a regional strategy involving:

> six key lines of action: strengthening bilateral security alliances; deepening our working relationships with emerging powers, including with China; engaging with regional multilateral institutions; expanding trade and investment; forging a broad-based military presence; and advancing democracy and human rights.[102]

A month later, President Obama also stressed that the United States was "turning [its] attention to the vast potential of the Asia Pacific region."[103] The announcement of a "rebalance" to the Asia-Pacific reflected the intention to underscore the importance of the region to US interests and to reinvigorate American engagement and leadership in order to address regional uncertainty about Washington's commitment.[104] In this context, the US Defense Department's January 2012 strategic guidance reaffirmed that "while the US military will continue to contribute to security globally, *we will of necessity*

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[100] Nina Silove, "The Pivot before the Pivot: US Strategy to Preserve the Power Balance in Asia," *International Security* 40, no. 4 (Spring 2016): 47.
[101] Kurt M. Campbell and Brian Andrews, "Explaining the US 'Pivot' to Asia," *Chatham House* Americas 2013/01 (August 2013): 2.
[102] Clinton, "America's Pacific Century."
[103] Quoted in Michael Green, Kathleen Hicks and Mark Cancian, *Asia-Pacific Rebalance 2025: Capabilities, Presence, and Partnerships: An Independent Review of US Defense Strategy in the Asia-Pacific* (Washington DC: Center for Strategic and International Studies, January 2016), vi.
[104] Green, Hicks and Cancian, "Asia-Pacific Rebalance 2025," vi.

rebalance toward the Asia-Pacific region."[105]

To support Washington's rebalance policy, the 2010 QDR had already directed the development of "a joint Air-Sea Battle concept" between the Air Force and Navy to defeat adversaries across the range of military operations, "including adversaries equipped with sophisticated anti-access and area denial capabilities." This was to be achieved by integrating "capabilities across all operational domains—air, sea, land, space and cyberspace—to counter growing challenges to US freedom of action." The Air-Sea Battle concept also aimed to "guide the development of future capabilities needed for effective power projection operations."[106] Due to increasing Chinese capabilities, the Air-Sea Battle concept rose in prominence—particularly among US allies—as giving operational "teeth" to a possible and credible US warfighting strategy.[107] In 2015, the concept was renamed as the "Joint Concept for Access and Maneuver in the Global Commons" (JAM-GC) to expand it across all services and make it a fully integrated joint concept that also included land forces.[108]

Interoperability with allied forces has also been a key force multiplier that underscores how critical the US' regional bilateral partnerships are to its national interests and strategic objectives.[109] The Western Pacific is a major operational hub for forward-deployed US Navy forces and taken together, the US and its regional allies spend far more on defense than any conceivable coalition of enemies. The San Francisco System of interrelated political-military and economic commitments between the US and its Western Pacific partners has provided the basis for the maintenance of approximately 100,000

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[105] US Department of Defense, *Sustaining US Global Leadership: Priorities for 21st Century Defense* (Washington DC: Department of Defense, January 2012), 2. Emphasis in original.
[106] US Department of Defense, *Quadrennial Defense Review Report* (Washington DC: Department of Defense, February 2010), 32-33.
[107] See Benjamin Schreer, "Planning the Unthinkable War: 'AirSea Battle' and its Implications for Australia," *ASPI: Strategy* (April 2013), 5.
[108] Paul McLeary, "New US Concept Melds Air, Sea and Land," *Defense News,* January 24, 2015, http://www.defensenews.com/story/defense/policy-budget/warfare/2015/01/24/air-sea-battle-china-army-navy/22229023/.
[109] William T. Tow, "Assessing US Bilateral Security Alliances in the Asia Pacific's 'Southern Rim': Why the San Francisco System Endures," (America's Alliances with Japan and Korea in a Changing Northeast Asia Project Discussion Papers, Stanford University Freeman Spogli Institute for International Studies, October 1999), 5-6.

US military personnel deployed in the region. Allied bases and logistical support have also delivered US forces with essential strategic depth and mobility. Assuring allies and maintaining partner capacity, while dissuading and deterring those actors that might otherwise seek to disrupt the balance of power, has remained a long-standing goal of US defense policy.[110] This integrated system of "hubs and spokes," with the US at the center has both maximized America's influence and prevented unilateral aggression by creating a favorable balance of power for Washington. Through this system the US has also promoted democratic ideals, liberal commerce and freedom of maneuver to legitimize its Asia-Pacific presence.[111] In this respect, the 2015 US National Security Strategy stated:

> We are modernizing our alliances with Japan, South Korea, Australia, and the Philippines and enhancing the interactions among them to ensure they are fully capable of responding to regional and global challenges. We are committed to strengthening regional institutions such as ASEAN, the East Asia Summit, and Asia-Pacific Economic Cooperation to reinforce shared rules and norms, forge collective responses to shared challenges, and help ensure peaceful resolution of disputes.[112]

In June 2012 then-US Secretary of Defense Leon Panetta announced that by 2020, 60 percent of American naval assets would be deployed in the Asia-Pacific, including six aircraft carriers, a majority of its cruisers, destroyers, LCS and submarines.[113] In June 2013, his successor Chuck Hagel pledged that 60 percent of the US Air Force's overseas-based forces and a similar percentage of its space and cyber capabilities would also be based in the

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[110] US Department of the Navy, *A Cooperative Strategy for 21st Century Seapower* (Washington DC: Department of the Navy, March 2015), 11-13

[111] The US alliance system is widely accepted as maximizing US influence in the Asia-Pacific. See Victor D. Cha, "Powerplay: Origins of the US Alliance System in Asia," *International Security* 34, no. 3 (Winter 2009/20010): 188; and Daniel Deudney and G. John Ikenberry, "The Nature and Sources of Liberal International Order," *Review of International Studies* 25, no. 2 (1999): 179-196; and G. John Ikenberry, "The Rise of China and the Future of the West: Can the Liberal System Survive," *Foreign Affairs* (2008): 23-37.

[112] President of the United States of America, *2015 National Security Strategy* (Washington DC: The White House, 2015), 24.

[113] US Secretary of Defense Leon E. Panetta, "Secretary of Defense Speech," IISS Shangri-La Dialogue, Singapore, June 2, 2012, http://www.defense.gov/speeches/speech.aspx?speechid=1681.

region.[114] In 2015, he also announced that the Navy would introduce the Joint High Speed Vessel (JHV) in the Pacific and forward-station four additional *Virginia*-class nuclear submarines in Guam. The Pentagon also declared its intention to permanently rotate up to four LCS at Singapore by 2017 and to base an additional seven LCS in Japan by 2022.[115] By 2018 the Navy's advanced multi-mission *Zumwalt*-class destroyer would also begin operating out of the region. And by 2020, the US plans to operate the *Hawkeye* early warning and unmanned *Triton* ISR aircraft in the region.[116]

In addition, the US has invested in regional security cooperation, particularly with Southeast Asian countries. The normalization of US-Vietnam relations along both military and diplomatic paths has proceeded apace, due to Chinese actions in the South China Sea.[117] The US-Indonesia Comprehensive Partnership was signed in 2010 which included joint exercises and an annual joint commission meeting.[118] President Obama's trip to Malaysia in 2014 resulted in a similar US-Malaysia Comprehensive Partnership and renewed emphasis on existing bilateral arrangements such as the Malaysia-US strategic talks and increasing military-to-military cooperation.[119] In Singapore, the US Navy has had extensive access to naval and air logistical

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[114] US Secretary of Defense Chuck Hagel, "Secretary of Defense Speech," IISS Shangri-La Dialogue, Singapore, June 1, 2013, http://www.defense.gov/speeches/speech.aspx?speechid=1785.

[115] "Four US Littoral Combat Ships to Operate out of Singapore by 2018: US Navy," *Straits Times,* February 17, 2015, http://www.straitstimes.com/singapore/four-us-littoral-combat-ships-to-operate-out-of-singapore-by-2018-us-navy; and Zachary Keck, "US Chief of Naval Operations: 11 Littoral Combat Ships to Asia by 2022," *The Diplomat,* May 17, 2013, http://thediplomat.com/2013/05/u-s-chief-of-naval-operations-11-littoral-combat-ships-to-asia-by-2022/.

[116] Hagel, "Secretary of Defense Speech."

[117] For an analysis on US-Vietnam security cooperation see, Hoang Anh Tuan and Do Thi Thuy, "US-Vietnam Security Cooperation: Catalysts and Constraints," *Asian Politics and Policy* 8, no 1 (January 2016): 179-192. See also Ashton B. Carter and Jennifer C. Bulkeley, "America's Strategic Response to China's Military Modernization," *Harvard Asia-Pacific Review* (Winter 2007): 52; and Tuan Minh Ta, "The Future of Vietnam-US Relations," *Brookings Institution,* April 14, 2010, https://www.brookings.edu/opinions/the-future-of-vietnam-u-s-relations/.

[118] Office of the Press Secretary, "Fact Sheet United States-Indonesia Comprehensive Partnership," The White House: President Barack Obama Archives, November 18, 2011, https://obamawhitehouse.archives.gov/the-press-office/2011/11/18/fact-sheet-united-states-indonesia-comprehensive-partnership.

[119] "Joint Statement By President Obama and Prime Minister Najib of Malaysia," US Mission to ASEAN, April 27, 2014, https://asean.usmission.gov/joint-statement-by-president-obama-and-prime-minister-najib-of-malaysia/.

facilities since 1990.[120] US military equipment has also become the weapons systems of choice for the Singapore Armed Forces (SAF).[121] Under the EDCA with the Philippines, the US committed USD66 million for the construction of in-country military facilities.[122] EDCA also enabled rotational access for the US military to Philippine bases and in March 2015 both sides begun joint patrols in the South China Sea.[123] However, the Philippines' President Rogrido Duterte stated in October 2016 that the US forces may be asked to leave the Philippines has raised uncertainty over the US-Philippine alliance.[124]

Nonetheless, doubts remain over American capabilities and resolve. American foreign policy debates have reflected war weariness and reluctance to resort to military force to deal with international crises raging from the civil war in Syria to the Russian annexation of Ukraine's Crimea. The protracted recovery from the Global Financial Crisis and partisan divisions leading to repeated policy gridlock in US Congress further contributes to a general unease about Washington's resolve and ability to commit to the region. Washington expects its allies to contribute more to collective defense, alongside supporting US-led efforts to uphold a favorable balance of power.[125]

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[120] Michael Richardson, "Visit Is First by Foreign Warship to New Base: Singapore Welcomes US Aircraft Carrier," *New York Times,* March 22, 2001, http://www.nytimes.com/2001/03/22/news/22iht-a4_65.html; and "Singapore Changi Naval Base," *Global.Security.org,* February 16, 2012, http://www.globalsecurity.org/military/facility/singapore.htm.

[121] See Tim Huxley, *Defending the Lion City: The Armed Forces of Singapore* (St Leonards: Allen & Unwin, 2000); and IHS Jane's report cited in Dhara Ranasinghe, "Singapore, the tiny state with military clout," *CNBC,* February 9, 2014, http://www.cnbc.com/2014/02/07/singapore-the-tiny-state-with-military-clout.html.

[122] Pia Lee-Brago, "US Earmarks $66 M for 8 Philippine Camps under EDCA," *Philstar,* January 4, 2016, http://www.philstar.com/headlines/2016/02/04/1549506/us-earmarks-66-m-8-philippine-camps-under-edca; and "What You Need to Know About EDCA," *CNN Philippines,* April 14, 2016, http://cnnphilippines.com/news/2016/01/13/what-you-need-to-know-about-edca.html.

[123] Trefor Moss, "US Stationing Warplanes in Philippines Amid South China Sea Tension," *The Wall Street Journal,* April 14, 2016, http://www.wsj.com/articles/u-s-stationing-warplanes-in-philippines-as-part-of-south-china-sea-buildup-1460636272; and "US Reveals Rare Joint Navy Patrols with Philippines," *BBC News,* April 14, 2016, http://www.bbc.com/news/world-asia-36043828.

[124] Jon Viktor D. Cabuenas, "Duterte says EDCA Not Signed by PHL President, May Ask US Forces to Leave," *GMA News Online,* October 2, 2016, http://www.gmanetwork.com/news/story/583527/news/nation/duterte-says-edca-not-signed-by-phl-president-may-ask-us-forces-to-leave.

[125] Tow and Limaye, "What's China Got to Do With it?"

On the one hand, the US effort emphasizes mainly qualitative advances in naval and associated air capabilities to maintain its technological lead in the region. On the other hand, it pushes its allies and partners to pursue both qualitative and quantitative advantages in their capabilities to target both interoperable and self-reliant defense contingencies. As will be demonstrated in the Japan and South Korea chapters, the US alliance has allowed the transfer of sophisticated defense technologies to these countries, as well as placing greater demands on host nations to "share" more of the operational burdens. In 2011, Secretary of State Clinton placed US alliances at the "fulcrum of our strategic turn to the Asia-Pacific."[126] Yet as Ashley J. Tellis has argued:

> because the cost of US contributions toward such collective goods may become burdensome over time, accepting increased contributions by friends and allies remains an attractive solution … So long as their political aims fundamentally cohere with Washington's, anything they do to augment the supply of global public goods serves the US, their own, and other common interests.[127]

Consequently, Washington has encouraged its allies to develop stronger military postures to balance against a rising China, should engagement fail. Yet, concerns also emerged that American allies and partners might be unable to keep pace with the advanced weapons technologies resulting from the *Third Offset Strategy*. As Peter Dombrowski notes, "if past is prologue, future American administrations will seek to limit access to advanced systems and thereby complicate future allied and coalition operations."[128] Countries like Japan, Singapore and South Korea may choose to match American investment in innovative technologies, however, technical and technological challenges will remain, for instance, sustaining the interoperability of communication systems, and maintaining doctrine and training.[129]

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[126] Clinton, "America's Pacific Century."
[127] Ashley J. Tellis, "Seeking Alliances and Partnerships: The Long Road to Confederationism in US Grand Strategy," in *Strategic Asia 2014-15: US Alliances and Partnerships at the Center of Global Power,* ed. Ashley J. Tellis, Abraham M. Denmark and Greg Chaffin (Seattle: The National Bureau of Asian Research, 2015), 24.
[128] Dombrowski, "Third Offset Strategy and Arms Racing in Asia."
[129] Dombrowski, "America's Third Offset Strategy," 9.

Such dynamics have had a dual effect on regional military modernization efforts. On the one hand, they have driven US allies to acquire platforms to fulfill capabilities (often from American suppliers) which demonstrate commitment to Washington and facilitate high levels of interoperability (as will be explained in the chapters on Japan and South Korea). A significant example has been the commitment by Japan, South Korea, Australia and possibly Singapore to purchase F-35 JSFs before the aircraft had achieved initial operating capability (IOC).[130] Given the long-standing reliance on US security commitments, Washington's allies will most likely cautiously cooperate with the next administration, whilst increasing their self-reliant defense position. On the other hand, China inevitably views these reactions to its re-emergence as a major regional player as evidence of a US-led posture of containment and coercion.

Strategic Competition with China

Ever since the 1990s, consecutive US administrations pursued a concerted engagement with Beijing in the expectation or hope that China would become a "responsible stakeholder" in the existing US-led strategic order. A hallmark of the US-China relationship under the Obama administration has been the proliferation of bilateral dialogue mechanisms, based on the expectation that US and Chinese officials need to understand each other's positions on a wide range of issues. However, at the same time, the US strategic and political elite has become increasingly disillusioned with China's strategic behavior, and as previously argued, actions were put in place to counter potential Chinese aggression even before the "pivot" announcement.[131] More recent actions by Beijing since 2009-2010 displayed a growing maritime assertiveness and challenge to the rules-based order and freedom of navigation in the Asia-Pacific.[132] This has been further evidenced by China's creation of artificial islands to support military aircraft and naval operations in the South China

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[130] "F-35 Lightning II: Global Participation," *Lockheed Martin*, 2016, https://www.f35.com/global; and Andrea Shalal, "The 11 Countries Expected to Buy F-35 Fighter Jet," *Reuters,* June 6, 2014, http://www.reuters.com/article/us-lockheed-martin-canada-f35-orders-idUSKBN0EG2XD20140606.

[131] See Harry Harding, "Has US China Policy Failed?," *The Washington Quarterly* 38, no. 3 (2015): 95-122; and Pillsbury, *The Hundred-Year Marathon.*

[132] Michael Yahuda, "China's New Assertiveness in the South China Sea," *Journal of Contemporary China* 22, no. 81 (2013): 446-459.

Sea.[133]

As Chinese capabilities grow, the concern in Washington has been that Beijing is changing the regional status quo, is defining its interests more expansively and intends to carve out maritime "spheres of influence."[134] The changing distribution of military capabilities, and uncertainty about China's future trajectory has fueled greater Sino-US strategic competition. As Adam P. Liff and G. John Ikenberry have argued: "as in any strategic interaction, it takes two to tango. Indeed the United States and its Asia Pacific security allies and partners are engaging in extensive efforts to hedge against both uncertainty and Beijing's specific policies by balancing against China."[135] Both Beijing and Washington have bolstered relations with regional partners in tandem with concerted military modernization in the face of uncertain intentions, implicitly competitive strategies, and potentially coercive policies of the other.[136] Therefore, despite declared policies stressing engagement and cooperation mechanisms, military modernization and force postures increasingly have displayed balancing in the form of both external security cooperation with Asian states and national military modernization programs.[137]

This dynamic has created an atmosphere of uncertainty about the other side's intentions, as both sides have concluded that there was no other alternative to competition for qualitative and quantitative advantages in its naval and associated air capabilities.[138] Washington has remained wary of China's improving naval capabilities and its associated objectives, and the DOD has expressed concern that the technological and qualitative edge of American military forces has gradually eroded. In reaction to this changing balance of power, the US has developed new operational concepts, changed its force posture and basing arrangements, and focused investments on innovative

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[133] "Build It and They Will Come: China Preps Spratlys for Military Aircraft," *CSIS Asia Maritime Transparency Initiative,* 2016, https://amti.csis.org/build-it-and-they-will-come/.
[134] Aaron L. Friedberg, "The Future of US-China Relations: Is Conflict Inevitable?" *International Security* 30, no. 2 (Fall 2005): 19.
[135] Liff and Ikenberry, "Racing toward Tragedy?" 57. See also John J. Mearsheimer, "China's Unpeaceful Rise," *Current History* 150, no. 690 (April 2006): 160.
[136] Medeiros, "Strategic Hedging and the Future of Asia-Pacific Stability," 145.
[137] Medeiros, "Strategic Hedging and the Future of Asia-Pacific Stability," 145.
[138] Liff and Ikenberry, "Racing toward Tragedy?," 54.

weapons technology. China's rising power and military challenge to American hegemony in the Asia-Pacific has sharpened the focus in the Pentagon and in Congress on the need to develop capabilities to respond to a "peer competitor." The PLA's increasing qualitative and quantitative improvements in naval and associated air capabilities has led Washington to pursue (mainly) qualitative improvements in its own navy, and supporting both qualitative and quantitative improvements of its regional allies and partners' capabilities. This has led to competitive arming dynamics, in which Washington has aimed to maintain its primacy in the Asia-Pacific. As the 2014 QDR stated,

> Defense spending in [the Asia-Pacific] continues to rise. As nations in the region continue to develop their military and security capabilities, there is greater risk that tensions over long-standing sovereignty disputes or claims to natural resources will spur disruptive competition or erupt into conflict, reversing the trends of rising regional peace, stability, and prosperity. In particular, the rapid pace and comprehensive scope of China's military modernization continues, combined with a relative lack of transparency and openness from China's leaders regarding both military capabilities and intentions.[139]

China's rising power challenges America's position in the Asia-Pacific.[140] In response, some regional allies, particularly Japan, have sought to align themselves more closely with the US to balance China's growing power. Aware that its technological edge has been gradually eroded by the increasing diffusion of advanced capabilities in the region, particularly to China, Washington has looked to innovate and generate a new military-technological edge.[141] Underlying this development has been the objective to maintain a rules-based order conducive to America's strategic and economic interests.[142] To meet these goals, the US has adopted a two-pronged approach when it comes to the military dimension of the rebalance to Asia: first, transforming

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[139] US Department of Defense, *Quadrennial Defense Review 2014,* 4.
[140] David J. Berteau and Michael J. Green, *US Force Posture Strategy in the Asia-Pacific Region: An Independent Assessment* (Washington DC: Center for Strategic and International Studies, June 27, 2012), 13.
[141] IISS, *The Military Balance 2016,* 2.
[142] Ashton B. Carter, "Meeting Asia's Complex Security Challenges," IISS Shangri-La Dialogue 2016, First Plenary Session, Singapore, June 4, 2016, https://www.iiss.org/en/events/shangri%20la%20dialogue/archive/shangri-la-dialogue-2016-4a4b/plenary1-ab09/carter-1610.

US forces in regards to technology and operational concepts. Second, strengthening the network of allies and partners to assist the US with forward missions, provide bases and protection of bases, and confer political legitimacy to US military operations.[143]

Therefore, Washington's changing Asia-Pacific force posture and structure has had a dual objective: it has been directed at maintaining American maritime freedom of maneuver in the region, while making it operationally more difficult for Chinese to deter American operations. In reaction, Beijing has argued that these extra assets devoted to the region, reinvigorated US partnerships, and increasing American investments into space, autonomous systems and artificial intelligence (AI), were aimed at containing China.[144] Accordingly, the PLA has sought to address perceived and actual shortfalls culminating from current American primacy, the US strategic rebalance toward the Asia-Pacific, and the development of JAM-GC for increasing the joint operating effectiveness of US naval and air forces for countering PLA operations.[145] China's revisionist intentions and desire to prevent foreign "intervention" have consequently fueled strategic competition, augmented by the development and modernization of specific naval and associated air capabilities, such as ASW and C4ISR.

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[143] Karen Parrish, "Carter Outlines 'Principled Network Security' Actions for Asia Pacific," *DoD News, Defense Media Activity,* June 4, 2016, https://www.defense.gov/News/Article/Article/791274/carter-outlines-principled-network-security-actions-for-asia-pacific. See also Michael E. O'Hanlon, "US Military Modernization: Implications for US Policy in Asia," in *Strategic Asia 2005-06: Military Modernization in an Era of Uncertainty* ed. Ashley J. Tellis and Michael Willies (Seattle: The National Bureau of Asian Research, 2006), Executive Summary.

[144] See Robert A Manning, "US Rebalancing Asia, Not Containing China," *Global Times,* July 2, 2013, http://www.globaltimes.cn/content/793293.shtml; "US Shows its True Colors," *China Daily,* April 29, 2014, http://usa.chinadaily.com.cn/opinion/2014-04/29/content_17472568.htm; and "What Show is US and Japan Playing on the Issue of South China Sea," *China Military Online,* February 9, 2015*,* http://english.chinamil.com.cn/news-channels/china-military-news/2015-02/09/content_6347187.htm.

[145] See Chen Weihua, "Ash Carter's Bellicose Rhetoric Bad for Bilateral Relations," *China Daily,* February 8, 2016, http://usa.chinadaily.com.cn/epaper/2016-02/08/content_23434706.htm; Chen Weihua, "Curb China-US military rivalry to avoid conflict," *China Daily,* July 31, 2015, http://www.chinadaily.com.cn/opinion/2015-07/31/content_21459531.htm; Chen Weihua, "Washington's Paranoia has a Clear Purpose," *China Daily,* March 20, 2015, http://usa.chinadaily.com.cn/opinion/2015-03/20/content_19863511.htm; and Zhang Yunbi, "Obama 'Hoping to Offset' Beijing's Influence," *China Daily,* February 17, 2016, http://www.chinadaily.com.cn/cndy/2016-02/17/content_23513345.htm;

The most significant examples of this interactive arming dynamic in naval and associated air capabilities has been demonstrated by the development of China's ballistic missile program, which falls under the PLARF (See Chapter 4: China). However, it is not yet clear whether the PLA can already field the C4ISR capabilities necessary to strike a fast moving ship in open waters.[146] In August 2014, Admiral Harry B. Harris, Commander of USPACOM, stated in response to a question about the threat posed to US Navy aircraft carriers by China's ASBMs that the US was "very well aware of the capabilities that China has and is trying to develop and I'm very confident we would be able to carry out any mission that we have to."[147] Further, Chief of Naval Operations, Admiral Greenert observed that the US was developing countermeasures to protect US carriers. He added that the US had "lots of intelligence" on the DF-21D and that new electromagnetic weapons, unmanned aircraft and other standoff weapons would help mitigate the threat of anti-ship missiles.[148]

The surprisingly rapid qualitative improvements in PLA capabilities have triggered improvements in US missile defense systems. The focus has been on surface combatants, particularly aircraft carriers, with regard to how to deconstruct the ballistic missile "kill-chain" (the sequence of events that needs to be completed to carry out a successful attack). Innovative US shipborne defenses with the capability to detect, track, destroy or deflect such advanced missiles have been deployed.[149] This has involved employing a number of active and passive measures, such as shooting down ASBMs with interceptor missiles ("hard kill"), and masking the exact location of Navy

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[146] Montgomery, "Contested Primacy in the Western Pacific," 136.
[147] Quoted in Greg Sheridan, "China's Military Provocation in The Pacific An Accident Waiting to Happen," *The Australian,* August 9, 2014, http://www.theaustralian.com.au/opinion/columnists/greg-sheridan/chinas-military-provocation-in-the-pacific-an-accident-waiting-to-happen/news-story/d56701879cfa01072eab97a2ac09283a.
[148] Jon Harper, "Navy's Top Admiral: Reducing Carrier Fleet Would Burn Out Sailors, Ships," *Stars and Stripes,* May 21, 2014, http://www.stripes.com/news/navy-s-top-admiral-reducing-carrier-fleet-would-burn-out-sailors-ships-1.284362; and Michael Fabey, "US Navy Looks to 'Series of Systems' To Counter Chinese Anti-Ship Missile," *Aerospace Daily & Defense Report,* April 21, 2015, 5.
[149] Rear Admiral Edward Masso, "Our Aircraft Carriers are Not Sitting Ducks," *Forbes,* August 4, 2014, http://www.forbes.com/sites/realspin/2014/08/04/our-aircraft-carriers-are-not-sitting-ducks/#5c668309131c.

ships or confusing ASBM re-entry vehicles ("soft kill").[150] Lockheed Martin and Raytheon, under study contracts from the US Missile Defense Agency, have begun developing concepts for a kill vehicle capable of taking out multiple objects simultaneously atop a single interceptor ("Multi-Object Kill Vehicle," MOKV).[151] The *Aegis* combat system has also been upgraded to have the capacity for conducting ballistic missile defense (BMD) operations by incorporating changes to *Aegis* system's computers and software and arming ships with BMD interceptor missiles.[152]

Another example of competition has been the US Navy's efforts to counter the PLA's progress in developing ASW capabilities and complicating US maneuvers in the region. On October 26, 2006, a Chinese *Song*-class diesel electric submarine reportedly surfaced approximately eight kilometers away from the US carrier, USS *Kitty Hawk,* which was operating with its strike group in international waters in the East China Sea near Okinawa.[153] Defense officials believed the Chinese submarines were practicing how to track and target carriers.[154] A former commander of US Pacific Fleet's submarine force, Rear Admiral Hank McKinney stated:

> the Chinese very well could have staged this event to make a point about the vulnerability of the Battle Group to submarine attack. The US Navy is fully aware of [those] vulnerabilities … The Chinese are building a credible submarine force which will make it very difficult for the US navy to maintain sea control dominance in or near coastal waters off of China.[155]

In November 2015, a Chinese attack submarine also closely trailed the aircraft carrier USS *Ronald Reagan* while it was operating off the south of Japan in

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[150] O'Rourke, "China Naval Modernization," 63.
[151] Mike Gruss, "Lockheed, Raytheon To Develop Advanced Kill Vehicle Concepts," *Space News,* August 11, 2015, http://spacenews.com/lockheed-raytheon-to-develop-advanced-kill-vehicle-concepts/.
[152] Ronald O'Rourke, "Navy Aegis Ballistic Missile Defense (BMD) Program: Background and Issues for Congress," Congressional Research Service Report RL33745 (Washington DC: Library of Congress, March 28, 2016), 2.
[153] Bill Gertz, "China Sub Stalked US Fleet," *Washington Times,* November 13, 2006, http://www.washingtontimes.com/news/2006/nov/13/20061113-121539-3317r/?page=all.
[154] Bill Gertz, "Admiral Says Sub Risked a Shootout," *The Washington Times,* November 15, 2006, http://www.washingtontimes.com/news/2006/nov/15/20061115-122631-3752r/.
[155] "Behind the *Kitty Hawk* Incident (Updated)," *Defense Tech,* November 14, 2006, http://www.defensetech.org/2006/11/14/behind-the-kitty-hawk-incident-updated/.

the Sea of Japan. The submarine conducted a simulated cruise missile attack.[156] In December 2016, the PLAN seized (and later returned) an American underwater survey drone in international waters off the Philippines.[157] Such drones assist in ASW and are used to track foreign submarines and assist the navigation of US submarines.[158]

Consequently, the US Navy has stepped up measures to counter China's submarines, bolstering ASW capabilities by increasing ASW training exercises, procuring platforms with ASW capabilities, and developing technologies for conducting new operational approaches to ASW.[159] Much of the difficulty faced by US ASW stems from the technical challenge posed by the stealth of advanced conventional submarines. Yet, as the PLAN expands its submarine force,[160] US naval forces have declined in relative numbers and this development could become a significant shortcoming due to heavy demands placed on them to perform both precision-strike and ASW missions during conflict. Thus, the DOD has emphasized qualitative improvements including hardware and software upgrade to kinetic weapons, in particular countering wake-homing torpedoes through the development on new anti-torpedo torpedoes (ATT).[161] The Surface Ship Torpedo Defense (SSTD) system, which consists of a sensor, processor and small interceptor missiles, is the first of its kind of "hard kill" countermeasures for ships and carriers designed to find, classify and track torpedoes through a Torpedo Warning System (TWS), and then destroy them with a Countermeasure Anti-Torpedo

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[156] Bill Gertz, "Chinese Submarine Practiced Missile Attack on USS Reagan," *Washington Free Beacon,* December 15, 2015, http://freebeacon.com/national-security/chinese-submarine-practiced-missile-attack-on-uss-reagan/; and Alastair Wanklyn, "Chinese Sub Targeted US carrier, Report Says," *The Japan Times,* December 16, 2015, http://www.japantimes.co.jp/news/2015/12/16/asia-pacific/chinese-sub-targeted-uss-ronald-reagan-missile-simulation-report-says/#.Vw3Pz_l97RY.

[157] Chris Buckely, "Chinese Navy Returns Seized Underwater Drone to US," *The New York Times,* December 20, 2016, http://www.nytimes.com/2016/12/20/world/asia/china-returns-us-drone.html.

[158] Jeremy Page and Paul Sonne, "China to Return Seized US Underwater Drone," *The Wall Street Journal,* December 19, 2016, http://www.wsj.com/articles/u-s-china-in-talks-to-handle-seizure-of-drone-in-south-china-sea-officials-say-1481979853.

[159] O'Rourke, "China Naval Modernization," 67.

[160] See O'Rourke, "Navy Force Structure and Shipbuilding Plans."

[161] Sam LaGrone, "Navy Develops Torpedo Killing Torpedo," *USNI News,* June 20, 2013, https://news.usni.org/2013/06/20/navy-develops-torpedo-killing-torpedo.

(CAT).[162] The plan is to equip all aircraft carriers and other high-value surface combatants with the system by 2035.[163]

Additionally, there has been evidence that China has started to invest in capabilities to erode America's global command of the commons, which is to a significant degree based on American forward-deployed forces and infrastructure in the Western Pacific. The PLA has fielded a series of "interrelated missile, sensor, guidance, and other technologies designed to deny freedom of movement to hostile powers in the air and waters off its coast."[164] If these capabilities do fulfil their potential for counter-intervention, this would in the PLA being able to exclude US forces from parts of the Western Pacific, in particular the Taiwan Strait.[165]

Findings

The US case study demonstrates dynamics that are not captured by the traditional "arms race" theories and the "action-reaction" concept. Rather, the more plausible explanations for military modernization demonstrates "interactive arming." The US' domestic situation and fiscal priorities have proven to be a restraining factor on American military modernization programs (H1). Yet these constraints have caused reactions from its regional allies and partners to pursue and modernize capabilities for self-reliant defense (H5). Moreover, "arms race" theories do not capture activities which respond to changing levels of armaments, but do not directly involve defense acquisitions. For the US, the desire to bolster its allies and partners' defense, as well as finding a cost-effective solution to the erosion of its military superiority, has led to defense technology transfers to partners and allies, increased security cooperation and reinvigorating alliances, and investments in civilian S&T industry.

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[162] Kris Osborn, "Navy Deploying New Anti-Torpedo Technology," *Defense Tech,* October 28, 2013, http://www.defensetech.org/2013/10/28/navy-deploying-new-anti-torpedo-technology/.
[163] "First Carrier Countermeasure Anti-Torpedo Launched," *United States Navy,* June 6, 2013, http://www.navy.mil/submit/display.asp?story_id=74665.
[164] Stephen Biddle and Ivan Oelrich, "Future Warfare in the Western Pacific: Chinese Anti-access/Area Denial, US AirSea Battle, and Command of the Commons in East Asia," *International Security* 41, no. 1 (Summer 2016): 7.
[165] Biddle and Oelrich, "Future Warfare in the Western Pacific," 41.

A peer competition such as that between the US and China, typically also involves a "war of words" for the moral high ground. Thus, Beijing has endeavored to portray Washington's rebalance pejoratively as renewed "containment" when the US insists it is protecting regional order and stability. (H4). It has focused on American presence in the region from the perspective of the rebalance and Washington's increasing investment in qualitative weaponry as opposed to a reaction to the PLA's military transformation (H3). This demonstrates that regional countries—whether allied or in opposition—are responding to American military modernization given its significance in defining the Asia-Pacific balance of power (H2). As the US' military modernization has a two-fold purpose in the Western Pacific—to counter China's military modernization and erosion of American military superiority, as well as to reassure partners and allies of American security commitments—the reactions in the region have been heightened. Decreases in American military capability are felt as acutely as increases, and both changes have resulted in regional pushes for both collective defense and self-reliant defense capabilities. This indicates that arming dynamics have also been influenced by the perceptions of the changing regional balance of power. However, such perceptions and misperceptions have not spiraled into conflict (H6). The next chapter examines Washington's key ally in the region, Japan.

Chapter 6:
Japan

Key Impulses

The change in Japan's security and defense policies signifies a reaction to its changing security environment. Despite its pacifist identity, this process has been informed by nationalism and a sense of uniqueness. Moreover, overwhelmingly the Japanese population has developed unfavorable views of China, South Korea and North Korea. In response, both South Korea and China have harnessed incremental changes made to Japanese defense policy and military modernization as instruments for their own nationalist policies and rationales for military modernization. Yet, Japan's ability to maintain its capabilities is dependent on whether it can sustain its defense spending over the long-term. Despite lifting its informal "1 percent of GDP" cap on military spending in 1987, due to the difficulty of managing the JSDF on stagnant economic growth,[1] Japan's socio-economic problems have still been a significant impediment to maintaining its levels of military modernization. If the Japanese economy does not recover there will be limited resources with which to fund its ambitious modernization and defense strategy. Japan has also faced the challenge that as per its constitution its military capabilities and any acquisitions must clearly be towards the "defensive end of the spectrum." Therefore, Japan has been unable to acquire offensive weapons, such as aircraft carriers and long-range strike systems.

Moreover, although Japan has moved towards a "collective self-defense" arrangement under its alliance with the US—limited resources have already strained alliance capabilities and produced contentious negotiations on cost-sharing.[2] Due to Japan's distinct post-war ideology, and social contentions over the American military footprint in Japan, Tokyo's enhanced posture and

[1] Clyde Haberman, "Japan Formally Drops Military Spending Cap," *The New York Times,* January 25, 1987, http://www.nytimes.com/1987/01/25/world/japan-formally-drops-military-spending-cap.html.
[2] Emily Chanlett-Avery and Ian E. Rinehart, "The US-Japan Alliance," Congressional Research Service Report RL33740 (Washington DC: Library of Congress, February 9, 2016), Summary.

desire to increase cooperation with Washington has also remained subject to the Japanese public's appetite to qualify its post-war pacifism.

Japan's modernization of its naval and associated air capabilities is driven by three key impulses. First, it is motivated to manage domestic pacifism and constitutional barriers to, at a minimum, possess a naval and air self-defense capability not solely reliant on American security guarantees. A broad national anxiety exists of Japan as a resource-poor group of islands, whose livelihood is reliant "on other countries for the supply of natural resources, energy, food, and many other materials which are indispensable to national existence." Tokyo is particularly concerned about maritime security and the protection of open and safe SLOCs.[3] However, overall, Japan's self-perception as a pacifist nation has proven to be a restraining influence on its military modernization.

This relates to the second impulse which is the objective to normalize its armed forces and allow its defense-industrial base to become globally competitive. The normalization of the Japanese armed forces and changes in its strategic doctrine assist in managing US pressure for burden-sharing, as well as deepening political and military joint-ness and interoperability with the US. Increasing self-reliant defense also enhances Japan's security and survival should the US decrease its commitments to its regional allies. Moreover, Tokyo is also responding to the existential threats sensed from a Korean peninsula contingency and an expanding China. For historical and geopolitical reasons, Japan is extremely sensitive to the changing balance of power in Northeast Asia. The moves to revitalize the alliance through enhancing the interoperable capabilities of the Japan Self-Defense Forces (JSDF) with US forces, as well as increasing security cooperation with Southeast Asian nations, is increasing China and South Korea's perception of a revival of Japanese militarism.

Lastly, because of its sensitivity towards changes to the regional balance of

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[3] Japan Defense Agency, *Defense of Japan* 1990), 116; and Yoichi Funabashi, "Japan Enters South China Sea Dispute," *Asia Sentinel,* May 24, 2016, http://www.asiasentinel.com/politics/japan-south-china-sea-dipsute/#.

power, Japan aims to maintain a regional power status commensurate with its economic position and perception of national prestige. For instance, the qualitative and quantitative development of Japan's submarine capability has been significant as it demonstrates that Japan has strengthened its ability to conduct denial operations against China. At present, China cannot dominate Japan as long as it remains allied to the US, even though the PLA already has a higher number of vessels and aircraft relative to the JSDF. Japanese decision-makers are aware that Japan can neither keep up with the quantitative numbers of the PLAN, nor defend itself without the assistance of the US. Additionally, Japan is becoming increasingly concerned about North Korea's evolving nuclear and missile program, and experiences a tense relationship with South Korea due to historical grievances.

Managing "Pacifist Nationalists"

In response to a darker security outlook, particularly the Abe government has placed considerable effort into reinterpreting Japan's constitution, updating defense guidelines and managing pacifist sentiment. Due to Japan's war-time history such efforts have been perceived by the ROK and China as aggressive and destabilizing. Nevertheless, in September 2015, reflecting the belief that Japan's current defense policy constrained its ability to protect fundamental interests, the cabinet of Prime Minster Abe passed a bill that allowed the "reinterpretation" of Article 9 of the Constitution. This enables Japan's armed forces in the future to exercise the right of collective self-defense under certain conditions, including the ability for the JSDF to assist its American ally, should the US come under attack.[4] The cabinet announcement stated that the "international environment surrounding Japan has become increasingly severe" and advocated more active measures to prevent conflict and deter possible threats to national security.[5]

According to the previous interpretation of Japan's constitution, Japan

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[4] "Japan to Allow Military Role Overseas in Historic Move," *BBC News,* September 18, 2015, http://www.bbc.com/news/world-asia-34287362; and "Is Japan Abandoning its Pacifism," *BBC News,* September 23, 2015, http://www.bbc.com/news/world-asia-34278846.

[5] Japan Ministry of Foreign Affairs, "Cabinet Decision on Development of Seamless Security Legislation to Ensure Japan's Survival and Protect its People," *Japan's Security Policy*, July 1, 2014, http://www.mofa.go.jp/fp/nsp/page23e_000273.html.

possessed the right of collective self-defense, meaning the right to defend another country that has been attacked by an aggressor. However, exercising that right would have violated the constitution's war-renouncing Article 9. Article 9 of the 1947 Constitution states:

> Aspiring sincerely to an international peace based on justice and order, the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes … In order to accomplish the aim of the preceding paragraph, land sea, and air forces, as well as other war potential, will never be maintained. The right of belligerency of the state will not be recognized.[6]

Bureaucrats from Japan and United States have long worked closely together to make incremental yet steady changes to Japan's security policies, often within the framework of the US-Japan alliance framework. The 2015 "reinterpretation" was actually part of a series of interpretations of Japan's post-war constitution since the Korean War. General Douglas MacArthur in the 1945 Potsdam Declaration prescribed three primary principles for Japan: popular sovereignty, pacifism and human rights;[7] with the preservation of Japanese pacifism embodied in Article 9. MacArthur's aims for the US occupation of Japan were two-fold: first, he wanted to eliminate any chance of future Japanese militarism through disarmament and demilitarization; second, he sought to establish a democratic system of government to extinguish the feudalistic aspects of Japanese society that Washington perceived as responsible for Japan's militarism.[8]

As the Cold War progressed, Japan's strategic importance grew and the Korean War gave impetus for revising Article 9. When North Korea invaded South Korea in 1950, the US occupational force in Japan was deployed to the peninsula. To fill the military vacuum by providing for national defense capability, MacArthur ordered Japan to create the National Police Reserve

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[6] Prime Minister of Japan and His Cabinet, *The Constitution of Japan*, http://japan.kantei.go.jp/constitution_and_government_of_japan/constitution_e.html.
[7] Hiroyuki Hata and Go Nakagawa, *Constitutional Law of Japan* (Netherlands: Kluwer Law International, 1997), 18-21.
[8] Richard A. Fisher, "The Erosion of Japanese Pacifism: The Constitutionality of the 1997 US Japan Defense Guidelines," *Cornell International Law Journal* 32 (1999): 394-396.

(NPR).[9] The NPR was originally meant to be constabulary, however, the entry of Chinese Communist Forces in the war on the Korean Peninsula increased the scope of threat Japan faced and by 1954 the forces were renamed into the Japan Self-Defense Forces, trained and outfitted with US military equipment.[10] Thus while the original US initiative was focused on disarmament and restraining Japanese nationalism, the policy quickly shifted to enhancing Japan's military capabilities and a flexible interpretation of Article 9 to allow Japan to take on a more active part in its alliance with the US and regional security.

Since then, Washington has repeatedly pointed to the need for Japan to remove constitutional restrictions which have prevented Tokyo from participating in collective security arrangements.[11] Richard Nixon's 1969 Guam Doctrine made clear Washington's desire for America's allies to do more for their own defense, and this applied especially to Japan. The aim was to enhance allies' self-reliance, that is, give major responsibility for self-defense to its Asian allies, with only financial and technical assistance from the United States.[12] The post-Cold War international system then marked a departure from "exclusive defense" towards "collective defense." With no strategic threat to contain, Washington could now credibly threaten to abandon Japan. Conversely, Japan was more dependent than ever on the US to guarantee access to oil and to manage its tense relations with Pyongyang and Beijing.[13] In 1996, in the Tokyo Declaration, President Bill Clinton and Prime Minister Hashimoto Ryutaro shifted the US-Japan alliance emphasis from Article 5 ("the defense of Japan") to Article 6 ("peace and security in the 'Far East'").[14] The 1997 US-Japan Defense Guidelines laid out what

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[9] Michael A. Panton, "Politics, Practice and Pacifism: Revising Article 9 of the Japanese Constitution," *Asian-Pacific Law & Policy Journal* 11, no. 2 (2010): 177.
[10] Kazumi Kuzuhara, "The Korean War and The National Police Reserve of Japan: Impact of the US Army's Far East Command on Japan's Defense Capability," *Boei Kenkyusho Kiyo (NIDS Security Studies)* 8, no, 3 (March 2006): 21, 107.
[11] Chanlett-Avery and Rinehart, "The US-Japan Alliance," 4-5.
[12] F. C. Langdon, *Japan's Foreign Policy* (Vancouver: University of British Columbia Press, 1973), 109.
[13] David Arase, "Japan, the Active State? Security Policy after 9/11," *Asian Survey* 47, no. 4 (July/August 2007): 566.
[14] Japan Ministry of Foreign Affairs, "Japan-US Joint Declaration on Security – Alliance for the 21st Century," *Japan-US Security Arrangements,* April 17, 1996, http://www.mofa.go.jp/region/n-america/us/security/security.html.

Japan's new regional role meant: Article 9 was reinterpreted to allow the JSDF to respond to regional contingencies by supporting American forces exclusively in non-combat roles such as logistics and information-sharing.[15]

Article 9 however has since become a core part of Japan's civic identity, with strong majorities of the general population and policy-makers internalizing the ideals of Article 9 and taking great pride in its meaning. The trauma of the atomic bombing of Hiroshima and Nagasaki, and the catastrophic defeat in WWII that discredited militarism, created a profound commitment to pacifism.[16] Due to Japan's collective identity and group-ist dynamic,[17] popular opposition to Abe's security and defense policies remains strong and significant despite Japan's changing security environment. In a series of *Asahi Shimbun* polls in July 2015, 57 percent disagreed with the proposed bill to allow collective self-defense and expand SDF activities abroad. An overwhelming 72 percent disagreed that Prime Minister Abe had been "courteous" when addressing the public about the security bills and a majority 55 percent disapproved of how the opposition parties reacted to the proposed bills. Moreover, 48 percent polled also believed that the security bills violated the Japanese Constitution, and a majority 45 percent could not foresee continuing support for Abe.[18]

The September 2015 bill was met with protest, with an estimated 25,000 people gathering at Shibuya in the previous month to "Save Article 9."[19] Student activism movements grew in response to the "reinterpretation." The most prominent has been the Students Emergency Action for Liberal

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[15] Japan Ministry of Defense, "The Guidelines for Japan-US Defense Cooperation (September 23, 1997)," *The 1997 Guidelines,* 2016, http://www.mod.go.jp/e/d_act/anpo/19970923.html.
[16] Arase, "Japan, the Active State? Security Policy after 9/11," 562.
[17] On Japanese group-ism and collective identity see Ruth Benedict, *The Chrysanthemum and the Sword: Patterns of Japanese Culture,* 2nd ed. (Boston and New York: Mariner, 2005), 55-57; and Laurence W. Beer, "Group Rights and Individual Rights in Japan," *Asian Survey* 21, no. 4 (April 191): 437-453.
[18] "Asahi Shimbun Public Opinion Poll (07/19/2015)," July 19, 2015, accessed via The Maureen and Mike Mansfield Foundation Asian Opinion Poll Database, http://mansfieldfdn.org/program/research-education-and-communication/asian-opinion-poll-database/asahi-shimbun-public-opinion-poll/.
[19] Janak Rogers, "The Debate over Japanese Pacifism and Article 9," *ABC Radio National,* August 13, 2015, http://www.abc.net.au/radionational/programs/earshot/japanese-pacifism-and-article-9/6695058.

Democracy, which evolved out of opposition to Japan's 2013 state secrets law under which whistleblowers and journalists face imprisonment for revealing and reporting sensitive information.[20] Many opponents believed that Abe had used his parliamentary majority to railroad the democratic process and unilaterally pass the security bills despite widespread opposition.[21] Yet, the Prime Minister's position represents a significant conservative element within Japanese society that desires to shed the perceived weakness and deference characterizing Japan's post-WWII stature. Reviving nationalist sentiments and a common perception of security problems bind together much of Japan's bureaucracy and political parties—the ruling Liberal Democratic Party (LDP) and its main opposition, the Democratic Party of Japan (DPJ) are often in agreement on foreign and defense policy.[22] Moreover, this issue is considered a backburner compared to Abe's ability to stimulate Japan's economy.[23] This was demonstrated in July 2016 when Abe's LDP secured a clear majority in the upper house elections, meaning the conservative LDP has a clear path to revise the pacifist constitution.[24]

China and South Korea, however, have vehemently opposed Japan's efforts to revise Article 9. Indeed, the rewriting of the constitution has been used as reasons to lament Japan's latent nationalism and re-militarization, and have consequently contributed to a reactive process in which China and South Korea have acted to counter an "unrestrained" and militarized Japan. For instance, the *China Daily* newspaper claimed that the reinterpretation of Article 9 promoted a "new Cold War" with the US, Japan and South Korea

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[20] Linda Seig and Teppei Kasai, "Japan Student Group Injects New Exuberance into Anti-war Protests," *Reuters,* August 28, 2015, http://www.reuters.com/article/us-japan-politics-students-idUSKCN0QW2KO20150828. See also "We Demand Politics of Freedom and Democracy," *Students Emergency Action for Liberal Democracy,* 2015, http://sealdseng.strikingly.com/.

[21] Justin McCurry, "New Generation of Japanese Anti-war Protestors Challenge Abe," *The Guardian,* September 16, 2015, http://www.theguardian.com/world/2015/sep/16/japanese-anti-war-protesters-challenge-shinzo-abe.

[22] Arase, "Japan, the Active State? Security Policy after 9/11," 574.

[23] Justin McCurry, "Japan Could Change Pacifist Constitution after Shinzo Abe Victory," *The Guardian,* July 11, 2016, https://www.theguardian.com/world/2016/jul/11/japan-could-change-pacifist-constitution-after-shinzo-abe-victory.

[24] Debito Arudou, "For Abe, it Will Always Be About the Constitution," *The Japan Times,* July 31, 2016, http://www.japantimes.co.jp/community/2016/07/31/issues/abe-will-always-constitution/#.WH63qfl97RY.

in one camp, and China, North Korea and Russia in the other.[25] China's Ministry of Defense News Channel also stated that Japan had "manufactured incidents and stirred up tension to pave the way for easing constitutional curbs that have kept the military out of overseas conflicts for nearly 70 years."[26] On a different occasion it also claimed that "Japan's lift of the ban of collective self-defense is not an isolate incident but a key move in "Abe's militarism" (sic)."[27]

South Korea's *Yonhap News* made similar claims, stating that "The South, a onetime colony of Japan, has remained cautious over the laws as Japan under its conservative leader Shinzo Abe has appeared reluctant to fully atone for its wartime atrocities including the sexual enslavement of Korean women during World War II."[28] In another article it placed the Abe government's "move to beef up the nation's military power without a clear apology for its imperialist past" alongside "North Korea's nuclear weapons drive" as the two major obstacles to East Asian peace and stability.[29] Working with Washington to enhance self-reliance and increase Japan's capacity to contribute to the alliance has thus led to a fear of re-militarization and ultra-nationalism from China and South Korea of an unrestrained Japan, which may one day be also no longer restricted by Washington's security guarantee, yet still have advanced military capabilities derived from the alliance.

Yet contemporary Japanese nationalism and its motivations for a more independent and self-reliant defense policy and force structure has often been misunderstood in academic and media discussion. The Chinese and South Korean reporting on Japanese opinion polls and protests have contributed to

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[25] Zhang Tao, "Japan's Moves Risk Creating a New Cold War," *China Daily,* April 5, 2016, http://english.chinamil.com.cn/news-channels/pla-daily-commentary/2016-04/05/content_6992383.htm.
[26] Zhang Tao, "Japan to Revise Weapons Exports Guidelines, Despite Political, Public Concerns," *PRC Ministry of National Defense News Channel*, March 6, 2014, http://eng.mod.gov.cn/Opinion/2014-06/16/content_4516734.htm
[27] Guo Renjie, "Where will Japan Head for After Lifting Ban on Collective Self-defense," *PRC Ministry of National Defense News Channel,* July 3, 2014, http://eng.mod.gov.cn/Opinion/2014-07/03/content_4519783.htm.
[28] "S. Korea Renews Calls on Japan to Enforce Security Laws in Peaceful Manner," *Yonhap News Agency,* March 29, 2016, http://english.yonhapnews.co.kr/search1/2603000000.html?cid=AEN20160329007051315.
[29] "Japan Urged Not to Upend Regional Peace," *Yonhap News Agency,* August 13, 2015, http://english.yonhapnews.co.kr/search1/2603000000.html?cid=AEN20150813006900315.

the perception that a clear majority of Japanese society deem the new security bills as unconstitutional and an affront to its pacifist nature. This has further been compounded by international reporting of ministerial visits to the Yasukuni shrine (which honors the Japanese war dead, including convicted war criminals), and the perceived historical revisionism in a select number of Japanese textbooks.[30] This has contributed to the shorthand explanation that Abe's current national security policy is a revival of Japan's WWII ultra-nationalist and imperialist imperatives.

However, Japan's sense of national consciousness and identity takes root in Japan's cultural and ethnic homogeneity, maritime boundaries, and "unique" fusion between Western and Asian civilizations.[31] It is based on the idea that the Japanese people have always existed as a separate people, that they possess unique attributes and pure blood, and that they have a unique mission in bridging the divide between East and West.[32] Japan's rapidly aging population and low fertility rate are therefore often labeled as more pressing threats to the survivability of the Japanese state.[33]

Thus, although popular connotations of Japanese nationalism trace it to imperialist ambitions, Japan's national consciousness is rather a distinct expression rooted in pacifist ideals and feelings of "uniqueness." Indeed its 2013 NDPG termed its new approach to taking a greater role in international operations as "Proactive Contribution to Peace" and "Proactive Pacifism.[34] The Japanese public and bureaucracy has been largely in agreement about the

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[30] Eugene A. Matthews, "Japan's New Nationalism," *Foreign Affairs* 82, no. 6 (November/December 2003), https://www.foreignaffairs.org/articles/asia/2003-11-01/japans-new-nationalism.

[31] Sandra Wilson, "Rethinking Nation and Nationalism in Japan," in *Nation and Nationalism in Japan,* ed. Sandra Wilson (Abingdon: Routledge, 2002), 2.

[32] Wilson, "Rethinking Nation and Nationalism in Japan," 2; and see Yukio Hatoyama, "Address by H.E. Dr. Yukio Hatoyama Prime Minister of Japan at the Sixty-fourth Session of the General Assembly of the United Nations," Prime Minister of Japan and his Cabinet, September 24, 2009. http://www.un.org/ga/64/generaldebate/pdf/JP_en.pdf

[33] Nicholas Eberstadt and Richard Katz, "Implications of Japan's Changing Demographics," *The National Bureau of Asian Research Roundtable* (October 10, 2012), http://nbr.org/research/activity.aspx?id=304; and Mark Mohr, "Japan's Declining Population: Clearly a Problem, But What's the Solution?" *Woodrow Wilson International Center for Scholars Asia Program Special Report* 141 (July 2008), https://www.wilsoncenter.org/sites/default/files/Asia_141.pdf.

[34] Japan Ministry of Defense, *National Defense Program Guidelines for FY2014 and Beyond* (Tokyo: Security Council and Cabinet, December 17, 2013), 5.

threats to its livelihood—North Korea's nuclear program, China's comprehensive military transformation, South Korea's peer competitiveness and hostility, and the fluctuating credibility of America's security guarantee. Indeed, recent incidents of North Korean nuclear and ballistic missile testing, Chinese incursions into Japanese territorial waters, and South Korean anti-Japanese protests have led to an erosion of support for Article 9. [35] Compared to the 2015 polls, in 2006 opposition to constitutional revision was 10 points higher, at 67 percent.[36] As well, in a 2016 poll, 86 percent of Japanese had an unfavorable view of China, with 81 percent associating it with arrogance, 76 percent viewing it as nationalistic and 71 percent as violent.[37]

Requirements for the US-Japan Alliance

For Washington, Japan remains its most geostrategically significant ally in the region. Conversely, for Japan, the alliance with the US is the key pillar of its foreign and defense policy due to the American provision of extended deterrence. Japan's naval force structure has remained largely structured as an adjunct to the US Navy to meet alliance commitments in East Asia.[38] Japan has served as a critical hub for US forward deployed forces, with approximately 50,000 American soldiers stationed in Japan and the exclusive use of approximately 90 facilities. Through this arrangement, the US has guaranteed Japan's security, including through extended deterrence under the US "nuclear umbrella."[39] At the end of the Cold War, there were concerns of the alliance being "adrift" without a purpose.[40] Yet since the late 1990s, the rise of China and increasing North Korean belligerence gave US-Japan

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[35] Andrew L. Oros, "The Politics of National Security," in *Routledge Handbook of Japanese Politics,* ed. Alisa Guander (Abingdon: Routledge, 2011), 322; and Masaru Tamamoto, "A Land Without Patriots: The Yasukuni Controversy and Japanese Nationalism," *World Policy Journal* 18, no. 3 (Fall 2001): 38-39.
[36] Bruce Stokes, "Japan Elections Come Amid Shifting Attitudes on Country's Military Posture," *Pew Research Centre: Fact Tank,* July 19, 2013, http://www.pewresearch.org/fact-tank/2013/07/19/japan-elections-come-amid-shifting-attitudes-on-countrys-military-posture/.
[37] Bruce Stokes, "Hostile Neighbors: China vs. Japan," *Pew Research Center,* September 13, 2016, http://www.pewglobal.org/2016/09/13/hostile-neighbors-china-vs-japan/.
[38] Patalano, "Japan as a Seapower," 334.
[39] Emma Chanlett-Avery et al, "Japan-US Relations: Issues for Congress," Congressional Research Service Report RL33436 (Washington DC: Library of Congress, September 29, 2015), 17.
[40] See Yoichi Funabashi, *Alliance Adrift* (Washington DC: Brookings Institution Press, 1999); and Kurt M. Campbell, "Energizing the US-Japan Security Partnership," *Washington Quarterly* 23, no. 4 (2000): 125-134.

relations a new guiding strategic rationale. However, the revitalization of the alliance to improve the operational capability as a combined force has contributed to the perception of a remilitarizing Japan fueled by right-wing nationalism and sustained by American political support and advanced military technology.

The US-Japan alliance has been a legacy of the American occupation of Japan after World War II. Unlike other defense treaties, the US pledge to protect Japan's security is not reciprocal.[41] During the Cold War, the US increasingly viewed Japan as geostrategically significant not only to counter the Soviet threat in the Pacific, but also to hedge against the possibility of an aggressive China.[42] Prime Minister Shigeru Yoshida's (1946-1947 and 1948-1954) "Yoshida Doctrine" resisted Washington's push for a full-scale Japanese rearmament or a collective security arrangement. Yoshida argued that Japan was democratic and peaceful, and that world opinion would protect Japan. More importantly, Article 9 forbade any remilitarization and public opinion was firmly against change. Yoshida also appealed to containment ideas by arguing that rearmament would impoverish Japan as it would alienate its neighbors and block off essential markets and resources to the small island nation.[43] This approach resulted in a highly asymmetric alliance. Although the US has pledged to protect Japan's security, the treaty also grants the US the right to have military bases in Japan, the right to project military power from these bases against a third country without consulting Tokyo, the right to veto any third country's military personnel in Japan, extraterritorial legal rights for US military personnel, the right to intervene to quell domestic disorder in Japan, and an indefinite time period for the treaty.[44]

The alliance and the consequent institutionalization of the Yoshida Doctrine thus politicized the American guarantee of Japanese security. Japanese civic identity adopted the Yoshida Doctrine. Consequently, Japanese public

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[41] Chanlett-Avery and Rinehart, "The US-Japan Alliance," 28.
[42] Christopher Layne, "China's Challenge to US Hegemony," *Current History* 107, no. 705 (January 2008): 13; and Mearsheimer, "China's Unpeaceful Rise," 160.
[43] Keith A. Nitta "Paradigms," in *US-Japan Relations in a Changing World,* ed. Steven Vogel (Washington DC: Brookings Institution Press, 2002), 78.
[44] Kenneth B. Pyle, *The Japanese Question: Power and Purpose in a New Era,* 2nd ed. (Washington DC: The AEI Press, 1996), 27.

opinion often associates the alliance with the American military footprint (particularly in Futenma, Okinawa[45]), the domestic costs of being dependent solely on the US, and foregoing certain sovereign rights. Moreover, it set a pattern for the tumultuous discussion on the divisive issues of the interpretation of the constitution, the rearmament of Japan, and the relationship with the US. Due to the success of the doctrine in achieving economic growth and Japan's desire for political stability and group consensus, these debates were often shelved,[46] further reinforcing the ideal type of Japan as a pacifist trading nation.

Thus the movement of the US-Japan alliance from an asymmetric arrangement towards a more balanced security partnership has been motivated not just by Washington's expectations for Japan to take on more of the burden and reduce its "free riding," but also by the Japanese bureaucracy who has aimed to reduce Japan's passivity and dependence in foreign affairs.[47] Part of the changing structure of the alliance has also related to the fiscal situation of Japan and the US as both economies are under strain and managing low growth. Whilst Tokyo recognized Washington's rebalance objectives, it remained concerned about the ability of Washington to commit due to its fiscal constraints and defense sequestration. Japan's Ministry of Defense, for instance, noted that the 2014 QDR highlighted that the risks to American forces would increase significantly if sequester-level cuts continued into FY2016.[48] Yet hosting American troops has placed strains on Japanese communities, particularly in Okinawa. Compounding basing controversies, Japan has over the years provided up to USD4 billion annually in direct and indirect host-nation support (HNS), which constitutes approximately 75 percent of the total US cost of maintaining troops in

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[45] For controversies surrounding US basing in Japan see: Emma Chanlett-Avery and Ian E. Rinehart, "The US Military Presence in Okinawa and the Futenma Base Controversy," Congressional Research Report R42645 (Washington DC: Library of Congress, January 20, 2016); and Aurelia George Mulgan, "Managing the US Base Issue in Okinawa: A Test for Japanese Democracy," *Japan Studies* 20, no. 2 (2000): 159-177.

[46] Kenneth B. Pyle, "Japan's Postwar National Purpose," in *Japan and North America, Volume II: The Postwar,* ed. Ellis Krauss and Benjamin Nyblade (London and New York: RoutledgeCurzon, 2004), 47.

[47] Sun-Ki Chai, "Entrenching the Yoshida Defense Doctrine: Three Techniques for Institutionalization," *International Organization* 51, no. 3 (Summer 1997): 395.

[48] Japan Ministry of Defense, *Defense of Japan 2014* (Tokyo: Ministry of Defense, 2014), http://www.mod.go.jp/e/publ/w_paper/2014.html.

Japan.[49] The 2012 estimate of costs related to the stationing of American forces in Japan was USD7.16 billion per annum,[50] while the 2015 five-year deal was set to even increase the amount of support provided by Tokyo.[51] The Ministry of Finance's calls to cut Japan's budget spending for US forces stationed in Japan were opposed by Washington, despite a public desire for Tokyo to restore public finances on top of Japan's expanded role in the alliance through new security legislation.[52]

In this context, requirements for the US alliance entails Tokyo to focus on bolstering self-reliance through developing capabilities to support US operations in the region. Yet because of its perception of American detachment to the region, it also seeks enhanced security cooperation with other US partners. Despite economic stagnation, Tokyo has kept a constant one percent share of its GDP for military expenditure. [53] It has proved to be the one of the most effective Asia-Pacific countries in managing this constraint on its defense resources. The Japan Maritime Self-Defense Force (JMSDF) is still widely regarded as the most powerful navy in the Asia-Pacific after USPACOM, and Japan's alliance with the US based on the Japan-US Security Treaty[54] has long been an anchor of the US security role in Asia.[55] The Japanese navy has evolved to "combine enhanced capabilities to retain sea control in the Sea of Japan and the East China Sea with extended

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[49] Included in this amount is the salaries of approximately 25,000 Japanese employees at US military installations. See Stephen Dagget, "Defense Burdensharing: Is Japan's Host Nation Support a Model for Other Allies," Congressional Research Service Report 95-515 (Washington DC: Library of Congress, June 20, 1994), 1; and Emma Chanlett-Avery, William H, Cooper and Mark E. Manyin, "Japan-US Relations: Issues for Congress," Congressional Research Service Report RL33436 (Washington DC: Library of Congress, February 24, 2010), 8.

[50] See Japan Ministry of Foreign Affairs, "USFJ-related Costs borne by Japan (JFY2012 Budget)," *Japan-United States of America Relations,* April 13, 2016, http://www.mofa.go.jp/region/n-america/us/security/pdfs/arrange_ref6.pdf.

[51] "Japan to Increase Host-nation Support for US Forces in New Five-year Deal: Sources," *The Japan Times,* December 10, 2015, http://www.japantimes.co.jp/news/2015/12/10/national/japan-increase-host-nation-support-u-s-forces-new-five-year-deal-sources/#.Vz5PWpN97Vo.

[52] Tetsushi Kajimoto, "Japan MOFA Seeks Cuts in Host-nation Spending for US Military," *Reuters,* October 26, 2015, http://www.reuters.com/article/us-japan-economy-defense-idUSKCN0SK0TA20151026.

[53] Based on figures from *SIPRI Military Expenditure Database 1988-2015*.

[54] *A Mutual Security Assistance Pact* was signed in 1952, and was replaced by the 1960 *Treaty of Mutual Cooperation and Security*, in which Japan grants the US military basing rights on its territory in return for a US pledge to protect Japan's security. See Chanlett-Avery and Rinehart, "The US-Japan Alliance," 28.

[55] Chanlett-Avery and Rinehart, "The US-Japan Alliance," Summary.

operational reach and flexibility, including an expeditionary component to meet alliance and diplomatic commitments in East Asia and beyond its confines."[56] Its 2010 *National Defense Program Guidelines* (NDPG) signaled a definitive shift away from its static Cold War framework, outlining a new "dynamic defense force" to strengthen its deterrence and response capabilities.[57]

In 2012, Japan announced plans to increase its defense spending for the next five years, outlaying more than USD230 billion to acquire surveillance drones, fighter jets, naval destroyers and amphibious vehicles. This included the creation of a new amphibious unit, the Western Army Infantry Regiment, modeled on the US Marines, which would be called on to retake islands captured by an enemy[58]—a clear response to Chinese naval and aerial activity near the disputed Senkaku/Diaoyu Islands. Japan has also invested more in its indigenous defense industry and has loosened the restriction on arms exports. In 2014, the Ministry of Foreign Affairs set out the *Three Principles on Transfer of Defense Equipment*,[59] which allows arms exports if they contribute to international cooperation and Japan's national security.[60] Tokyo has since signed a February 2016 agreement with the Philippines allowing the transfer of defense equipment,[61] and announced the sale of six used maritime surveillance vessels to Vietnam.[62] In November 2016, Prime Minister Shinzo Abe confirmed that Japan would also donate two decommissioned Japan

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[56] Alessio Patalano, "Japan as a Seapower: Strategy, Doctrine, and Capabilities under Three Defence Reviews, 1995-2010," *Journal of Strategic Studies* 37, no. 3 (2014): 403-441.
[57] Japan Ministry of Defense, *National Defense Program Guidelines for FY2011 and Beyond* (Tokyo: Security Council and Cabinet, December 17, 2010), 6. See also NIDS, "Japan Examining the Dynamic Defense Force," in *East Asian Strategic Review 2013* (Tokyo: National Institute for Defense Studies, 2013), 105.
[58] Zachary Keck, "Japan Might Create Island Assault Unit," *The Diplomat,* June 15, 2013, http://thediplomat.com/2013/06/japan-might-create-island-assault-unit/.
[59] Japan Ministry of Foreign Affairs, "The Three Principles on Transfer of Defense Equipment and Technology," in *Japan's Security Policy,* April 6, 2016, http://www.mofa.go.jp/fp/nsp/page1we_000083.html.
[60] "Japan OK'd 1,841 Defense Equipment Exports for Fiscal 2014 Under New Rules," *The Japan Times,* October 15, 2015, http://www.japantimes.co.jp/news/2015/10/15/national/politics-diplomacy/japan-okd-1841-defense-equipment-exports-fiscal-14-new-rules/#.VzP_tYR97RZ.
[61] Isabel Reynolds, "Japan, Philippines Seal Defense Equipment Transfer Deal," *Bloomberg News,* February 29, 2016, http://www.bloomberg.com/news/articles/2016-02-29/japan-seals-defense-equipment-transfer-deal-with-the-philippines.
[62] Ankit Panda, "Vietnam to Acquire Japanese Maritime Surveillance Ships," *The Diplomat,* August 2, 2014, http://thediplomat.com/2014/08/vietnam-to-acquire-japanese-maritime-surveillance-ships/.

Coast Guard (JCG) patrol vessels to Malaysia.[63] In the same month, India and Japan signed a civil nuclear pact, allowing Japan to export nuclear power equipment and technology to India.[64]

The JSDF has become more active in overseas missions, including efforts in the 2000s to support US-led coalitions in Afghanistan and the reconstruction of Iraq.[65] It has also contributed to global operations like anti-piracy patrols and UN peacekeeping operations.[66] In April 2015, the US and Japan agreed on revised *Guidelines for Japan-US Defense Cooperation*, the first update since 1997, which deepened alliance cooperation and could lead to an enhanced operational role for the JSDF.[67] Its new arms exports principles were also written with an aim to deepen cooperation in its R&D chains for defense innovation purposes. As Taisuke Hirose has argued,

> boosting bilateral DE&T cooperation would allow the United States and Japan to enhance interoperability and economic efficiency between the two militaries, both of which serve to strengthen the alliance. Moreover, military cooperation would tighten industrial cooperation and lead to further economic collaboration and exchanges of people and information. The new arms export principles can serve as a favorable wind for strengthening US-Japan relations.[68]

In 2014, Tokyo also revised its espionage laws, enacting the State Secrecy Law in 2014. The new law imposed tough penalties for civil servants, politicians and others who leak sensitive information related to diplomacy,

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[63] Gordon Arthur, "Japan Donating Large Patrol Boats to KL," *Shephard Media,* November 17, 2016, https://www.shephardmedia.com/news/imps-news/japan-donating-large-patrol-boats-kl/

[64] Sugam Pokharel and Chandrika Narayan, "India and Japan Sign Civil Nuclear Deal," *CNN,* November 11, 2016, http://edition.cnn.com/2016/11/11/world/india-japan-nuclear-deal/.

[65] See Christopher Hughes, "Japan's Security Policy, the US-Japan Alliance, and the 'War on Terror': Incrementalism Confirmed or Radical Leap?," *Australian Journal of International Affairs* 58, no. 4 (December 2004): 427-445; and Muneo Narusawa, "The Overseas Dispatch of Japan's Self-Defense Forces and US War," *The Asia-Pacific Journal: Japan Focus*. 12, issue 31, no. 2 (July 2014): 1-4.

[66] See Randall Schriver and Isabella Mroczkowski, "Japan's Global Engagement: A Mapping Study of Japan's Global Role and International Contributions," Project 2049 Institute Report, April 2012.

[67] Japan Ministry of Foreign Affairs, "The Guidelines for Japan-US Defense Cooperation," *Japan-US Security Arrangements,* April 27, 2015, http://www.mofa.go.jp/region/n-america/us/security/guideline2.html.

[68] Taisuke Hirose, "Japan's New Arms Export Principles: Strengthening US-Japan Relations," *CSIS Japan Chair Platform,* October 14, 2014, http://csis.org/publication/japan-chair-platform-japans-new-arms-export-principles-strengthening-us-japan-relations.

terrorism and espionage. Those who disclose information designated as "special secrets" could face up to 10 years in prison.[69] Particularly after the WikiLeaks and Edward Snowden leaks, Japan had been under increasing pressure from Washington to better protect state secrets—including intelligence shared by the US—and to have the ability to prosecute cases of espionage.[70] The passing of the new law—despite domestic protests arguing that it would conceal government misdeeds and limit press freedoms—was a critical step in advancing US-Japan intelligence sharing.

The alliance has significantly influenced the modernization of Japan's sophisticated capabilities to maximize interoperability with US forces, particularly in the naval and air space. These capability developments have not just targeted China's military transformation, but have also aimed at increasing joint warfighting capacities for a broad range of East Asian contingencies. Although Japan indigenously develops its own ships, these platforms have benefited from advanced American software and weapons. Japan is one of five allied countries (alongside South Korea, Australia, Spain and Norway) to have *Aegis*-equipped surface combatants.[71] The US and Japan have also cooperated in developing certain technologies—sensor, advanced kinetic warhead, second-stage propulsion and a lightweight nose cone—for the BMD interceptor missiles (SM-3 Block IIA version) used by only Japanese and American *Aegis* ships, with Japan funding a significant share of the effort.[72] In 2015, the US also authorized the sale of two additional *Aegis* destroyers and Japan announced plans to modernize its existing six destroyers with the latest *Aegis* system to bring its capability up to eight

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[69] Noriyuki Suzuki, "Abe's Play for Secrecy Law," *The Japan Times,* October 26, 2013, http://www.japantimes.co.jp/news/2013/10/26/national/abes-play-for-secrecy-law/#.Vz1DLPl97RY.

[70] Justin McCurry, "Japan Whistleblowers Face Crackdown Under Proposed State Secrets Law," *The Guardian,* December 6, 2014, http://www.theguardian.com/world/2013/dec/05/whistleblowers-japan-crackdown-state-secrets.

[71] O'Rourke, "Navy Aegis Ballistic Missile Defense (BMD) Program," 2.

[72] O'Rourke, "Navy Aegis Ballistic Missile Defense (BMD) Program," 7; US Department of Defense Missile Defense Agency, "US-Japan Cooperative Development Project Conducts Successful Flight Test of Standard Missile-3 Block IIA," *MDA News Release,* December 8, 2015, http://www.mda.mil/news/15news0009.html; and Daniel Wasserbly, "Next Generation SM-3 Missile Interceptor Takes First Flight," *IHS Jane's 360,* June 9, 2015, http://www.janes.com/article/52093/next-generation-sm-3-missile-interceptor-takes-first-flight.

BMD-capable *Aegis* destroyers using the SM-3.[73] The *Aegis*-equipped *Atago*-class destroyers are modelled after the American *Arleigh Burke* destroyers, and the *Osumi*-class tank landing ships can accommodate two American-designed Landing Craft Air Cushion (LCAC) hovercraft.[74] In particular, the sensors, radars and electronic countermeasures are based on American designs and utilize American logistical support.[75] And despite being indigenously developed, the JMSDF's submarine operations have been integrated with the US Navy so its crews benefit from joint training exercises.[76]

Japan has also invested in 42 F-35A JSFs, as part of its modernization process.[77] The key strategic explanation was that the aircraft could be used in concert with the JMSDF, the US Air Force and the US Navy's air wing in order to enhance allied operational capability and flexibility.[78] Upgrades to its aging F-2 fighters have included equipping them with American Joint Direct Attack Munition (JDAM) kits that enable the jets to have a precision strike capability.[79] Enhancing Japan's precision strike capability has strengthened interoperability and joint planning with the US, and increased

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[73] US Defense Security Cooperation Agency, "Japan – DDG (Guided Missile Destroyer) 7 and 8 AEGIS Combat System (ACS), Underwater Weapon System (UWS), and Cooperative Engagement Capability (CEC)," *USDCA News Release*, August 7, 2015, http://www.dsca.mil/major-arms-sales/japan-ddg-guided-missile-destroyer-7-and-8-aegis-combat-system-acs-underwater**;** and US Defense Security Cooperation Agency, "AEGIS Weapon Systems Upgrade," *USDCA News Release,* December 10, 2012, http://www.dsca.mil/major-arms-sales/japan-aegis-weapon-system-upgrade**.**

[74] Kyle Mizokami, "The Japanese Navy's 5 Most Lethal Weapons of War," *The National Interest,* July 5, 2015, http://nationalinterest.org/feature/the-japanese-navy%E2%80%99s-5-most-lethal-weapons-war-13256?page=2.

[75] See "Abukuma Class Destroyer Escorts, Japan," *naval-technology.com*, 2016, http://www.naval-technology.com/projects/abukuma-class/; and James Hardy, "DSCA Notification Sheds Light on Next-gen Japanese Destroyers," *IHS Jane's Defence Weekly,* August 12, 2015**,** http://www.janes.com/article/53567/dsca-notification-sheds-light-on-next-gen-japanese-destroyers**.**

[76] "Japan's Crack Submarine Fleet," *The Japan Times,* November 26, 2015, http://www.japantimes.co.jp/opinion/2015/11/26/commentary/japan-commentary/japans-crack-submarine-fleet/#.V0vV1fl97RY.

[77] "JASDF's Next Generation Fighter," *Lockheed Martin,* 2016, https://www.f35.com/global/participation/japan.

[78] Paul Kallender-Umezu, "Japan's Fighter Procurement Punch," *Defense News,* June 6, 2015, http://www.defensenews.com/story/defense/air-space/strike/2015/06/06/japan-fighter-f35-jasdf-f15-f2-upgrade-situational-awareness-sensors/28379749/.

[79] Patricia J. Parmalee, "JDAM Kits to Be Installed in Japan's F-2s," *Aviation Week,* September 1, 2003, http://aviationweek.com/awin/jdam-kits-be-installed-japans-f-2s.

Japan's defense capability and deterrent.[80] Such platforms, particularly JDAMs, serve as force multipliers within the alliance context. To assist further integration with US global command and control, Japan also acquired three RQ-4 *Global Hawk* unmanned surveillance systems (to be based at the USAF Misawa Air Base)[81] and E-2D Advanced Hawkeye airborne early warning and control aircraft (as part of its modernization of its 13 E-2C aircraft), which will enhance allied situational awareness of air and naval activity in the Pacific.[82] In addition to naval and associated air capabilities, a significant feature of allied efforts has been the multi-level intelligence system for coalition operations, the OED (OSIS [Ocean Surveillance Information System] Baseline Upgrade Evolutionary Development), which is a significant element for submarine detection in the East China Sea. Japan has been one of seven US allies to receive OED hardware and software, and key aspects of the US OSIS are co-located within JMSDF OSIS facilities.[83]

Transforming Japan's Defense Industry

Tied to Japan's desire to normalize its self-defense forces to meet the requirements of the US alliance has been the goal to liberalize its defense industry. Japan, as the world's third largest economy in terms of nominal GDP, has been a prolific supplier of sophisticated civilian technology to the global market place.[84] Japan's technological capabilities are at or above world levels in many areas that are critical for military systems. Its missiles, ships

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[80] Shinichi Ogawa, "Conventional Deterrence and Japan's Security," *NAPSNet Special Reports* (22 May 2012), http://nautilus.org/napsnet/napsnet-special-reports/conventional-deterrence-and-japans-security/.
[81] Zachary Keck, "Japan to Deploy Global Hawk Spy Drone by 2015," *The Diplomat,* August 24, 2013, http://thediplomat.com/2013/08/japan-to-deploy-global-hawk-spy-drone-by-2015/.
[82] Marina Malenic, "US Approves E-2D Sale to Japan," *IHS Jane's Defence Weekly,* June 3, 2015, http://www.janes.com/article/51957/us-approves-e-2d-sale-to-japan; Aaron Mehta, "Japan Officially Selects Osprey, Global Hawk, E-2D," *Defense News,* November 22, 2014, http://www.defensenews.com/story/defense/international/asia-pacific/2014/11/21/japan-officially-selects-osprey/19343099/; and Lara Seligman, "US Approves $1.2B Global Hawk Sale to Japan," *Defense News,* November 23, 2015, http://www.defensenews.com/story/defense-news/2015/11/23/us-approves-12b-global-hawk-sale-japan/76256262/.
[83] John Pike and Steven Aftergood, "OSIS Baseline Upgrade," FAS Intelligence Resource Program, January 16, 2000, http://fas.org/irp/program/process/obu.htm; and Desmond Ball and Richard Tanter, *The Tools of Owatatsumi: Japan's Ocean Surveillance and Coastal Defence Capabilities* (Canberra: ANU Press, 2015), 4.
[84] "GDP Ranking," The World Bank, 2016, http://data.worldbank.org/data-catalog/GDP-ranking-table.

and armored vehicles are technologically competitive with Western counterparts.[85] However, as a result of the post-war "peace-oriented" constitution, its participation in the global arms market has been severely limited.[86] Despite having strong competitive advantages in the civilian market, Japanese companies such as Mitsubishi Heavy Industry and Kawasaki Heavy Industry have not been able translate this strength into the defense market (See Table 6.1).[87] Additionally, Japan has not participated in international development programs such as the Joint Strike Fighter, and despite technology transfers agreements with the US, Japan's defense industry has remained relatively isolated from the international arms market.

Rank	Company	Country	Defense revenue (USD mn)	Total revenue (USD mn)	% of defense revenue
1	Lockheed-Martin	US	43,468	7,248	92
2	Boeing	US	29,500	94,571	31
3	BAE Systems	UK	23,622	25,278	91
4	Raytheon	US	22,384	24,069	93
5	General Dynamics	US	19,696	31,353	63
21	Mitsubishi Heavy Industries	Japan	4,033	34,835	12
68	Kawasaki Heavy Industries	Japan	884.66	13,517	7
69	Komatsu Ltd.	Japan	884.66	16,046	6
77	NEC	Japan	805.45	23,719	3
81	Fujitsu Ltd.	Japan	696.87	40,135	2

Table 6.1: Comparison of World and Japanese Defense Manufacturers (2016)

However, in April 2014, Prime Minister Abe's cabinet in accordance with its new National Security Strategy, set out its new arms export principles, *The Three Principles on Transfer of Defense Equipment and Technology*, which

[85] Kyle Mizokami, "Japan's Emerging Defense Export Industry," *USNI News,* February 23, 2015, https://news.usni.org/2015/02/23/japans-emerging-defense-export-industry.
[86] Arthur Alexander, *Of Tanks and Toyotas: An Assessment of Japan's Defense Industry* (Santa Monica CA: RAND, 1993), iii.
[87] "Top 100 for 2017," *DefenseNews,* 2017, http://people.defensenews.com/top-100/.

specified when overseas transfers of defense equipment and technology cooperation would be permitted. The new rules virtually lifted the ban on arms exports to the US.[88] This was a result of three dynamics. First, the Japanese government in the 1990s actively promoted the indigenization of the defense industry to enhance the nation's independence and to stimulate "technical competence, production efficiency, and economic growth."[89] Second, and in contrast to the first dynamic, Japan's stagnant economic growth—but also restriction to the JSDF market (which is slashing procurement in line with the overall Japanese budget)—created pressure on defense production base. Recently, over 50 Japanese defense firms or subcontractors have withdrawn from doing armaments work, while another 13 declared bankruptcy.[90] Lastly, the one-way technology transfer to Japan from the US had become a serious alliance management issue.[91] Thus, changes to the legislation were spurred by the desire to export the SM-3 Block IIA by the US to a third-party, as well as the desire to bid for the Australian submarine contract.[92]

As a result of the new principles, Japan has been in talks with several regional countries. Japan and India have discussed the sale of two *ShinMaywa* US-2 seaplanes that can perform patrol, search and rescue, and replenishment duties in the Indian Ocean. In 2015, both India and Thailand signaled interest in purchasing the *Soryu*-class to modernize their submarine fleets.[93] In December 2015, Japan and India agreed on a legal framework for the transfer of defense equipment and technology.[94] India also publicly welcomed

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[88] Japan Ministry of Foreign Affairs, "The Three Principles on Transfer of Defense Equipment and Technology," *MOFA Press Releases*, April 1, 2014, http://www.mofa.go.jp/press/release/press22e_000010.html; and Hirose, "Japan's New Arms Exports Principles: Strengthening US-Japan Relations."
[89] Alexander, *Of Tanks and Toyotas*, v.
[90] Richard A. Bitzinger, "Japan's Disappointing Entrée into the Global Arms Market," *RSIS Commentary* 128, (May 27, 2016).
[91] Hirose, "Japan's New Arms Exports Principles."
[92] Mizokami, "Japan's Emerging Defense Export Industry."
[93] Zachary Keck, "Watch Out, China: Asia's Dangerous Submarine Race Heats Up," *The National Interest,* April 23, 2015, http://nationalinterest.org/blog/the-buzz/watch-out-china-asias-dangerous-submarine-race-heats-12712.
[94] Japan Ministry of Foreign Affairs, "Agreement between the Government of Japan and the Government of the Republic of India Concerning the Transfer of Defence Equipment and Technology," Government of Japan and Government of Republic of India, December 2015, http://www.mofa.go.jp/files/000117470.pdf; and "India-Japan Pact Signed for Transfer of Defence Equipment, Technology," *Hindustan Times,* December 13, 2015,

Japan's constitutional reinterpretation on collective self-defense and invited Japan to permanently participate in the bilateral India-US Malabar naval exercises.[95] Also in December 2015, Japan and Indonesia agreed to strengthen security cooperation and begun talks on the transfer of defense equipment and technology as part of "Japan's intention to seamlessly support maritime support capabilities of the ASEAN countries."[96] Japan's first official defense pact to allow the transfer of defense equipment and technology to an ASEAN nation was signed with the Philippines in February 2016.[97] The agreement provided for Japan and the Philippines to conduct joint research and development, and joint production of defense equipment and technology.[98] Japan had already agreed in June 2015 to provide the Philippines with ten patrol vessels for the Philippine Coast Guard.[99] In May 2016, Japan and Vietnam also agreed to establish an "extensive strategic partnership," including ties between their defense industries.[100] Vietnam's Prime Minister Nguyen Xuan Phac expressed gratitude to Japan for furnishing its maritime law enforcement ships and requested ongoing support to deliver newly built patrol ships to Vietnam in addition to the six already received.[101]

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http://www.hindustantimes.com/india/india-japan-pact-signed-for-transfer-of-defence-equipment-technology/story-ryHeoqjR33PMVdrLpTEb9K.html.

[95] Dhruva Jaishankar, "India and Japan: Emerging Indo-Pacific Security Partnership," *RSIS Commentary* 130 (May 30, 2016).

[96] Japan Ministry of Foreign Affairs, "Japan-Indonesia Foreign and Defense Ministerial Meeting," *Japan-Indonesia Relations,* December 18, 2015, http://www.mofa.go.jp/s_sa/sea2/id/page3e_000437.html; and Kiyoshi Takenaka, "Japan, Indonesia Boost Security Ties, Eye Defense Equipment Transfers," *Reuters,* December 17, 2015, http://www.reuters.com/article/us-japan-indonesia-idUSKBN0U01XN20151217.

[97] The Philippines Department of National Defense, "The Philippines, Japan Sign Defense Agreement," *Official Gazette,* March 3, 2016, http://www.gov.ph/2016/03/03/ph-jp-sign-defense-agreement/.

[98] Renato Cruz de Castro, "The Philippines and Japan Sign New Defense Agreement," *CSIS Asia Maritime Transparency Initiative,* March 15, 2016, http://amti.csis.org/the-philippines-and-japan-sign-new-defense-agreement/.

[99] Toko Sekiguchi, "Japan to Provide Patrol Vessels to Philippines," *The Wall Street Journal,* June 4, 2015, http://www.wsj.com/articles/japan-to-provide-patrol-vessels-to-philippines-1433424771.

[100] "Japan, Vietnam Agree to Boost Defense Cooperation," *Yomiuri Shimbun,* May 29, 2016, http://the-japan-news.com/news/article/0002979487; and "Japan and Vietnam Expand Defense Partnership," *USNI News*, March 19, 2014, https://news.usni.org/2014/03/19/japan-vietnam-expand-defense-partnership.

[101] Japan Ministry of Foreign Affairs, "Japan-Viet Nam Foreign Ministers' Meeting," *Japan-Viet Nam Relations,* May 5, 2016, http://www.mofa.go.jp/s_sa/sea1/vn/page3e_000488.html; and "Maritime Security Ties to Grow, Hanoi and Tokyo Say," *The Japan Times,* May 6, 2016, http://www.japantimes.co.jp/news/2016/05/06/national/politics-diplomacy/japan-vietnam-agree-boost-maritime-security-cooperation/#.V096c_l97RY.

Yet, the loosening of arms exports has led to reactions from China. Beijing argued that Japan's actual intent was to contribute to a weapons build-up of in the region and use the US-Japan alliance as a form of containment. Chinese foreign ministry spokesperson Hua Chunying stated:

> against the backdrop of an intensifying swing to the right for Japanese politics, the intention behind and effect of massively loosening restrictions on the export of weapons really worries people … We hope that Japan can really learn the lessons of history, respect and face up the legitimate and reasonable security concerns of its neighbors and take real steps to promote regional peace and stability.[102]

And *Xinhua* claimed:

> by interfering in the South China Sea issue, Abe has revealed his ambition to wield greater military influence, fueled by the eased rules on arms exports … Heightened tensions will help Japanese arms manufacturers to sell more weapons to other countries, which will further complicate regional security."[103]

Reacting to China

Despite normalizing bilateral relations in 1972 and the third-largest two-way trade relationship in the world,[104] due to historical tensions, conflicting strategic interests and a territorial dispute over Senkaku/Diaoyu Islands, China-Japan relations have remained tense. Since the early 1990s, Japanese officials have become increasingly concerned about Beijing's lack of transparency over its political intentions, its growing economic clout and military modernization. Japan's 2015 defense white paper, *Defense of Japan,* stated:

> while advocating "peaceful development," China, particularly over maritime issues

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[102] Ben Blanchard, "China Says Worried by Japan Arms Exports Ban Revision," *Reuters,* February 25, 2014, http://www.reuters.com/article/us-china-japan-idUSBREA1O0NK20140225.
[103] "'China Threat' Ploy Used to Fulfill Rightist Agenda," *China Daily,* June 23, 2015, http://africa.chinadaily.com.cn/opinion/2015-07/23/content_21383959.htm.
[104] "Country Comparison to the World," *CIA: The World Factbook,* 2016, https://www.cia.gov/library/publications/the-world-factbook/fields/2050.html; and Japan Ministry of Finance, "Trade Statistics," *Customs & Tariff,* 2016, http://www.customs.go.jp/toukei/info/index_e.htm.

> where its interests conflict with others', based on its own assertions incompatible with the existing international legal order, continues to act in an assertive manner, including coercive attempts at changing the status quo, and is poised to fulfil its unilateral demands without compromise. China's actions include dangerous acts that may invite unintended consequences, raising concerns over China's foreign direction.[105]

The *Defense of Japan 2015* also discussed in-detail China's growing military capabilities and increasingly bold activities in Japanese territorial waters.[106] Consequently, China and Japan's naval and associated air capabilities suggest attempts to offset each other's level of armaments. This reactive process has been symptomatic of "the steps that one side takes to promote its own security [leaving] the other with a growing sense of vulnerability."[107] Richard Bush has argued that what makes this security dilemma unique—and indeed, quite problematic—is the historical antagonism: "Imperial Japan exposed and exploited China's weakness … fostering a deep sense of victimization among the Chinese and leaving scars on the Chinese psyche."[108]

Modern historical grievances are rooted in Japan's defeat of the failing Qing dynasty in 1895 and the 1931 invasion and brutal occupation of Manchuria.[109] Relations have been further aggrieved by repeated Japanese ministerial visits to the controversial Yasukuni shrine, certain textbooks promoting historical revisionism, and Tokyo's stance on its military transgressions during World War II, particularly the "comfort women" issue.[110] China, particularly its state-owned media, has reacted. For instance, the *China Daily* claimed in 2015:

> Japanese Prime Minister Shinzo Abe took reluctant steps toward saying the right

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[105] Japan Ministry of Defense, *Defense of Japan 2015* (Tokyo: Japan, 2015), 34.
[106] Gen Nakatani, "Foreword: On the Publication of Defense of Japan 2015," in *Defense of Japan 2015* (Tokyo: Ministry of Defense, 2015).
[107] Richard C. Bush, *The Perils of Proximity: China-Japan Security Relations* (Washington DC: Brookings Institution Press, 2010), 2.
[108] Bush, *The Perils of Proximity: China-Japan Security Relations,* 2.
[109] James H. Liu and Tomohide Atsumi, "Historical Conflict and Resolution between Japan and China: Developing and Applying a Narrative Theory of History and Identity," in *Meaning in Action: Constructions, Narratives, and Representations,* ed. Toshio Sugiman (Tokyo: Springer Japan, 2008), 331.
[110] Chun Han Wong, "China Shows Skepticism on Japan's 'Comfort Women' Apology," *The Wall Street Journal,* December 29, 2015, http://www.wsj.com/articles/china-shows-skepticism-on-japans-comfort-women-apology-1451386918.

> things in his speech on Aug 14 commemorating the 70th anniversary of the end of World War II. And despite not going far enough, he appears to believe that a few highly qualified and clearly limited expressions of polite regret can wipe clean Japan's historical debt towards China … Read superficially, Abe seemed to say all the right things.[111]

The CCP's promotion of nationalism through patriotic history education has in recent times sparked large public outpourings of anger at Japan. While the state-sponsored patriotic education was intended to serve domestic political purposes, the government has since faced greater difficulties stopping large anti-Japanese demonstrations.[112]

Mutual suspicion and mistrust escalated to open hostility in the 2000s over the disputed Senkaku/Diaoyu Islands in the East China Sea. Japan and China have engaged in struggles over the uninhabited islands since the 1970s,[113]and the contest escalated upon the identification of natural oil and gas reserves along the continental shelf around the islands.[114] Japan has claimed to have discovered the islands (*terra nullius*) in 1884, officially annexed them in 1885, and in 1972 at the end of the American occupation the Japanese government resumed responsibility for them.[115] China has based its claims on a Chinese "portolano"[116] from 1403, and has referred to the Chinese tributary state system in which Japan was a vassal state to Imperial China.[117] In line with this, some Chinese have also questioned Japan's sovereignty over the Ryukyu Islands (Okinawa), further antagonizing its territorial dispute with Japan, as

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[111] Martin Sieff, "Abe's Words Ring Hollow, Expose his Mask," *China Daily,* August 19, 2015, http://www.chinadaily.com.cn/cndy/2015-08/19/content_21642495.htm.
[112] Yinan He, "History, Chinese Nationalism and the Emerging Sino-Japanese Conflict," *Journal of Contemporary China* 16, no. 50 (2007): 9; and Suisheng Zhao, "Nationalism's Double Edge," *The Wilson Quarterly* 29, no. 4 (Autumn 2009): 76.
[113] M. Taylor Fravel, "Explaining Stability in the Senkaku (Diaoyu) Islands Dispute," in *Getting the Triangle Straight: Managing China-Japan-US Relations,* ed. Gerald Curtis, Ryosei Kokubun and Wang Jisi (Washington DC: Japan Center for International Exchange and Brookings Institution Press, 2010), 145.
[114] Victor H. Li, "China and Off-Shore Oil: The Tiao-yü Tai Dispute," *Stanford Journal of International Studies* 10 (1975): 143.
[115] "Who Really Owns the Senkaku Islands?," *The Economist,* December 3, 2013, http://www.economist.com/blogs/economist-explains/2013/12/economist-explains-1.
[116] A book of sailing directions with charts and descriptions of harbors and coasts.
[117] See John K. Fairbank, "Tributary Trade and China's Relations with the West," *The Journal of Asian Studies* 1. no. 2 (February 1942): 129-149; and Peter Hays Gries et al, "Historical Beliefs and the Perception of Threat in Northeast Asia: Colonialism, the Tributary System, and China-Japan-Korea Relations in the Twenty-first Century," *International Relations of the Asia-Pacific* 9, no. 2 (2009): 245-265.

well as broader relations as a whole.[118] In 2010 a Chinese fishing boat collided with two Japanese patrol boats in the East China Sea in two separate incidents, 40 minutes apart.[119] In response to Japan's detention of one of the fishing boat captains, the Chinese government blocked exports of rare earth minerals, preventing them from being loaded aboard ships at Chinese ports.[120]

In 2012, the Japanese government purchased three of the five islands from a private landowner in order to preempt their sale to Tokyo's ultranationalist governor, Shintaro Ishihara.[121] Beijing protested, condemned the act as "nationalism" and in violation with the status quo. Chinese citizens also staged a series of anti-Japan protests. By the end of 2012, China begun deploying CCG maritime law enforcement ships near the islands and stepped up "routine" patrols to assert jurisdiction in what it considered "Chinese territorial waters."[122] Often the ships waved signs saying, "Leave Chinese waters" and "Follow the Chinese law."[123] On December 13, 2012, the anniversary of the 1937 Nanjing massacre, a small surveillance plane belonging to China's State Oceanic Administration flew so low across the airspace over the disputed islands that it escaped Japan's land-based radar on a nearby outpost.[124]

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[118] Justin McCurry, "China Lays Claim to Okinawa as Territory Dispute with Japan Escalates," *The Guardian,* May 16, 2013, http://www.theguardian.com/world/2013/may/15/china-okinawa-dispute-japan-ryukyu; and Jane Perlez, "Calls Grow in China to Press Claim for Okinawa," *The New York Times,* June 13, 2013, http://www.nytimes.com/2013/06/14/world/asia/sentiment-builds-in-china-to-press-claim-for-okinawa.html.

[119] "Boat Collisions Spark Japan-China Diplomatic Row," *BBC News,* September 8, 2010, http://www.bbc.com/news/world-asia-pacific-11225522; and Justin McCurry, "Japan-China row Escalates Over Fishing Boat Collision," *The Guardian,* September 9, 2010, http://www.theguardian.com/world/2010/sep/09/japan-china-fishing-boat-collision.

[120] Keith Bradsher, "Amid Tension, China Blocks Vital Exports to Japan," *The New York Times,* September 22, 2010, http://www.nytimes.com/2010/09/23/business/global/23rare.html; and Valeria Bailey Grasso, "Rare Earth Elements in National Defense: Background, Oversight Issues, and Options for Congress" Congressional Research Service Report R41744 (Washington DC: Library of Congress, March 31, 2011).

[121] "Sino-Japanese Maritime Disputes: Islands Apart," *The Economist,* September 15, 2012, http://www.economist.com/node/21562987.

[122] "Chinese Ships Continue Patrolling Diaoyu Islands," *China Daily,* March 24, 2013, http://www.chinadaily.com.cn/china/2013-02/24/content_16251935.htm.

[123] Yuka Hayashi, Jeremy Page and Julian E. Barnes, "Tensions Flare as Japan Says China Threatened Its Forces," *The Wall Street Journal,* February 5, 2013, http://www.wsj.com/articles/SB10001424127887324445904578285442601856314.

[124] Japan Ministry of Defense, "China's Activities Surrounding Japan's Airspace," *Defense Activities,* 2016, http://www.mod.go.jp/e/d_act/ryouku/.

In 2013, China further escalated the situation by declaring it would establish an ADIZ in the East China Sea, covering the disputed Senkaku/Diaoyu Islands as well as airspace overlapping existing ADIZs of Japan, South Korea and Taiwan.[125] The ADIZ declaration increased indignation and anxiety as China did not consult with affected countries. Japanese and many international observers argued that the requirements for flight notification in the ADIZ went beyond international norms and impinged on freedom of navigation. China's declaration of the ADIZ implied Chinese military enforcement within the zone and, therefore, the overlap of ADIZs could lead to serious accidents and unintended clashes elevating the risk of conflict.[126] That year, Chinese warships also locked their fire-control radar on a Japanese destroyer and a helicopter on two separate occasions within the space of three weeks.[127] Beijing blamed the tensions on Japan's attempt to buy the islands while Japan's defense minister Itsunori Onodera responded that "we intend to push China very hard to restrain from engaging in such dangerous acts."[128]

By 2015, there were almost daily encounters as both countries scrambled fighter jets. Japan encountered Chinese aircraft 883 times in FY2016, up 73 percent from the previous fiscal year, and the second-highest amount since the JSDF begun publicizing numbers in 2001.[129] In 2016, tensions again escalated in June when Japanese P-3C patrol aircraft spotted a Chinese *Dongdiao*-class intelligence ship entering Japanese 12nm territorial waters,

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[125] "Statement by the Government of the People's Republic of China on Establishing the East China Sea Air Defense Identification Zone," *Xinhua,* November 23, 2013, http://news.xinhuanet.com/english/china/2013-11/23/c_132911635.htm.
[126] Ian E. Rinehart and Bart Elias, "China's Air Defense Identification Zone (ADIZ)," Congressional Research Service Report R43894 (Washington DC: Library of Congress, January 30, 2015), Summary.
[127] Reiji Yoshida and Mizuho Aoki, "Chinese Target-locked MSDF Ship, Chopper," *The Japan Times,* February 6, 2013, http://www.japantimes.co.jp/news/2013/02/06/national/politics-diplomacy/japan-says-chinese-warships-locked-weapons-radar-on-msdf/#.V0U4Ivl97RY.
[128] Hayashi, Page and Barnes, "Tensions Flare as Japan Says China Threatened Its Forces."
[129] Japan Ministry of Defense, "Statistics on Scrambles Through Fiscal Year 2015," *Joint Staff Press Release,* January 20, 2017, http://www.mod.go.jp/js/Press/press2017/press_pdf/p20170120_03.pdf. See also and Kiyoshi Takenake, "Japan's Scrambles Against Chinese Planes Hit Record High," *Reuters,* April 9, 2014, http://www.reuters.com/article/japan-china-scrambles-idUSL3N0N10Y920140409; and Kiyoshi Takenake, "Japan Jet Scrambles Against China Planes Hit Record this Summer," *Reuters,* October 19, 2015, http://www.reuters.com/article/japan-china-jets-idUSL3N12J1BG20151019.

off the south coast of Kyushu.[130] The incursion came just less than a week after a Chinese frigate entered the contested contiguous zone around Senkakau/Diaoyu Islands; this was only the second such recorded incident since the end of WWII after a Chinese submarine was detected in 2004.[131]

China's military modernization and actions in the East China Sea has driven not only the transformation of Japanese naval and associated air capabilities, but also its maritime constabulary needs. To strengthen its versatility in amphibious operations, particularly in the East China Sea, Tokyo decided to acquire 17 V-22 *Ospreys* from the United States.[132] Moreover, to counter China's actions and qualitative improvements in naval capabilities, Japan started to enhance its C4ISR, ASW and island defenses. With regards to C4ISR, in 2014 it built a fixed-air defense radar on Okino Erabu Island (on the northern tip of Okinawa) with an FPS-7 long-range search radar strengthening air control. It is also upgraded existing defense radars on Miyako (off Okinawa Island) and Takahatayama Islands (off Honshu Island) to the same system.[133] ASW capabilities were modernized with the 2015 launch of two *Izumo*-class helicopter destroyers—capable of carrying up to 400 troops, seven ASW SH-60K helicopters and seven MCH-101 mine countermeasure helicopters (which the JSDF has also decided to acquire).[134] At a full-load of 24,000tons, the *Izumo*-class has been the largest ship ever commissioned by the JSDF. It joined the two *Hyuga*-class helicopter carriers commissioned in 2009 and 2011, further enhancing Japan's power projection.[135]

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[130] Gabriel Dominguez, "Chinese Spy Ship Enters Japanese Territorial Waters," *IHS Jane's Defence Weekly,* June 15, 2016, http://www.janes.com/article/61424/chinese-spy-ship-enters-japanese-territorial-waters.
[131] "Chinese Naval Ship Enters Japanese Territorial Waters," *The New York Times,* June 15, 2016, http://www.nytimes.com/aponline/2016/06/15/world/asia/ap-as-japan-china-vessel.html?_r=0.
[132] Seth Robson, "Japan to Buy Ospreys, Global Hawks," *Stars and Stripes,* December 16, 2013, http://www.stripes.com/news/reports-japan-to-buy-ospreys-global-hawks-1.257894.
[133] Japan Ministry of Defense, "Build of Defense Capability in FY2013," in *The National Defense Program Guidelines and the Build-Up of Defense Capabilities* (Tokyo: Ministry of Defense, 2013), 114-117.
[134] James Hardy, "Japan Launches Second Izumo-class Helicopter Carrier," *IHS Jane's Defence Weekly,* August 27, 2015, http://www.janes.com/article/53858/japan-launches-second-izumo-class-helicopter-carrier.
[135] Paul Kallender-Umezu, "Izumo Drives Japanese Naval Buildup," *DefenseNews,* April 12, 2015, http://www.defensenews.com/story/defense/show-daily/sea-air-space/2015/04/12/japan-navy-izumo-helicopter-antisubmarine-china-asw-msdf/25411743/.

The JSDF also developed a next generation maritime patrol aircraft, the *Kawasaki* P-1, with an acquisition timetable of 65 aircraft at a rate of one to two per year.[136] The 2015 defense budget allocated USD3.2 billion for a bulk order of twenty planes in order to reduce unit costs. It also allocated USD9.1 million for capability improvements for its P-3Cs with regards to radars and infrared detection systems.[137] Moreover, Japan has begun development of a Variable Depth Sonar system which will be mounted on destroyers, enabling coordinated searches among multiple destroyers to enhance the ability to detect and classify submarines at greater depths.[138] As aforementioned, the JMSDF also made significant investments in its submarine fleet, with the aim to bring their fleet total from 16 to 22 by 2020.[139] Currently, the *Soryu*-class has been produced at a rate of one per year, greatly outstripping the decommissioning rate of its predecessor, the *Oyashio*-class.[140] The *Soryu*-class (4,100 tons submerged) is one of the most advanced diesel-electric submarines in the world, with an air independent propulsion (AIP) system that allows it to remain submerged longer than any other submarine of similar displacement.[141] Critical areas of JMSDF submarine activities targeted towards China have involved the "Tsushima Strait, the Miyako Strait between Okinawa Island and Miyako Island, and the Osumi Strait off the southern tip of Kyushu, each of which constitutes a passageway through which Chinese naval vessels must pass to move from the East China Sea to the Pacific Ocean."[142]

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[136] Franz-Stefan Gady, "Japan Seeks to Export its New Sub-Hunting Plane," *The Diplomat,* July 9, 2015, http://thediplomat.com/2015/07/japan-seeks-to-export-its-new-sub-hunting-plane/.
[137] Japan Ministry of Defense, *Defense Programs and Budget of Japan: Overview of FY2015 Budget* (Tokyo: Ministry of Defense, 2015), 2.
[138] Ministry of Defense of Japan, *Defense Programs and Budget of Japan: Overview of FY2016 Budget* (Tokyo: Ministry of Defense, 2016), 7.
[139] Desmond Ball, "Asia's Naval Arms Race" (Paper Presented at the 25th Asia Pacific Roundtable, Kuala Lumpur, Malaysia, May 30, 2011), 6.
[140] "Japan Submarine Capabilities," *Nuclear Threat Initiative*, June 30, 2014, http://www.nti.org/analysis/articles/japan-submarine-capabilities/.
[141] "SS Soryu Class Submarines, Japan," *naval-technology.com*, 2016, http://www.naval-technology.com/projects/sssoryuclasssubmarin/; and Kyle Mizokami, " 'Five Japanese Weapons of War China Should Fear," *The National Interest,* June 14, 2014, http://nationalinterest.org/feature/five-japanese-weapons-war-china-should-fear-10660.
[142] "Japan's Crack Submarine Fleet," *The Japan Times,* November 26, 2015, http://www.japantimes.co.jp/opinion/2015/11/26/commentary/japan-commentary/japans-crack-submarine-fleet/#.WJvSZNd97RY.

An additional measure for responding to China's movements around the Senkaku/Diaoyu Islands has been the modernization of Japan's maritime constabulary forces, the JCG, in order to match China's "white hull" force. Legislation relating to the JCG has enabled the coast guard to take actions still denied to the JMSDF. Japan's Coast Guard Law states:

> In situations where the crew of the vessel refuses to comply with repeated calls to stop, when they resist the captain or vice captain's enforcement of his duties, or when they try to flee, the director-general of the Japan Coast Guard, based on the vessel's appearance, its navigational patterns, suspicious behavior by the crew, and information gathered concerning other surrounding situations, can authorize the use of weapons against the vessel for the purpose of stopping the vessel, within reason, and when all the following stipulations apply, the captain or vice captain can then use force, within reason, against the vessel if he determines that there is no other way to stop it.[143]

Although the JMSDF has its own "Special Boarding Unit," it does not have authority to fire on enemy ships unless fired upon first. In contrast, the JCG is legally allowed to initiate armed conflict under the conditions of "justifiable defense" and during an "emergency." Warning shots, if ignored, can be followed by disabling fire targeted on the offending vessel's crew. [144]

In 2014 Japan commissioned two high-endurance *Shikishima*-class patrol cutters with landing helicopter pads (PLH-class)—according to the Commandant of the Japan Coast Guard, Admiral Yuji Sato "one of the largest-ever investments in the 66-year Japan Coast Guard history."[145] In 2015, it also introduced a crew rotation system across its patrol vessels in order to increase its operational capacity and awareness. Japan's FY2015 budget request included funding for an additional six new PL-class patrol vessels for 2016, six new Patrol vessel Medium (PM)-class ships for 2016-

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[143] The Nippon Foundation, "Japan Coast Guard Law (Law No. 28 of April 27, 1948 as amended through Law No. 102 of 1999)," in *Japan Coast Guard Laws and Regulations* (Tokyo: The Nippon Foundation Library, 2001), https://nippon.zaidan.info/seikabutsu/2001/00500/contents/00021.htm.
[144] Richard J. Samuels, "'New Fighting Power!' Japan's Growing Maritime Capabilities and East Asian Security," *International Security* 32, no. 3 (Winter 2007/08): 95-96.
[145] Quoted in Naohide Arakawa, "The Japan Coast Guard FY2015 Budget in Brief and New Senkaku Patrol Fleet," *The Japan International Transport Institute (JITI) Journal* 2, no. 4 (September 2015): 2.

2017, and life extension and upgrades for its two PLH-class cutters.[146] It also allocated USD1.71 billion to reinforce JCG fleet strength and staffing, including building six new Patrol vessel Large (PL)-class cutters dedicated to the Senkaku/Diaoyu Islands.[147] In March 2016, the JCG announced the purchase of an H225 medium-lift multi-purpose helicopter to bring its fleet total to 48.[148] It also announced in April 2015 the order of an unspecified number of *Falcon 2000* aircraft—long-range high-speed jet aircraft with sophisticated surveillance systems to enhance monitoring capability over maritime areas.[149] In November 2016, Japan's Cabinet Intelligence and Research Office (CIRO) reported that China had greatly increased unilateral oil and gas development along Japanese waters near the Japanese-controlled Senkaku/Diaoyu Islands.[150] The CIRO stated that the CCG had engaged in an "intimidation campaign" around the Senkaku/Diaoyu Islands in a five-phase campaign since 2012.[151]

In response, the CCG moved in the same direction by developing capabilities designed to counter Japanese superiority in constabulary forces. It added larger and better armed ships, and started to build a new coast guard base near Wenzhou port on the Chinese coast. This would give Chinese vessels easier access to the Senkaku/Diaoyu Islands.[152] Due to the operational requirements

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[146] Arakawa, "The Japan Coast Guard FY2015 Budget in Brief and New Senkaku Patrol Fleet," 2.
[147] Nao Arakawa and Will Colson, "The Japan Coast Guard: Resourcing and Responsibility," *CSIS: Asia Maritime Transparency Initiative,* April 1, 2015, http://amti.csis.org/the-japan-coast-guard-resourcing-and-responsibility/.
[148] "Japan Coast Guard Orders an Additional H225," *Airbus Helicopters,* March 14, 2016, http://www.airbushelicopters.com/website/en/press/Japan-Coast-Guard-orders-an-additional-H225_1943.html.
[149] "Japan Coast Guard Selects Dassault Aviation's Falcon 2000 Maritime Surveillance Aircraft After an International Competition," *Dassault Aviation,* April 22, 2015, http://www.dassault-aviation.com/en/dassault-aviation/press/press-kits/japan-coast-guard-selects-dassault-aviations-falcon-2000-maritime-surveillance-aircraft-after-an-international-competition/.
[150] Bill Gertz, "Japanese Intelligence Tells Pentagon China Engaged in Multi-Year Takeover Attempt of Senkaku Islands," *The Washington Free Beacon,* November 23, 2016, http://freebeacon.com/national-security/japanese-intelligence-tells-pentagon-china-engaged-multi-year-takeover-attempt-senkaku-islands/.
[151] "Japan Protests after Swarm of 230 Chinese Vessels Enters Waters near Senkakus," *The Japan Times,* August 6, 2016, http://www.japantimes.co.jp/news/2016/08/06/national/japan-ramps-protests-china-fishing-coast-guard-ships-enter-senkaku-waters/#.WG2aE_l97RY; and Gertz, "Japanese Intelligence Tells Pentagon China Engaged in Multi-Year Takeover Attempt of Senkaku Islands."
[152] "China Coastguard Plans Wenzhou Surveillance Base as Beijing Looks to Bolster Claims to Disputed Diaoyu Islands," *South China Morning Post,* June 14, 2015,

of the East China Sea, the Chinese construction of two 10,000ton high-endurance cutters has been similar to the capabilities of Japan's 9,000ton *Shikishima*-class cutters. Not only will they also be equipped with helicopter landing pads, but they also have similar hulls, anti-aircraft CIWS mounts and gun turrets.[153] China's Wuchang Shipbuilding Industry Company is in the process of constructing four new 5,000ton cutters while China Ship-building Industry Corporation has been contracted to build two 4,000ton cutters and an additional two surveillance ships.[154] Both class of ships are similar to JCG patrol vessels in terms of tonnage, speeds, lengths and helicopter flight decks.[155]

The Korean Peninsula

Japan has an uneasy relationship with both North and South Korea. North Korea's increased asymmetric capabilities, nuclear weapons test and belligerence pose a direct threat to Japan. More complex is its relationship with South Korea. It is often assumed that Japan and South Korea, whose democracies and capitalist markets are compatible, and who share anxieties over the security of its sea-lanes for merchant shipping, should naturally cooperate rather than compete. Rather, in spite of North Korean belligerence and increased Chinese aggressiveness, Japan and South Korea have struggled to maintain amicable relations. South Korea shares many of China's concerns regarding Japan's adjustment of its force posture due to Japan's WWII legacy on the peninsula and also has a territorial dispute with Tokyo over Takeshima/Dokdo Islands. South Korea's objective of reunification of the Korean peninsula overrides effective trilateral coordination between Tokyo, Seoul and Washington. However, the reunification of South and North Korea

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http://www.scmp.com/news/china/diplomacy-defence/article/1821265/china-coastguard-plans-wenzhou-surveillance-base; and "China Plans to Build Coast Guard Base Near Senkaku Islands: Sources," *The Japan Islands,* June 13, 2015, http://www.japantimes.co.jp/news/2015/06/13/national/politics-diplomacy/china-plans-to-build-coast-guard-base-near-senkaku-islands-sources/#.WG2rY_l97RY.

[153] Franz Stefan-Gady, "Beijing Builds 'Monster' Ship for Patrolling the South China Sea," *The Diplomat,* January 13, 2016, http://thediplomat.com/2016/01/beijing-builds-monster-ship-for-patrolling-the-south-china-sea/.

[154] Chuck Hill, "The Chinese Coast Guard to Build World's Largest Offshore Patrol Vessel – And More," *CIMSEC Blog,* February 8, 2014, http://cimsec.org/chinese-coast-guard-build-worlds-largest-offshore-patrol-vessel/9625.

[155] Gertz, "Japanese Intelligence Tells Pentagon China Engaged in Multi-Year Takeover Attempt of Senkaku Islands."

poses an existential threat to Japanese defense planners:

> A unified Korea that retains nuclear weapons is tilted towards China, refuses to countenance a continued security relationship with the United States that includes some continuing American military presence, and/or is resolutely hostile toward Japan in its vision of the future would represent a major foreign policy defeat for Japan and a problem of immense concern for the nation's future. A reunified Korea with renewed animus toward Japan would have long-term, unfavorable implications for Japanese security.[156]

North Korea has played a singular role in driving Japan's requirements for ballistic missile defense. The 1998 test of a *Taepodong* missile over Japan consolidated support for a sustained military alliance and the development of ballistic missile defense with its US ally. In March 1999, the JMSDF and JCG spotted two North Korean spy ships in Japanese waters in the Sea of Japan. In 2001, the JCG even sunk a North Korean spy ship disguised as a Chinese squid fishing vessel that had entered Japan's EEZ.[157] In 2002, Japanese public support for a hardline stance against North Korea increased after North Korea's leader Kim Jong-il admitted that his country had abducted at least 12 Japanese citizens in the 1970s and 1980s, eight of whom Pyongyang claimed to be dead.[158] This led to the 2003 launch of Japan's first independent spy satellites equipped with radar equipment and camera in order to monitor North Korea without relying on allied and foreign intelligence networks.[159]

In March 2010, North Korea sunk a South Korean warship (the *Cheonan*) and,

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[156] Michael H. Armacost and Kenneth B. Pyle, "Japan and the Unification of Korea: Challenges for US Policy Coordination," *NBR Analysis* 10, no. 1 (March 1999): 6.
[157] The incident is known in Japan as the "Battle of Amami-Ooshima." See "Coast Guard Sinks Suspect Ship in East China Sea," *The Japan Times,* December 23, 2001, http://www.japantimes.co.jp/news/2001/12/23/national/coast-guard-sinks-suspect-ship-in-east-china-sea/#.V0eLW5N976Y; and James Brooke, "North Korea Calls Japan's Sinking of Mystery Boat 'Brutal Piracy,'" *The New York Times,* December 27, 2001, http://www.nytimes.com/2001/12/27/world/north-korea-calls-japan-s-sinking-of-mystery-boat-brutal-piracy.html.
[158] "North Korea Confesses to Kidnappings," *BBC News,* September 17, 2002, http://news.bbc.co.uk/2/hi/asia-pacific/2262074.stm; and Jonathon Watts, "North Korea Apologises to Japan for Bizarre Tale of Kidnap and Intrigue," *The Guardian,* September 18, 2002, http://www.theguardian.com/world/2002/sep/18/japan.northkorea.
[159] James Brooke, "Japan Launches Spy Satellite Despite North Korean Threats," *The New York Times,* March 28, 2003, http://www.nytimes.com/2003/03/28/world/japan-launches-spy-satellite-despite-north-korean-threats.html; and Chanlett-Avery and Rinehart, "The US-Japan Alliance," 8.

in November 2010, attacked South Korea's *Yeonpyeong* Island with artillery fire. These incidents, combined with repeated missile launches and tests of nuclear devices spurred Japanese leaders—with widespread public support—to enhance BMD in cooperation with the US In 2002, Japan concluded that North Korea had about 100 *Nodong* mid-range missiles with adequate range (approximately 1,200km) to cover the whole Japanese archipelago.[160] In response, in 2004 Japan begun the development of its BMD system consisting of *Aegis*-destroyers to intercept ballistic missiles in the mid-course phase; Patriot PAC-3 missiles to intercept ballistic missiles in the terminal phase; sensor systems to detect and track ballistic missiles; and command and control, battle management; and communication systems to counter ballistic missiles through the coordination of weapon systems and sensor systems (See Figure 6.1).[161]

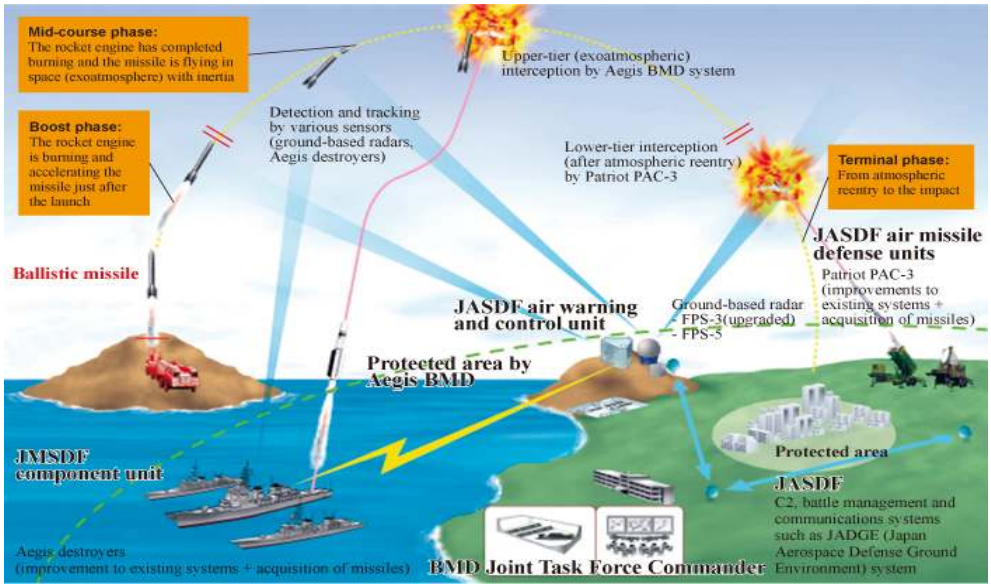

Figure 6.1: Japan's BMD Architecture and Concept of Operations[162]

As previously noted, Japan-US cooperation in this area has consisted of the development of the advanced ballistic missile interceptor, the SM-3 Block IIA, to be deployed on *Aegis* destroyers, as well as recertification of US PAC-

[160] James Brooke, "Japan Fears North Korea: US Promises Defense Shield," *The New York Times,* December 26, 2002, http://www.nytimes.com/2002/12/26/international/asia/26KORE.html.
[161] Japan Ministry of Defense, "Japan's BMD System," *Japan Defense Focus* 31 (August 2012), http://www.mod.go.jp/e/jdf/no31/specialfeature.html.
[162] Japan Ministry of Defense, "Japan's BMD System."

3 missiles.[163] In November 2016, the defense ministry also considered acquiring the US land-based THAAD system. The system intercepts missiles when they re-enter the atmosphere, supplementing its PAC-3 missiles and, if deployed, would give Japan a three-tiered BMD capability.[164]

Japan's naval modernization vis-à-vis South Korea has been much more complex due to a "recursive" relationship. That is, the two states cooperate when their interests converge, but revert to discreet shadowboxing and the elicitation of nationalism for domestic political gain.[165] Tokyo and Seoul normalized relations in 1965, however, despite mutual strategic interests such as North Korean belligerence and China's military transformations, Japan-South Korea relations have remained volatile due to the historical legacy of Japan's 35-year annexation of the Korean Peninsula (1910-1945).[166] The tone for mistrust and grievance against Japan—stemming from this time—has the economic and political oppression of the Korean, the indignity and humiliation felt by Koreans from the Japanese campaign to suppress Korean identity, and the forcing of Korean men into labor and Korean women into sex slavery continues to echo into the present day.[167] This has been compounded by the South Korean perception of Japan's lack of sincerity in its apologies and a matching Japanese perception of South Korea's insufficient appreciation for past apologies and reparations.[168]

The territorial dispute over Takeshima/Dokdo Islands and the failure to jointly demarcate an EEZ that overlap these islands, has also been a source for antagonism. Both sides have presented elaborate legal-historical cases.

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[163] Japan Ministry of Defense, *Defense Programs and Budget of Japan: Overview of FY2016 Budget* (Tokyo: Ministry of Defense, 2016), 11.
[164] "Japan to Upgrade Missile Interception System, Considers Three-tier Defense," *The Japan Times,* February 15, 2016, http://www.japantimes.co.jp/news/2016/02/15/national/politics-diplomacy/japan-upgrade-missile-defense-considers-acquiring-three-tier-system/#.V0eWO5N976Y.
[165] See Victor D. Cha, *Alignment Despite Antagonism: The US-Korean-Japan Security Triangle* (Stanford: Stanford University Press, 1999).
[166] See Peter Duus, *The Abacus and the Sword: The Japanese Penetration of Korea 1895-1910* (Berkeley: University of California Press, 1995).
[167] Alexander Bukh, "Japan's History Textbooks Debate. National Identity in Narratives of Victimhood and Victimization," *Asian Survey* 47, no. 5 (2007): 731; and Kiwoong Yang, "South Korea and Japan's Frictions over History: A Linguistic Constructivist Reading," *Asian Perspective* 32, no. 3 (2008): 63.
[168] Chanlett-Avery and Rinehart, "The US-Japan Alliance," 10.

South Korea's position has been that Dokdo Island was subjugated as Korean territory in 512BC when the Silla Kingdom conquered the Usan State (Ulleungdo and Dokdo Islands), which was noted in the geographical annals of King Sejong in 1454.[169] On its part, Japan has argued that Korea's historical claims are illegitimate because they are based on a mistaken description of the islands, and that Japan established sovereignty over the islands in the early 17th century when its sailors used them as a "navigational port, docking point for ships and a rich fishing ground."[170] It is important to note that both sides would stand to gain economically from formal ownership of the islands.[171] Japan and South Korea, as parties to the 1982 UNCLOS, would be entitled to a 200nm Exclusive Economic Zone and privileged access to the resources of the sea and seabed within the zone.[172]

Japan and South Korea relations are also influenced by their economic rivalry in global markets, having long competed in similar industries, particularly in electronics and metal manufacturing.[173] Inflation in Japan's currency (yen), relative to South Korea's won would erode South Korea's price competitiveness. In fact, through Prime Minister Abe's 2012 quantitative and qualitative easing program ("Abenomics"), [174] Japan took measures to depreciate certain electronics and metals prices through depreciating the yen, eroding South Korean export competitiveness (a key part of its economic growth) and weakening profit growth of many South Korean firms.[175] South Korea has run a trade deficit with Japan for more than 30 years and nine out of South Korea's top 10 exports goods are in direct competition with Japan's

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[169] ROK Ministry of Foreign Affairs, "Why Dokdo is Korean Territory," *Dokdo: Beautiful Island of Korea*, 2013, http://dokdo.mofa.go.kr/eng/dokdo/reason.jsp.
[170] Japan Ministry of Foreign Affairs, "Takeshima," *Japanese Territory,* July 30, 2014, http://www.mofa.go.jp/region/asia-paci/takeshima/index.html.
[171] Sean Fern, "Tokdo or Takeshima? The International Law of Territorial Acquisition in the Japan-Korea Island Dispute," *Stanford Journal of East Asian Affairs* 5, no. 1 (Winter 2005): 89.
[172] UN, "Part V: Exclusive Economic Zone," *United Nations Convention on the Law of the Sea,* http://www.un.org/depts/los/convention_agreements/texts/unclos/part5.htm.
[173] Jack Joo K. Ree, Gee Hee Hong, and Seoeun (Thelma) Choi, "Should Korea Worry about a Permanently Weak Yen?" *IMF Working Paper* WP/15/57 (July 2015), 12-13.
[174] See Joshua K. Hausman and Johannes F. Wieland, "Abenomics: Preliminary Analysis and Outlook," *Brookings Papers on Economic Activity* (Spring 2014): 1-63; and Andy Sharp, "Abenomics: Japan's Economic Shock Therapy," *Bloomberg,* May 20, 2016, http://www.bloomberg.com/quicktake/abenomics.
[175] Ree, Hong and Choi, "Should Korea Worry about a Permanently Weak Yen?," 22.

exports (See Table 6.2).[176] Many policy-makers in Seoul have perceived Japan's efforts to boost its export competitiveness as coming at the expense of South Korean industry. For instance, South Korea's finance minister and deputy minister, Hyun Oh-seok warned the G8 in 2013 that "these monetary policies are having quite a negative impact," and there needed to be "coordinated efforts to prevent … unintended side effects from [Japan's new] monetary policy."[177]

	Japan				South Korea		
Export		**USD bn**	**% of total exports**	**Export**		**USD bn**	**% of total exports**
1	Vehicles	141.9	22.0	**1**	Electronic equipment	134.3	27.1
2	Machinery	124.0	19.2	**2**	Vehicles	62.7	12.6
3	Electronic equipment	98.3	15.2	**3**	Machinery	58.3	11.8
4	Medical, optical, technical equipment	35.9	5.6	**4**	Ships, boats	33.2	6.7
5	Iron and steel	24.5	3.8	**5**	Plastics	27.7	5.6
6	Plastics	23.4	3.6	**6**	Medical, optical, technical apparatus	27.6	5.6
7	Organic chemicals	15.9	2.5	**7**	Mineral fuels	27.4	5.5
8	Precious metals	14.0	2.2	**8**	Iron and steel	18.7	3.8
9	Ships, boats	12.8	2.0	**9**	Organic chemicals	17.9	3.6
10	Rubber	9.8	1.5	**10**	Iron or steel products	11.1	2.2

Table 6.2: Comparison of Japan and South Korea's Top 10 Exports (2016)

Consequently, Washington expressed for many years its frustration at Japan and South Korea's failure to not only move past divisive historical issues and

[176] See Daniel Workman, "Japan's Top 10 Exports," *World Top 10 Exports,* July 30, 2017, http://www.worldstopexports.com/japans-top-10-exports/; and Daniel Workman, "South Korea's Top 10 Exports," *World's Top 10 Exports,* September 6, 2016, http://www.worldstopexports.com/south-koreas-top-10-exports/.

[177] Serena Tarling and Chris Giles, "G8 Needs to Deal with Impact of Abenomics, Says Hyun Oh-seok," *Financial Times,* June 2, 2013 https://www.ft.com/content/fdb54c5e-cb74-11e2-8ff3-00144feab7de.

build a cooperative security relationship, but also to forge a meaningful trilateral US-Japan-South Korea relationship.[178] In 2012, Seoul and Tokyo almost signed two agreements that would have instigated meaningful defense cooperation: a General Security of Military Information Agreement (GSOMIA), and an Acquisition and Cross-Servicing Agreement (ACSA). The idea of Japan and South Korea sharing military intelligence had been discussed since the late 1980s.[179] The GSOMIA would have allowed the two countries to more easily share classified information regarding common security issues like North Korea's nuclear and missile program. The ACSA would have provided a framework for logistical cooperation in situations such as disaster relief and peacekeeping operations.[180] Yet, the ACSA and GSOMIA agreements were suspended in July 2012 in response to domestic pressure with 61 percent of South Koreans opposed to the pacts, and 69 percent believing, specifically, that the US had been pressuring then-President Lee Myung-bak and his Cabinet to sign the GSOMIA.[181] Tensions over the cancellation of the agreements were further inflamed when President Lee visited Takeshima/Dokdo a month later. Tokyo reacted by recalling the ambassador to Seoul for 12 days, and the Japanese Cabinet proposed to refer the issue to the International Court of Justice to resolve the territorial dispute.[182] The GSOMIA agreement was eventually signed in November 2016, citing sharing intelligence on North Korea nuclear development as the primary reason for its relatively short one-month negotiation period.[183]

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[178] See Antony J. Blinken, "US-Japan-ROK Trilateral Relationship," Remarks at Brookings Institution, Washington DC, March 29, 2016, http://www.state.gov/s/d/2016d/255277.htm.
[179] Jaehan Park and Sangyoung Yun, "Korea and Japan's Military Information Agreement: A Final Touch for the Pivot?," *The Diplomat,* November 24, 2016, http://thediplomat.com/2016/11/korea-and-japans-military-information-agreement-a-final-touch-for-the-pivot/.
[180] "Military Pact South with South Korea," *The Japan Times,* January 4, 2011, http://www.japantimes.co.jp/news/2011/01/04/national/military-pact-sought-with-south-korea/#.V0vDf_l97RY; Victor D. Cha, "What's Next for the US-Korea Alliance," Statement before the House Committee on Foreign Affairs, Subcommittee on Asia and the Pacific, Washington DC, June 6, 2012, 6; and Chanlett-Avery and Rinehart, "The US-Japan Alliance," 10.
[181] Jiyoon Kim, Karl Friedhoff and Chungku Kang, "The Asan Monthly Opinion Survey: July 2012," *The Asan Institute for Policy Studies* (July 2012), 2.
[182] Eleanor Warnock, "Japan's Ambassador to Return to South Korea," *The Wall Street Journal: Asia,* August 22, 2012, http://online.wsj.com/article/SB10000872396390444270404577605274266398492.html.
[183] Jesse Johnson, "South Korea, Japan Ink Intelligence-sharing Pact on North Korea Threat," *The Japan Times,* November 23, 2016, http://www.japantimes.co.jp/news/2016/11/23/asia-pacific/politics-diplomacy-asia-

Consequently, while Japan's capabilities have largely been developed to fulfill interoperability requirements under the US alliance framework and in response China's comprehensive military modernization, these capabilities also meet the operational requirements for Japanese contingencies involving the Korean peninsula. Japan's need to secure and defend its extended interests, including its SLOCs and EEZs, encompasses both the contested territories of the Senkaku/Diaoyu Islands and the Takeshima/Dokdo Islands in the East China Sea. For example, the development of doctrine, training and joint operations between the JMSDF and JCG has targeted both contingencies involving China and the Koreas. After two episodes in 1999 and 2001 when North Korean spy boats entered Japanese territorial waters, the JMSDF and JCG adopted a manual to set up procedures for joint responses to such scenarios and engaged in joint training.[184] In 2015, the two forces held their first joint training on "gray-zone" scenarios in response to Chinese incursions into Japanese waters around the Senkaku/Diaoyu Islands. They since adopted an information-sharing protocol and daily exchange of information.[185]

These developments, however, implicitly offer a threat to South Korea's economic and strategic interests, and South Korea has engaged in a similar naval build-up of blue-water capabilities (discussed in-detail in Chapter 7: South Korea). Indeed, South Korea's amphibious assault ship class has been named "*Dokdo"* and the logo has been inscribed with the words (in English) "Project Power."[186] Consequently, interactive armament dynamics have also developed in response to Japan's military modernization and changes in strategic doctrine (See Figure 6.2). These transformations were targeted at its larger opponent, China, and its attempts to change regional balance of power. Yet, such changes in armaments and organization have also been applicable to the Korean peninsula, and South Korea has reacted accordingly.

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pacific/south-korea-japan-ink-intelligence-sharing-pact-north-korea-threat/#.WG21Qvl97RY.

[184] Céline Pajon, "Japan's Coast Guard and Maritime Self-Defense Force: Cooperation among Siblings," *Maritime Awareness Project,* December 1, 2016, http://maritimeawarenessproject.org/2016/12/01/japans-coast-guard-and-maritime-self-defense-force-cooperation-among-siblings/.

[185] Pajon, "Japan's Coast Guard and Maritime Self-Defense Force."

[186] Ball, "Asia's Naval Arms Race," 8.

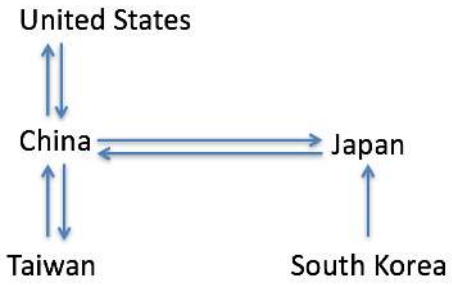

Figure 6.2: Interactive Arming Dynamics vis-à-vis Japanese Military Modernization

However, because of Japan's more concerted and focused efforts on the development of its naval capabilities vis-à-vis China, its experience with training and technology from the US Navy, and South Korea's focus on North Korea and reunification contingencies, South Korea's development of blue-water capabilities has merely been an asymmetric reaction to Japan. Despite South Korea's recent investments in advanced naval and associated air platforms, Japan's capability development has been well-ahead due to its technological sophistication of command and control, its frequency of maneuvers, its development of doctrine and training, and the level of integration between the services (ground, air, navy and coast guard).

Findings

The dynamics of Japan's military modernization in response to changing currents in Northeast Asia's strategic environment have demonstrated the multilateral character of interactive arming, as opposed to a simple bilateral relationship with China (H2). Most importantly, the re-interpretation of Article 9 of the constitution, new security legislation aimed at normalizing the JSDF and the revised Defense Guidelines has been a competitive response to a darker security outlook even though it is not reflected in any way in the country's military force posture. Much domestic political effort has been focused on managing the Japanese public's pacifist sentiments in order to meet the requirements of a changing regional balance of power (H1). Tokyo is particular sensitive to the potential threat emanating from China's comprehensive military transformation, as well as its uneasy relationship with both North and South Korea (H4). Despite these tensions, and numerous incidents over contested maritime territories and ADIZs, conflict has not been a result (H6).

These concerted efforts have reflected a realization that the "social contract that eschews war for dependence on the US protective shield"[187] cannot meet Japan's changing security needs and long-term defense options. That is, the requirements set by the US-Japan alliance for collective self-defense, although an important loosening of past restrictions, still limits quite severely Japan's authority to use its armed forces unilaterally (H5). Developments such as these, although they demonstrate a reactive behavior to changes in Japan's strategic environment, would simply be missed if analysts viewed events through the lens of "arms racing." In turn, this significant change in its strategic doctrine and the incremental testing of public pacifism has led to protestations of alarm from Japan's neighbors. That is, Japan for the last three decades has fielded a technologically sophisticated and capable navy, and the military modernization of the JSDF continues to advance across a broad front (H3). But it has been the revision of Article 9, a political maneuver addressing defense and the use of force in the Japanese context that has clearly had the greater impact in China and South Korea in stimulating their own military transformations. To complete the analysis of the interactive arming dynamic between China, Japan and the ROK, the next chapter examines the rationales of South Korean arms acquisitions.

[187] Alexis Dudden, "Two Strategic Cultures, Two Japans: Executive Brief," in *Strategic Asia 2016-17: Understanding Strategic Cultures in the Asia-Pacific,* ed. Ashley J. Tellis, Alison Szalwinski and Michael Wills (Washington DC: The National Balance of Asian Research, 2016), 30.

Chapter 7:
South Korea

Key Impulses

The Korean Peninsula is the most militarized area in the world and South Korea's armed forces have long been focused on North Korean contingencies. Previous academic discussion on South Korea's defense expenditure and military programs have centered on the tensions between the two Koreas and the possibility of another major conventional conflict on the Korean Peninsula.[1] Indeed, the US-ROK alliance was the direct result of the 1950-53 Korean War and has been geared towards a North Korean contingency ever since. Not least because of the intersecting interests of three major nuclear powers plus Japan renewed conflict on the peninsula would have serious ramifications for the entire Asia-Pacific. Consequently, the South Korean armed forces' primary objective for nearly six decades has been to preserve the status quo and maintain a robust defense posture to deter Pyongyang. However, increasingly the programs of the ROK Navy have changed in pace and purpose—seeking blue-water power projection capabilities for contingencies beyond the peninsula.[2] The ROK Navy's website logo emphatically states: "To the Sea! To the World!"[3]

Three key and interrelated impulses appear to have have driven South Korean naval and associated air modernization. First, a need to meet alliance requirements. Pressure from Washington to assume a larger share of the burden contributed to South Korea's increased capabilities in ballistic missile defense, ASW, anti-ship warfare, anti-air warfare, and an indigenous defense industry. Second, South Korea is looking beyond the immediate demands of deterrence and defense against North Korean to a future when a unified and

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[1] See Anthony H. Cordesman and Ashley Hess, *The Evolving Military Balance in the Korean Peninsula and Northeast* Asia (Washington DC: CSIS Burke Chair in Strategy, June 2013); and David C. Gompert, "North Korea: Preparing for the End," *Survival* 55, no. 3 (2013): 21-46.
[2] Paul Pryce, "The Republic of Korea Navy: Blue-Water Bound?" *CIMSEC Blog,* January 28, 2016, http://cimsec.org/the-republic-of-korea-navy-blue-water-bound/21490.
[3] ROK Ministry of National Defense, "Republic of Korea Navy," 2016 http://www.navy.mil.kr/NavyBoard/english/main/main.jsp.

self-sufficient Korea can take its place alongside Japan and the PRC. This goal has been expressed through its increasing focus on self-reliant defense and investments in indigenous defense industry. However, self-reliance has been a long-term objective as the ROK armed forces continue to face many operational and technical challenges. Like Japan, the requirements of the US-ROK alliance have resulted in South Korean dependence on the US for its defense, even against North Korea. This is particularly evidenced in the indefinite delay of plans to transfer OPCON from the US to South Korea, due to the deficiencies in its C4ISR capabilities. The net result has been for South Korea to focus on the short to medium term modernization requirements driven by North Korean contingencies, reducing the scope to prepare for its longer-term aspiration for self-reliant defense vis-à-vis China and Japan. Seoul is responding to an increasingly negative security outlook, and its perceptions of how the increasing investments by China and Japan change the Northeast Asian balance of power. China's military transformation and Japan's response have triggered South Korea's investment in in blue-water capabilities that signal its determination to withstand coercion from China and Japan over sovereignty and territorial maritime claims.

The US-ROK Alliance and Desire for Self-reliance

The US and ROK have been allies since 1953 when they signed the Mutual Defense Treaty. From the 1960s to the early 1980s, the ROK Navy built its fleet as a pillar of deterrence against invasion by North Korea and to address burden-sharing obligations under the alliance. Because of the nature of the conflict, South Korea emphasized its contribution to land-based operations and was content to operate elderly naval vessels donated or loaned by the US Navy.[4] Since then, the US maintained a continuous presence in South Korea to deter aggression from the North, with American conventional forces and its extended nuclear deterrence augmenting South Korean force structure. Despite the strengths in the alliance, there have been periodic strains. Seoul has often disagreed with its ally about which policies are most suitable for North Korea, how to respond to China's rise, and how to manage South

[4] Yoji Koda, "The Emerging Republic of Korea Navy: A Japanese Perspective," *Naval War College Review* 63, no. 2 (Spring 2010): 17.

Korea-Japan relations.[5] There also have been tensions over burden-sharing and cost overruns of ongoing realignment initiatives such as the re-location of US Forces Korea (USFK) and the transfer of wartime operational control (OPCON) which would give South Korea control of its own military forces during war. Although Washington and Seoul share a common interest in deterring North Korea, they have disagreed on where the responsibility should lie. South Korea has three options: first, to take primary responsibility (Washington's first preference); second, to share the burden with the US; and third, to support American actions as a junior partner (Seoul's first preference).

In 2006, Washington and Seoul set a timeframe for the OPCON transfer to occur between October 15, 2009 and March 15, 2012—the US sought to transfer by the end of 2009 while the ROK preferred 2012.[6] Yet, by 2014 the transfer was indefinitely delayed as not only had Seoul and Washington deemed the situation on the peninsula too precarious, but an assessment was also reached that South Korean capabilities were too underdeveloped.[7] The objective to reduce the 28,500 American forces stationed in South Korea was deferred in 2014, when an additional 800 troops were sent to South Korea citing the enhanced North Korean threat and the US rebalance.[8] Additionally, the planned 2016 consolidation of USFK from Seoul to Camp Humphreys in the southern city of Pyeongtaek was delayed for a further year. The relocation plan would have reduced US military sites from 174 to 96 and would have allowed "the return of valuable land back to the Republic of Korea."[9] The ups and downs in the alliance have demonstrated Seoul's delicate balancing act

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[5] Mark E. Manyin et al, "US-South Korea Relations," Congressional Research Service Report, R41481 (Washington DC: Library of Congress, April 26, 2016), 1-2.
[6] Kate Ousley, "Wartime Operational Control," in *2006 SAIS US-Korea Yearbook,* ed. David Straub (Washington DC: John Hopkins University, 2006), 31-32.
[7] Steven Denny, "South Korean Politics Drive OPCON Transfer," *The Diplomat,* October 28, 2014, http://thediplomat.com/2014/10/south-korean-politics-drive-opcon-transfer/.
[8] Tony Capaccio and Nicole Gaouette, "US Adding 800 Troops for South Korea Citing Rebalance," *Bloomberg News,* January 8, 2014, http://www.bloomberg.com/news/articles/2014-01-07/u-s-adding-800-troops-for-south-korea-citing-rebalance.
[9] "USFK Relocation to Pyeongtaek Pushed Back to End of 2017," *Yonhap News Agency,* December 13, 2015, http://english.yonhapnews.co.kr/news/2015/12/13/0200000000AEN20151213002100315.html; and Jun Ji-hye, "US military's largest overseas base taking shape in Pyeongtaek," *Korea Times,* December 13. 2013, http://www.koreatimes.co.kr/www/news/nation/2015/12/116_193061.html.

between its strategic needs in an increasingly complex environment, and its desire to have control over its own military forces without overdependence on American equipment and technology.

Moreover, Seoul and Washington's views have also differed on how to respond to the rise of China and the military modernization of Japan.[10] The 2009 *Joint Vision for the ROK-US Alliance* aimed to upgrade the alliance's areas and level of cooperation, however, this was in areas of "space, cyber, disasters due to climate changes, counter-piracy and other maritime security matters, … prevent[ing] the spread of WMD, … and participate in UN-led peacekeeping operations."[11] Yet, for Seoul, the main objective of the US alliance and its contribution to "peace and stability in Northeast Asia" has been the deterrence of North Korea and not other contingencies. Peacetime operations and combined exercises, such as Key Resolve and Foal Eagle, have assisted in preparing against North Korean contingencies. [12] Consequently, despite South Korea being a geostrategic location for US forces to face China and Russia, and to provide a front-line defense for Japan, South Korea resisted upgrading the alliance to address the changing Northeast Asian strategic environment.[13] This changed in 2006, when the US requested to reduce and realign the number of troops stationed on the Korean Peninsula to free them for more pressing duties elsewhere, namely Iraq. American insistence that the remaining troops in Korea enjoy "strategic flexibility"—that is, capable of conducting operations external to the peninsular—reflected a change in doctrine towards responding to more global contingencies.[14] This created further impetus for South Korea to develop its self-defense capabilities,[15] described in its *2004 Defense White Paper* as "co-operative

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[10] Mitchell B. Reiss, "Drifting Apart? The US-ROK Alliance at Risk," *Korean Journal of Defense Analysis* 21 no.1 (2009): 11.
[11] ROK Ministry of National Defense, *2014 Defense White Paper,* 116.
[12] See "CFC Announces Start of Key Resolve and Foal Eagle 2016," *USFK Press Releases,* March 6, 2016, http://www.usfk.mil/Media/Press-Releases/Article/686836/cfc-announces-start-of-key-resolve-and-foal-eagle-2016/.
[13] Kongdan Oh, "US-ROK: The Forgotten Alliance," *Brookings East Asia Commentary* 22 (October 2008), http://www.brookings.edu/research/opinions/2008/10/south-korea-oh.
[14] Nina Sawyer, "USFK Realignment and Reduction," in *2006 SAIS US-Korea Yearbook,* ed. David Straub (Washington DC: US-Korea Institute at SAIS, 2006), 21-22.
[15] Richard A. Bitzinger, "Transforming the US Military: Implications for the Asia-Pacific," *ASPI: Strategy,* (December 2006), 28.

self-reliant defense" or the "balanced development of the ROK-US alliance and self-defense side by side."[16]

Policy diversions from its American ally has thus impacted modernization decisions. Up until the 1980s, the ROK Navy was focused on surface combat as opposed to power projection and ASW. In the latter half of the 1980s, naval modernization became conspicuous with the introduction of advanced weapons platforms, indigenously developed surface combatants, and the acquisitions to enhance ASW capabilities.[17] This rapid advance in military modernization was mainly due to South Korea's awareness that its economic and political clout was increasing, and consequently also its interests and need to protect related interests. Approximately 80 percent of South Korea's borders are coastline and like Japan, it is reliant on securing its sea-lanes and EEZ, including over the contested Takeshima/Dokdo Islands and Ieodo/Suyan Islands, to facilitate its export-driven economy and dependence on international trade. [18]

Reflecting changes in its strategic environment, in 1995 then-President Kim Young-Sam approved the long-term development of a blue-water navy. His successors Kim Dae-jung and Roh Moo-hyun provided further opportunity for the ROK Navy to extend its reach beyond the limitations of the Korean Peninsula.[19] The 2010 sinking of its corvette, the *Cheonan,* by North Korea, and increasing concerns over Chinese and Japanese naval modernization provided Seoul with a set of objectives for qualitative and quantitative increases in naval and associated air capabilities. Moreover, demands for capability development from South Korea's indigenous defense industrial base intensified. The dual aims for an independent force structure and a self-reliant defense industry has attracted bipartisan and domestic political support

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[16] ROK Ministry of National Defense, *2004 Defense White Paper* (Seoul: Ministry of Natioanl Defense, Deember 2004), 94.
[17] Koda, "The Emerging Republic of Korea Navy," 20.
[18] Terence Roehrig, "Republic of Korea Navy and China's Rise: Balancing Competing Priorities" (CNA Maritime Asia Project, Workshop 2: Naval Developments in Asia, Arlington, August 2012), 62.
[19] Ian Bowers, "The Republic of Korea Navy – A 'Big' Small Navy," in *Small Navies: Strategy and Policy for Small Navies in War and Peace,* ed. Michael Mulqueen, Deborah Sanders and Ian Speller (London and New York: Routledge, 2014), 99.

due to the perception of isolation in a "friendless neighborhood."[20] In this regard, South Korea's *2012 Defense White Paper* stated that "countries in Northeast Asia are undertaking efforts towards mutual cooperation while at the same time keeping each other in check, in order to secure a position of regional ascendancy as well as to fulfill national interest."[21] It further added that modernization was driven by the need to:

> resolutely safeguard ROK territory, territorial waters and airspace in the East, West and Southern Seas including the five Northwest Islands, as well as *Marado*, *Ulleungdo*, and *Dokdo*. In particular, the ROK military is maintaining a strong readiness posture based on the unwavering resolve to safeguard *Dokdo,* which is undoubtedly the territory of the ROK in terms of geographical and historical facts and international law.[22]

In October 2013, the former chief of naval operations, Admiral Chie Yoonhee, was appointed as the first Chairman of the Joint Chief of Staff not stemming from the land forces. The next iteration of its Defense White Paper in 2014 warned that "historical and territorial conflicts and a growing arms race have intensified among the countries of Northeast Asia."[23] Seoul recognized that given South Korea's strategic location in Asia, any changes in the region's distribution of power created by competitive military modernization programs, would not only have ramifications throughout the region, but also for South Korean interests.[24] Additionally, although being hardest hit by the Asian Financial Crisis and suffering setbacks during the Global Financial Crisis, South Korea recorded steady increases in its defense expenditure despite contractions to its GDP growth.[25] An increasing share of its military

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[20] Michael Wesley, *Restless Continent: Wealth, Rivalry and Asia's New Geopolitics* (Collingwood: Black Inc, 2015), Google e-book, Chapter 4.
[21] ROK Ministry of National Defense, *2012 Defense White Paper* (Seoul: Ministry of National Defense, December 11, 2012), 14.
[22] ROK Ministry of National Defense, *2012 Defense White Paper*, 60.
[23] ROK Ministry of National Defense, *2014 Defense White Paper* (Seoul: Ministry of National Defense, December 31, 2014), 2.
[24] Victor D. Cha, "Strategic Culture and the Military Modernization of South Korea," *Armed Forces & Society* 28 (2001): 100
[25] Based on figures from *WMEAT*, and IMF *World Economic Outlook* databases. For detailed data on South Korean annual defense budgets see also "Appendix 16: Annual Defense Budgets" in *2014 Defense White Paper,* 298.

budget has been allocated to naval modernization, with the focus increasingly shifting away from land-based contingencies.[26]

South Korea's military modernization has therefore increasingly reacted to contingencies beyond the peninsula. Seoul has aimed for an independent as possible foreign policy, and expressed misgivings about cooperation with the US' key ally, Japan, due to Japan's efforts to expand its own capabilities. And even though Seoul agreed to make its nascent BMD capabilities interoperable with American systems including through the planned acquisition of THAAD systems, it has resisted full integration into the US-led regional BMD network in which Japan plays a large role.[27] Consequently, the US alliance has played a dual role in South Korean military modernization: bolstering South Korean deterrence and defense of North Korean aggression, but also fueling South Korea's capacity and necessity for self-reliant defense. Many force upgrades resulted from the desire for interoperability and joint warfighting capabilities—similar to the US-Japan alliance—as well as South Korea's growing nationalism and self-assertiveness in its foreign and defense policy.

Seoul's force modernization has been balanced between meeting alliance operational requirements and acquiring capabilities in areas previously directed by US forces, particularly in regards to surveillance, reconnaissance and early warning.[28] The ROK government allocated USD12-14 billion for Foreign Military Sales (FMS) acquisition programs from 2012 to 2015.[29] South Korea also benefited from American technical expertise for *Aegis* and *Patriot* PAC-3 upgrades, as well as upgrading airborne early warning and control (AEW&C) aircraft designed to detect incursions in South Korean airspace.[30] It has also upgraded its ground-based tactical C4ISR system and

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[26] Ball, "Asia's Naval Arms Race," 8-9.
[27] Manyin et al, "US-South Korea Relations," 3-4.
[28] Cordesman and Hess, *The Evolving Military Balance in the Korean Peninsula and Northeast Asia*, 112.
[29] US Commercial Service, "Defense Industry Equipment," *export.gov,* December 28, 2015, http://www.export.gov/southkorea/doingbusinessinskorea/leadingsectorsforusexportsinvestment/defense/index.asp.
[30] "WON By Default: Korea's E-737 AWACS," *Defense Industry Daily,* October 16, 2014, http://www.defenseindustrydaily.com/us-export-restrictions-hand-korean-ex-competition-to-us-firm-02497/.

has sought to acquire a harbor surveillance system and mobile underwater surveillance sonar.[31] Moreover, the ROK invested in power projection and long-range surveillance capabilities, in particular *Global Hawk* unmanned aerial vehicles, AH-64E *Apache* attack helicopters, F-35 JSFs and four A330 Multi Role Tanker Transport (MTT) aerial refueling tankers which would extend the operational range of its fighter aircraft.[32] Such US-origin arms acquisitions have extended beyond alliance requirements of deterrence and defense against North Korea. Similarly, South Korea's ambitious domestic procurement program have gone beyond the need for self-reliance, for instance its KF-X 4.5 generation fighter will be equipped with advanced stealth technology, such as an indigenously developed active electronically scanned array (AESA).[33]

Strengthening Indigenous Defense Industry

Tied to its objective of self-reliance has been the desire to strengthen South Korea's indigenous defense industry to produce sophisticated weapons platforms for both domestic purchase and international export, and to overcome its reliance on American technology. The South Korean defense industry developed mainly with the assistance of American experience and technology during the Cold War, and consistent efforts have been underway to turn the South Korean defense industry into a major arms exporter. The 1969 Nixon Doctrine boosted the local defense industry due to the reduction of US defense commitments to Asia and the need for self-reliance. This development also liberalized the export of advanced US military technologies to allies such as the ROK.[34] In 2005, the ROK Ministry of National Defense under President Roh Moo-hyun released the *Defense Reform 2020* plan, which aimed to create a self-reliant and technological sophisticated defense force through the creation of an defense industrial base capable of producing

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[31] Cordesman and Hess, *The Evolving Military Balance in the Korean Peninsula and Northeast Asia,* 111; and US Commercial Service, "Defense Industry Equipment."
[32] "Korean Air Refueling: Airbus Wins," *Defense Industry Daily,* July 2, 2015, http://www.defenseindustrydaily.com/korean-air-refueling-competition-afoot-024281/; and US Commercial Service, "Defense Industry Equipment."
[33] "KF-X Fighter: Korea's Future Homegrown Jet," *Defense Industry Daily,* December 6, 2016, http://www.defenseindustrydaily.com/kf-x-paper-pushing-or-peer-fighter-program-010647/.
[34] Richard A. Bitzinger, "South Korea's Defense Industry at the Crossroads," *Korean Journal of Defense Analysis* 7, no. 1 (1995): 236.

advanced capabilities.[35] It announced a qualitative transformation of the South Korean military by calling for the replacement of nearly every outdated major weapon, which meant replacing one-third to one-half of platforms.

The *Defense Reform 2020* plan projected an 11.1 percent per annum defense budget increase until 2015 and then a seven percent per annum budget increase through to 2020. Half of this budget increase would be dedicated to the investment and modernization of forces.[36] It further aimed to reduce the number of armed personnel and prioritize new technology-intensive and efficient measures. This directive was aimed at offsetting the changing demographic trend of a rapidly aging population, and thus reducing reliance on conscription for recruitment.[37] However, due to the change in governments and lower than expected economic growth, the targets set for expenditure were never met. In March 2011, the *Defense Reform 2020* plan was adjusted and replaced with the *Defense Reform Plan 307,* which aimed to address many of the perceived weaknesses in South Korean deterrence and command and control. The documented highlighted the 2010 events of the sinking of the *Cheonan* and the shelling of *Yeonpyeong* Island as evidence for a need for reform.[38] The importance of defense reform and self-reliance has been consistently highlighted by the political elite and South Korean defense ministers.[39] In particular, the development of an advanced and self-sustaining defense industry capability has been a significant driver for naval and associated air modernization

In 2016, South Korea ranked 9th in global arms export and second in the region behind China. Three of its companies were also in the top 100 for defense manufacturing which collectively rank higher than the top five

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[35] Chung-in Moon and Jin-Young Lee, "The Revolution in Military Affairs and the Defence Industry in South Korea," *Security Challenges* 4, no. 4 (Summer 2008): 122.
[36] See Bruce W. Bennett, "A Brief Analysis of the Republic of Korea's Defense Reform Plan," (Paper Prepared for the Republic of Korea Ministry of National Defense, RAND National Defense Research Institute, 2006), 1-2.
[37] Moon and Lee, "The Revolution in Military Affairs and the Defence Industry in South Korea," 122.
[38] Bruce W. Bennett, "The Korean Defense Reform 307 Plan," *Asan Institute Issue Brief* (April 18, 2011), http://en.asaninst.org/contents/issue-brief-no-8-the-korean-defense-reform-307-plan-by-bruce-w-bennett-the-rand-corporation1/.
[39] Hwee Rhak Park, "South Korea's Failure to Implement 'Defense Reform 2020,'" *Korean Journal of International Studies* 12, no. 2 (December 2014): 394.

Japanese defense manufacturers, the exception being Mitsubishi Heavy Industries (See Table 7.1).[40] South Korea also has three of the top four shipbuilding enterprises in the world. Its aim to sustain its competitiveness—particularly as the shipbuilding industry provides an important cashflow for South Korea's stagnating economy—has further driven its desire to make the manufacturing base more export-driven.[41]

Rank	Company	Country	Defense revenue (USD mn)	Total revenue (USD mn)	% of revenue from defense
1	Lockheed-Martin	US	43,468	7,248	92
2	Boeing	US	29,500	94,571	31
3	BAE Systems	UK	23,622	25,278	91
4	Raytheon	US	22,384	24,069	93
5	General Dynamics	US	19,696	31,353	63
19	Hanwha	ROK	4,215	40,523	10
41	Korea Aerospace Industries (KAI)	ROK	1,819	2,667	68
44	LIG Nex1	ROK	1,618	1,618	100

Table 7.1: Comparison of World and South Korean Defense Manufacturers (2016)

The objective of becoming a leading weapons producer led to acquisitions based on agreements for technology transfer to feed indigenous arms developments. For example, Seoul has pursued an F-35 JSF technology transfer agreement for its KF-X fighter program. In 2015, Seoul requested (and was later denied by Washington) the four most significant out of 25 technologies: AESA radar, electro-optical tracking devices and jammer technology. In 2016, Seoul's minister for the Defense Acquisition and

[40] Based on figures from *SIPRI Arms Transfers Database,* 2016, https://www.sipri.org/databases/armstransfers; and "Top 100 for 2017," *Defense News,* 2017, http://people.defensenews.com/top-100/.
[41] Mingi Hyun, "Global Insider: South Korea Naval Shipbuilding," *World Politics Review,* January 5, 2011, http://www.worldpoliticsreview.com/trend-lines/7472/global-insider-south-korea-naval-shipbuilding.

Procurement Administration (DAPA) announced the pursuit of other US technologies from the F-35 program, and the indigenous development of its own AESA radar.[42]

South Korea has persistently acquired advanced American defense technology, such as anti-ship missiles, C4ISR equipment, multiple-launch rocket systems, and even components for *Aegis.*[43] In 2015, DAPA listed *Aegis*-equipped warships as one of ten weapon systems to be indigenized under a 2015-2019 plan.[44] South Korea's indigenous KF-X program has also been driven by the desire to tap into the lucrative arms export market, particularly in Southeast Asia. For instance, in 2015 KAI signed contracts with the Indonesian defense ministry and the country's state-owned defense company, PT Dirgantara Indonesia, to jointly develop South Korea's indigenous fighter. The Indonesian government agreed to cover one percent of the total project costs in exchange for one prototype and technology data.[45] In 2015, South Korea—through KAI—also delivered the first two of twelve FA-50 *Golden Eagle* light combat fighters to the Philippines. The remaining jets are expected to be delivered in 2017.[46]

The North Korea Contingency

The North Korea contingency has been the primary driver for South Korea's naval and associated air capability development in ballistic missile defense and littoral combat. The election of Lee Myung-bak in 2008 reinvigorated the ROK's military modernization in BMD capabilities, however, the decision

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[42] Leigh Giangreco, "Korea Pursuing KFX Technology through Future Offset Deals," *FlightGlobal,* November 21, 2016, https://www.flightglobal.com/news/articles/korea-pursuing-kfx-technology-through-future-offset-431682/.
[43] Gordon Lubold, "Is South Korea Stealing US Military Secrets?," *Foreign Policy,* October 28, 2013, http://foreignpolicy.com/2013/10/28/is-south-korea-stealing-u-s-military-secrets/.
[44] Gordon Arthur, "US Approves Aegis Sale to ROK Navy," *Shephard Media,* June 10, 2015, https://www.shephardmedia.com/news/digital-battlespace/us-approves-aegis-sale-rok-navy/.
[45] Jun Ji-hye, "KAI Signs KF-X Contract with Indonesia," *The Korea Times,* January 7, 2016, http://www.koreatimes.co.kr/www/news/nation/2016/01/116_194922.html.
[46] Prashanth Parameswaran, "Philippines Receives 2 New Fighter Jets from South Korea," *The Diplomat,* December 1, 2015, http://thediplomat.com/2015/12/philippines-receives-2-new-fighter-jets-from-south-korea/. See also, "FA-50 Light Combat Aircraft, South Korea," *airforce-technology.com,* 2017, http://www.airforce-technology.com/projects/-fa-50-light-combat-aircraft-south-korea/.

remained to keep the ROK separate from the joint US-Japan BMD system. His successor President Park Geun-hye (impeached in December 2016[47]) demonstrated an equally hardline stance towards Pyongyang.[48] The overarching North Korea policy remained based on retaining robust deterrence and defense capabilities with the simultaneous promise of unparalleled assistance to the North provided Pyongyang made the "right choice." For instance, in April 2014 Park promised investment and humanitarian aid in exchange for North Korea giving up its nuclear program. It was rejected by Pyongyang, with the state media calling her an "eccentric old spinster" and claiming that the offer was full of "filth" and "deception" aimed at destroying the North Korean government.[49] Park reaffirmed her stance that large-scale assistance was dependent on denuclearization progress and North Korea refraining from military provocations. In February 2016, Seoul closed Kaesong, the joint North-South Korea industrial complex, in response to the launch of a satellite by the North.[50] In the meantime, Park continued her public calls for South Korea and the international community to prepare for and welcome reunification.[51]

Pyongyang, led by Kim Jong-Un, assumedly feels threatened by the South's own weapons development, economic weight, public rhetoric and alliance with the US. As Andrei Lankov argued, "the existence of such a neighbor means that any serious political crisis inside North Korea could easily lead to regime collapse, followed by South Korea's absorption of the impoverished

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[47] See Choe Sang-hun, "South Korea Enters Period of Uncertainty With President's Impeachment," *The New York Times,* December 6, 2016, http://www.nytimes.com/2016/12/09/world/asia/south-korea-president-park-geun-hye-impeached.html.

[48] See Choe Sang-hun, "South Korea Begins Naval Drills With the US," *The New York Times,* July 16, 2014, http://www.nytimes.com/2014/07/17/world/asia/south-korea-begins-naval-drills-with-the-us.html?_r=0.

[49] Choe Sang-hun, "2 Koreas, After Exchanging Fire, Rearm With Insults," *The New York Times,* April 1, 2014, http://www.nytimes.com/2014/04/02/world/asia/korea.html/.

[50] Justin McCurry, "Seoul Shuts Down Joint North-South Korea Industrial Complex," *The Guardian,* February 11, 2016, https://www.theguardian.com/world/2016/feb/10/seoul-shuts-down-joint-north-south-korea-industrial-complex-kaesong.

[51] Office of the Press Secretary, "2015 United States-Republic of Korea Joint Statement on North Korea," The White House: President Barack Obama Archives, October 16, 2015, https://www.whitehouse.gov/the-press-office/2015/10/16/united-states-republic-korea-joint-statement-north-korea.

North."[52] To this end, North Korea has maintained a large arsenal of SCUD short-range, and *Nodong* and *Musudan* medium-range ballistic missiles that could reach targets in South Korea and Japan.[53] After the collapse of the Six Party Talks in 2008, Pyongyang restarted its reprocessing facility, and is believed to possess enough fissile material for at least six nuclear warheads.[54] It has also declared its intent to develop a nuclear-armed ICBM capability.[55] It is clear however that North Korea's longer-range missiles that aim to reach Guam, Alaska and the continental US remain unreliable and in some cases untested. In May 2016, for the fourth time North Korea failed to launch its intermediate-range ballistic missile, the BM-25 *Musudan,* believed to have a range of 3,000-4,000km.[56] Despite such failures, Pyongyang has remained committed to nuclear and ballistic missile tests, including the ambition of a submarine-launched ballistic missile. [57] In January 2016, Pyongyang announced the success of its fourth nuclear test of an "experimental hydrogen bomb."[58] Its fifth nuclear test in September 2016 was accompanied by the claim that it had successfully miniaturized nuclear warheads to fit on a missile.[59] As Jeffrey Lewis has argued, "these aren't military tests, they are military exercises" for a nuclear first strike.[60]

North Korea has also made several incursions into South Korean territorial waters, including South Korea's inshore SLOC. In May 2010, the *Cheonan*

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[52] Andrei Lankov, "Why Nothing Can Really Be Done about North Korea's Nuclear Program," *Asia Policy* 23 (January 2017): 105.
[53] Chung-in Moon, "Managing North Korean Nuclear Threats," *Asia Policy* 23 (January 2017): 74.
[54] Emma Chanlett-Avery, Ian E. Rinehart and Mary Beth D. Nikitin, "North Korea: US Relations, Nuclear Diplomacy, and Internal Situation," Congressional Research Service Report R41259 (Washington DC: Library of Congress, January 15, 2016), 11.
[55] Ian E. Rinehart, Steven A. Hildreth and Susan V. Lawrence, "Ballistic Missile Defense in the Asia-Pacific Region: Cooperation and Opposition," Congressional Research Service Report R43116, (Washington DC: Library of Congress, April 3, 2015), 5.
[56] Jun Ji-hye, "Pyongyang Fails to Launch Musudan for Fourth Time," *Korea Times,* March 31, 2016, http://www.koreatimes.co.kr/www/news/nation/2016/05/116_205968.html.
[57] Jack Kim and Ju-Min Park, "North Korea Says Ballistic Missile Test 'Great Success,'" *Reuters,* April 24, 2016, http://www.reuters.com/article/us-northkorea-missile-idUSKCN0XK08U.
[58] "North Korea Nuclear Tests: What Did They Achieve?" *BBC News,* April 22, 2016, http://www.bbc.com/news/world-asia-17823706; and Chanlett-Avery, Rinehart and Nikitin, "North Korea," 2.
[59] "North Korea's Nuclear Programme: How Advanced Is It?" *BBC News,* January 6, 2017, http://www.bbc.com/news/world-asia-pacific-11813699.
[60] Jeffrey Lewis, "North Korea Is Practicing for Nuclear War," *Foreign Policy,* March 9, 2017, http://foreignpolicy.com/2017/03/09/north-korea-is-practicing-for-nuclear-war/.

was sunk just south of the disputed Northern Limit Line (NLL) in the Yellow Sea, supposedly by a North Korean torpedo.[61] In November 2010, North Korea also shelled the South's Yeonpyeong Island, placing the ROK military on its highest non-wartime alert.[62] The incidents highlighted the failure of the policies of "harmonious relations" with the North (the "Sunshine Policy" under the Kim Dae-jung [1998-2003] and Roh Moo-hyun governments [2003-2008] [63]). South Korea under the Lee Myung-bak administration (2008-2013) initially focused on air defense artillery and reinforced American extended deterrence with North Korea, refraining from the acquisition of missile defense technologies to avoid provoking Pyongyang.[64] The short- to mid- and long-term procurements in *Defense Reform Plan 307* further aimed to strengthen South Korea's ability to counter localized military attacks and asymmetric threats, as well as optimizes military command and control. [65]

After the realization that sanctions and other countermeasures had not produced any tangible outcomes, the Park Geun-hye government strengthened its deterrence posture and began to adopt a more offensive posture, particularly against North Korean missile attack.[66] The *2014 Defense White Paper* emphasized the enhancement of response capabilities through the indigenous development of three pillars by 2020:

1. The "Kill Chain": an offense-oriented defense system that detects missiles in real time. It aims to carry out a preemptive strike against Pyongyang's nuclear and missile facilities if Seoul is

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[61] "'North Korean Torpedo' Sank South's Navy Ship – Report," *BBC News,* May 20, 2010, http://www.bbc.co.uk/news/10129703.
[62] "North Korean Artillery hits South Korean Island," *BBC News,* November 23, 2010, http://www.bbc.co.uk/news/world-asia-pacific-11818005.
[63] See Norman D. Levin and Yong-Sup Han, *Sunshine in Korea: The South Korean debate over Policies Toward North Korea* (Santa Monica: RAND Center for Asia-Pacific Policy, 2002); and Son Key-yong, *South Korean Engagement Policies and North Korea: Identities, Norms and the Sunshine Policy* (London and New York: Routledge, 2006).
[64] Rinehart, Hildreth and Lawrence, "Ballistic Missile Defense in the Asia-Pacific Region," 10.
[65] Rhee Sang-Woo, *From Defense to Deterrence: The Core of Defense Reform Plan 307* (Washington DC: CSIS Korea Chair Platform, September 7, 2011), https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/110907_FromDefensetoDeterrence_Rhee.pdf.
[66] Moon, "Managing North Korean Nuclear Threats," 75.

targeted.[67]

2. The Korea Air and Missile Defense (KAMD) system which aims to intercept a ballistic missile stage by stage (See Figure 7.1). [68]
3. The Korea Massive Punishment and Retaliation (KMPR): to complement the preemptive and defense strategies of the Kill Chain and KAMD, the KMPR aims to launch attacks on North Korean leadership upon detection of the impending use of nuclear weapons.[69]

The ROK also began to invest in its indigenous long-range SAM systems (L-SAM) and medium-range SAM systems (KM-SAM). To support these platforms, the ROK Navy also acquired three *Aegis*-equipped KDX-III destroyers equipped with SM-2 Block IIIA/Bs and planned to procure six more destroyers armed with SM-6 by 2019.[70] In 2012 it deployed two *Green Pine* ground-based radar systems that are jointly developed by the US and Israel, which enhances early warning and the accuracy of tracking missiles.[71] Seoul also indicated its desire to purchase the *Iron Dome* system, which is not a BMD system but is able to intercept self-propelled, short-range rockets by striking them with guided missiles. However, due to the high cost of the system and conflicting reports over its operational effectiveness, Seoul instead invested in indigenous developments of similar capabilities for its KAMD. [72] South Korea's arms procurement agency in April 2014 approved a USD1.3 billion plan to upgrade the ROK's PAC-2 air defense system and

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[67] Jun Ji-hye, "3 Military Systems to Counter N. Korea: Kill Chain, KAMD, KMPR," *The Korea Times,* November 1, 2016, http://www.koreatimes.co.kr/www/news/nation/2016/11/205_217259.html.
[68] ROK Ministry of National Defense, *2014 Defense White Paper*, 92.
[69] Kim Tae-woo, "North Korea's 5th Nuclear Test: The Fallout in Seoul," *The Diplomat,* September 22, 2016, http://thediplomat.com/2016/09/north-koreas-5th-nuclear-test-the-fallout-in-seoul/.
[70] Zachary Keck, "South Korea Navy Wants 3 More Aegis Destroyers," *The Diplomat,* October 17, 2013, http://thediplomat.com/2013/10/south-korea-navy-wants-3-more-aegis-destroyers/; and Kim Eun-jung, "South Korea Pushes to Build Three more Aegis Destroyers," *Yonhap News Agency,* October 16, 2013, http://english.yonhapnews.co.kr/national/2013/10/16/43/0301000000AEN20131016001100315F.html?c2f09a90.
[71] "ELM-2080 – Green Pine Radar System," Israel Aerospace Industries, 2016, http://www.iai.co.il/2013/33785-27136-en/ELTA.aspx.
[72] Rinehart, Hildreth and Lawrence, "Ballistic Missile Defense in the Asia-Pacific Region," 11.

to buy PAC-3 missiles by 2020.[73] In March 2016, Seoul announced that it would modernize its *Aegis* destroyers with SM-6 (replacing the SM-2s) to bolster missile defense against North Korea.[74] The SM-6 provides extended range and incorporates advanced signal processing and guidance control capabilities, thus enhancing South Korea's anti-air warfare, sea-based terminal BMD and anti-surface warfare capabilities.[75] Significantly, in reaction to North Korea's fourth nuclear test, in July 2016, South Korea announced it would deploy the THAAD system,[76] which is interoperable with its SAMs and *Aegis* missile defense platforms (See Figure 7.1).[77]

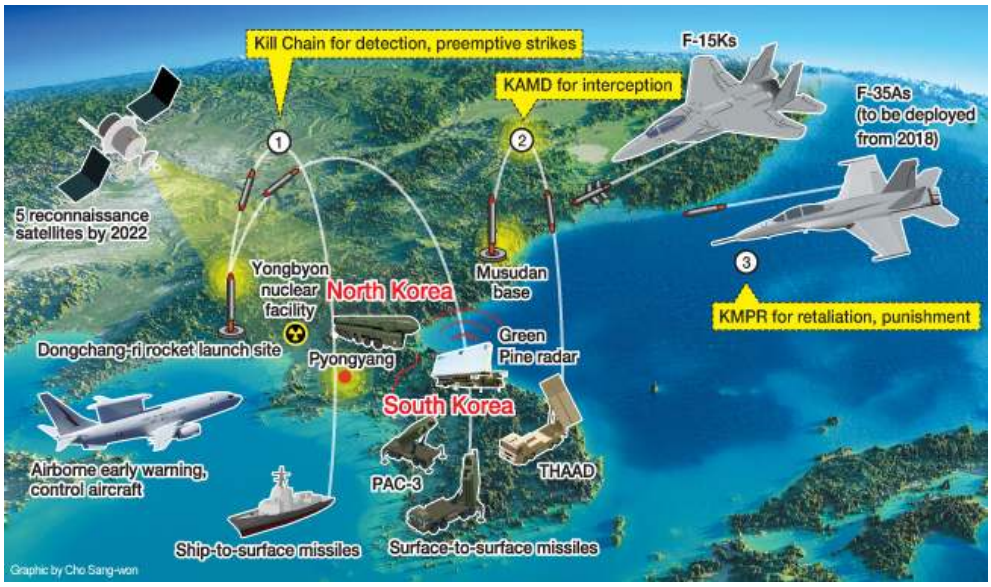

Figure 7.1: Conceptual Layout of South Korean Response Capabilities[78]

To clarify, South Korea would not possess the THAAD system, but it would

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[73] Karen Montague, "A Review of South Korean Missile Defense Programs," *George C. Marshall Institute Policy Outlook* (March 2014): 1.
[74] Kim Eun-jung, "S. Korea to Deploy New Surface-to-air Missiles for Aegis Destroyers," *Yonhap News Agency,* June 12, 2013, http://english.yonhapnews.co.kr/national/2013/06/12/37/0301000000AEN20130612004900315F.HTML.
[75] Sydney J. Freedberg Jr., "Anti-Aircraft Missile Sinks Ship: Navy SM-6," *Breaking Defense,* March 7, 2016, http://breakingdefense.com/2016/03/anti-aircraft-missile-sinks-ship-navy-sm-6/.
[76] Benjamin Lee, "South Korea's THAAD Dilemma Continues," *The Diplomat,* December 16, 2016, http://thediplomat.com/2016/12/south-koreas-thaad-dilemma-continues/.
[77] See "Cheolmae II / Cheongung M-SAM Medium Surface to Air Missile," *GlobalSecurity.org,* June 26, 2014, http://www.globalsecurity.org/military/world/rok/m-sam.htm; and "L-SAM Long-range Surface-to-Air Missile," *GlobalSecurity.org,* February 21, 2016, http://www.globalsecurity.org/military/world/rok/l-sam.htm.
[78] Graphic by Cho Sang-won in Jun Ji-hye, "3 Military Systems to Counter N. Korea: Kill Chain, KAMD, KMPR," *The Korea Times,* November 1, 2016, http://www.koreatimes.co.kr/www/news/nation/2016/11/205_217259.html.

deploy a US THAAD anti-missile battery with US personnel.[79] THAAD is capable of intercepting short, medium and intermediate-range missiles, including North Korean *Nodongs,* during the terminal phase.[80]

These investments in naval and associated air capabilities seemingly extended beyond requirements for littoral combat and defense. Due to the geography of the Korean peninsula and the placement of North Korean artillery, effective deterrence of North Korea by the South depends to a large degree on ballistic missile and air defense, as well as littoral combat capabilities. These concerns were highlighted by Beijing's reaction to South Korea's decision to deploy THAAD, as it would give the US advantage in early warning and tracking of Chinese ICBMs. As Rod Lyon has argued,

> China's right to believe that THAAD surveillance data could be transferred to other BMD assets protecting CONUS. Indeed, one of THAAD's missions would be to strengthen US defenses against the possibility of North Korean ballistic missile attack on CONUS [continental United States]. So it has to be able to transfer data to CONUS-based radars and interceptors. But the United States already has a THAAD battery deployed on Guam, two AN/TPY-2 radars deployed in Japan (at Shariki and Kyogamisaki), space-based assets, plus a range of ship-borne radars and larger land-based radars in other parts of the Pacific theatre. Would a THAAD deployment in South Korea change much? The short answer is that it could improve early tracking of some Chinese missiles, depending on their launch point. Still, that might not make actual interception of those missiles much easier. ICBM warheads move fast. And sophisticated penetration-aids help to confuse missile defenses.[81]

In contrast to South Korean naval capabilities, the majority of North Korean vessels deployed near the NLL are patrol combatants to protect North Korean

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[79] Bruce W. Bennett, "THAAD's Effect on South Korea's Neighbors," *The RAND Blog,* April 5, 2016, http://www.rand.org/blog/2016/04/the-effect-on-south-koreas-neighbors.html; and Jung Sung-ki, "South Korea Eys THAAD Despite China's Fear," *Defense News,* January 14, 2016, http://www.defensenews.com/story/defense/show-daily/singapore-air-show/2016/02/14/south-korea-eyes-thaad-despite-chinas-fear/80067558/.

[80] Ankit Panda, "What is THAAD, What Does It Do, and Why Is China Mad About It?" *The Diplomat,* February 25, 2016, http://thediplomat.com/2016/02/what-is-thaad-what-does-it-do-and-why-is-china-mad-about-it/.

[81] Rod Lyon, "The Hard Truth About THAAD, South Korea and China," *The National Interest,* February 23, 2016, http://nationalinterest.org/blog/the-buzz/the-hard-truth-about-thaad-south-korea-china-15295?page=show&utm_content=buffera4706&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer.

fishing boats, which often show up in June, the peak season for catching prized blue crabs.[82] Added to this, North Korea simply cannot compete with American global C4ISR of which South Korea benefits. There is no doubt that compared to North Korea, South Korea has the overwhelming material support and resources to sustain its qualitative and quantitative military modernization and force expansion. North Korea's limited financial resources have had a significant impact on what kinds of capabilities it could develop and what types of strategies to employ. In comparison, the real dollar value North Korea's military expenditure is far lower than South Korea's, however, the proportion of GDP North Korea allocates for defense spending is disproportionately much higher (See Figure 7.2 and Figure 7.3). On average, whilst South Korea spends USD18.14 billion annually on defense, North Korea's expenditure averages a mere USD4.86 billion. When translated into percentages of GDP, South Korean defense spending accounts on average to 2.5 percent, whilst for North Korea it consumed almost 25 percent. Thus, when comparing the "military burden"—military expenditure as a proportion of purchasing power parity—it is clear that despite North Korea's "military-first" policy[83] and the burden it places on its people, South Korea's market economy simply gives it greater wherewithal in investing and sustaining its military capability. On a per capita basis, one South Korean can contribute twice as much to military expenditure as a North Korean.[84]

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[82] "Navy Kicks off Exercise to Defend Western Sea Border," *Yonhap News Agency,* June 16, 2016, http://english.yonhapnews.co.kr/national/2016/06/16/0301000000AEN20160616002051315.html; and Elizabeth Shim, "North Korea Increases Patrol Boats at Disputed Maritime Border," *UPI*, June 16, 2016, http://www.upi.com/Top_News/World-News/2016/06/16/North-Korea-increases-patrol-boats-at-disputed-maritime-border/4171466082707/.

[83] See Choo-suk Suh, "North Korea's "Military-First" Policy and Inter-Korean Relations," *Korean Journal of Defense Analysis* 14, no. 2 (2002): 167-185.

[84] Data and trends for North Korean military expenditure, economic figures and weapons platforms are indicative and/or based on available and unclassified data only. North Korea does everything possible to conceal data on its military, and there are no reliable estimates of how much resources it devotes to its forces. All outside sources agree however that it is one of the most militarized countries in the world. See Cordesman and Hess, *The Evolving Military Balance in the Korean Peninsula and Northeast Asia,* viii.

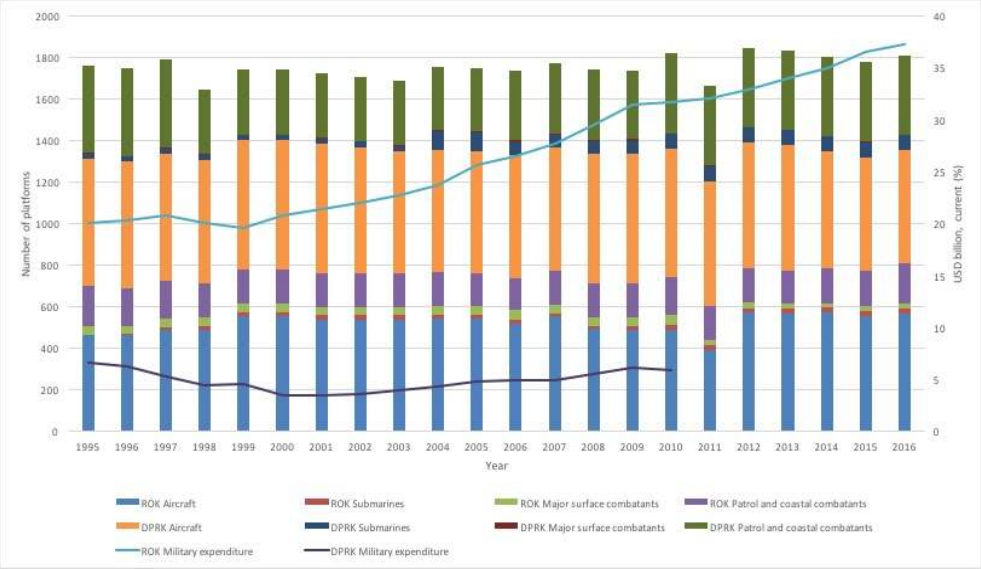

Figure 7.2: Comparison of ROK and DPRK Military Expenditure and Platforms (1995-2016)

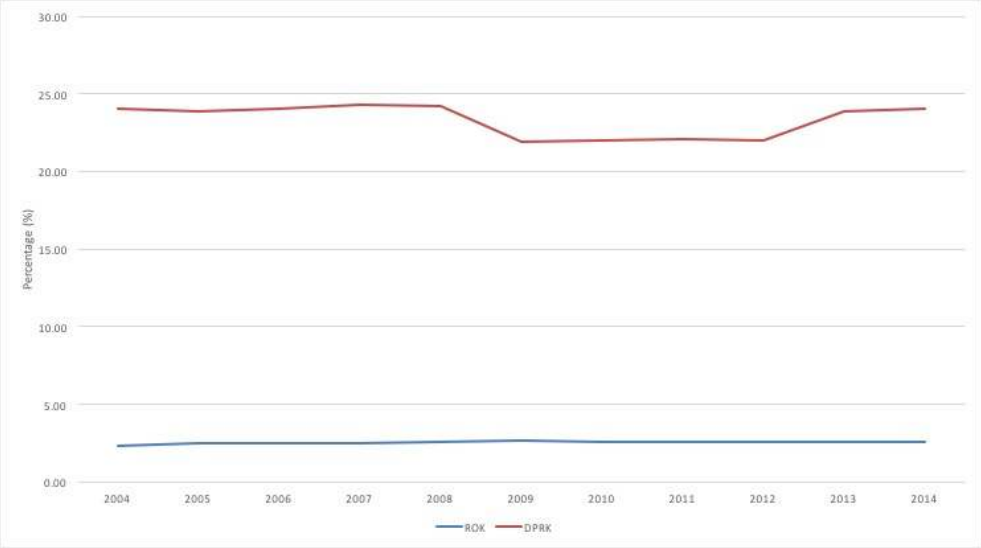

Figure 7.3: Comparison of ROK and DPRK military burden (2004-2014)[85]

The North Korean qualitative and quantitative improvements have suffered from attempts to militarize a crippled economy. Therefore, in terms of the DPRK's capacity for military action its focus is on manpower and land-based contingencies. As a study by the IISS noted:

> Although it is difficult to know North Korea's precise intentions or aspirations, its forces are deployed along the Demilitarized Zone (DMZ) in such a manner that they could support an invasion of South Korea. In particular, the percentage of North Korean forces deployed within 100km of the DMZ has significantly increased

[85] Due to the opacity of the North Korean regime, the time series is restricted to the available 2004-2014 to enable an adequate comparison with South Korea.

> during the past two decades. Currently, North Korea deploys approximately 65% of its military units, and up to 80% of its estimated aggregate firepower, within 100km of the DMZ. This inventory includes approximately 700,000 troops, 8,000 artillery systems and 2,000 tanks. Because of these forward deployments, North Korea could theoretically invade the South without recourse to further deployments and with relatively little warning time. … Thus, it has been argued that North Korea's military strategy is designed around plans to launch an invasion of South Korea. At the same time, North Korea's armed forces are also positioned in order to deter an attack, being deployed to deliver a pre-emptive strike against the South if Pyongyang believes that an attack is imminent or to retaliate with overwhelming force if the North is attacked. This posture is dictated by the doctrine that "attack is the best form of defence," a formulation that defined Soviet forward deployments in East Germany during the Cold War. The mass forward deployment of North Korean forces also helps to strengthen domestic political support for Pyongyang's "military first" policy and heavy internal security apparatus.

When comparing the South and North's blue water capabilities (major surface combatants in Figure 7.2), the South far overwhelms the North. As well, despite the North Korean number of littoral combatants (patrol and coastal) increasing, South Korean vessels are qualitatively superior. The North Korean navy fields mainly legacy platforms produced in, or based on designs of the Soviet Union and China, dating back to the 1950s and1970s, with few systems based on modern technology. Overall, it does not train for blue-water naval operations and its naval modernization is extremely limited with some upgrades to select surface ships and a continued program to construct small submarines. [86] Keeping in mind North Korea's focus on land-based contingencies, it stands to reason that South Korea's significant investments in technologically sophisticated blue-water capabilities are reactions to regional military modernization programs, particularly Japan's. The emphasis on qualitative improvements at the expense of quantitative numbers of ships reflects South Korea's turn to broader East Asian contingencies.

[86] US Office of the Secretary of Defense, *Military and Security Developments involving the Democratic People's Republic of Korea: Report to Congress 2015* (Washington DC: Department of Defense, 2015), 10.

Reacting to China and Japan

A legacy of the division of the Korean Peninsula, the ROK Navy has been for the majority of its existence an adjunct force to the ROK Army. Despite the reliance on the sea as a "provider of essential materials and a facilitator of its export driven economy," the modernization of the navy only started in the early 1990s when the first civilian-led government made the conscious decision to pursue greater naval strength.[87] While still concerned with contingencies with the North, Seoul has become more confident in its military superiority vis-à-vis Pyongyang. Its strategic objectives have more and more included contingencies other than conflict with the DPRK, particularly those involving China and Japan. Its *2014 Defense White Paper* highlighted as one of its primary concerns about the security environment of Northeast Asia the "Increasing Influence and Arms Race in the Region." It further stated that "while the United States maintains its military superiority in Northeast Asia, China, Japan and Russia have vied to build up their own military strength, centering on naval and air forces."[88] Thus the ROK Navy's mission has become two-fold: first, to maintain its traditional deterrent and littoral combat role in South Korean waters vis-à-vis North Korea; and second, to have a medium force that can operate on a regional level performing blue water operations to counter and mirror Chinese and Japanese modernizations.[89]

The modernization of South Korea's blue-water capabilities has reflected the desire to possess a naval force capable of protecting its national interests, including its maritime territories, EEZs and SLOCs. Due to the overlapping and competing claims in the East China Sea, the ROK Navy has responded to Chinese and Japanese naval modernization through a comprehensive modernization of naval and associated air capabilities (for the detailed analysis on Japan-ROK relations see Chapter 6: Japan). First, balancing its economic ties with strategic concerns regarding China has been difficult for Seoul. During the Lee Myung-Bak administration, the strengthening of the ROK-US alliance strained Lee's ability to maintain a consistent and cordial

[87] Ian Bowers, "The Republic of Korean and Its Navy: Perceptions of Security and the Utility of Seapower," *The Journal of Strategic Studies* 37, no. 3 (2014): 447.
[88] ROK Ministry of National Defense, *2014 Defense White Paper,* 15.
[89] Bowers, "The Republic of Korea Navy – A 'Big' Small Navy," 101.

relationship with Beijing. China is South Korea's largest two-way trading partner , accounting for 27 percent of exports and 22 percent of imports, while for China[90] South Korea is its third largest market for exports (4.5 percent share) and its primary export partner (11.4 percent share).[91] In August 2012, the two countries celebrated the twentieth anniversary of diplomatic normalization, a period during which the advancement of political, economic and cultural relations proceeded at a rapid pace.[92] However under the surface, negative public perceptions of China in South Korea increased and a series of bilateral tensions and entanglements heightened Seoul's discontent with Beijing.[93] These included China's controversial claim to the ancient Korean Kingdom of Koguryo in 2004; illegal Chinese fishing in Korean territorial waters and the killing of a South Korean Coast Guard (KCG) captain in 2011; continued disputes over Socotra Rock; and China's protective relationship with North Korea. Seoul was particularly angered by China's repatriation of North Korean defectors, as well as China's "enabling response" to North Korea's 2010 provocations of the sinking of the *Cheonan* and the shelling of *Yeonpyeong* Island.[94]

South Korea and China also dispute the sovereignty over the Ieodo/Suyan Islands, which is just 149km from South Korea's Jeju Island naval base.[95] Both Seoul and Beijing claim the main feature, a submerged rock (Socotra) approximately 4.6km below the surface, is within their EEZs.[96] According to UNCLOS, maritime features classified as rocks cannot be claimed by any country as territory, however, nations can control and use the sea and natural resources around the rock. The reef around Socotra rock might also contain

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[90] "South Korea: Trade Statistics," *globalEdge,* Michigan State University, 2017, https://globaledge.msu.edu/countries/south-korea/tradestats.
[91] See "China: Trade Statistics," *globalEdge,* Michigan State University, 2017, https://globaledge.msu.edu/countries/china/tradestats.
[92] Han Suk-hee, "South Korea Seeks to Balance Relations with China and the United States: Current Issues in US-ROK Relations," *Council on Foreign Relations Report*, November 2012, http://www.cfr.org/south-korea/south-korea-seeks-balance-relations-china-united-states/p29447.
[93] Roehrig, "Republic of Korea Navy and China's Rise," 61.
[94] Scott Snyder and See-Won Byun, "Cheonan and Yeonpyeong: The Northeast Asian Response to North Korea's Provocations," *The RUSI Journal* 156, no. 2 (2011): 74.
[95] Lily Kuo, "Will a Tiny Submerged Rock Spark a New Crisis in the East China Sea," *The Atlantic,* December 9, 2013, http://www.theatlantic.com/china/archive/2013/12/will-a-tiny-submerged-rock-spark-a-new-crisis-in-the-east-china-sea/282155/.
[96] Rinehart and Elias, "China's Air Defense Identification Zone (ADIZ)," 21.

natural gas and mineral deposits.[97] In 2003, South Korea built a raised platform on Socotra rock to support an ocean research station, drawing the ire of Beijing.[98] China's announcement of a controversial East China Sea ADIZ in November 2013, inflamed tensions by extending over the submerged rock and its reef. To no avail, South Korea requested China to change its ADIZ to eliminate the overlap with South Korea's.

In response, in December 2013 South Korea expanded its ADIZ by approximately 66,480km^2 in waters off its south coast to also encompass the feature, thus creating an ADIZ overlapping with China's and Japan's (See Figure 7.4).[99] The announcement of China's ADIZ came at a time when Seoul was building stronger ties with Beijing and its relations with Tokyo were acrimonious. However, the ADIZ announcement caused a shift in South Korea's perspective on Beijing's intentions. Although the ADIZ was primarily an attempt by China to exert legal and administrative control over the Senkaku/Diaoyu Islands, the move exposed its territorial expansion plans and repercussions for South Korea.[100] In response, both Seoul and Tokyo announced to send military planes through China's new ADIZ without notifying Beijing to display their opposition to China's moves to assert control over regional air space.[101] Indeed, South Korea's Foreign Minister Yun Byung-se commented:

> the issue of the air defense identification zone is making the already difficult regional situations even more difficult to deal with … We see competition and

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[97] Kim Young-jin, "Why Ieodo Matters," *The Korea Times,* September 18, 2012, http://www.koreatimes.co.kr/www/news/nation/2012/09/117_120266.html.
[98] "Chinese Media Blast S. Korea's Plan to Build New Ocean Research Station," *Yonhap News Agency,* January 5, 2014, http://english.yonhapnews.co.kr/national/2014/01/05/38/0301000000AEN20140105002600320F.html.
[99] "South Korea Declared Expanded ADIZ Overlapping With Other Zones," *The Japan Times,* December 8, 2013, http://www.japantimes.co.jp/news/2013/12/08/asia-pacific/south-korea-declares-expanded-adiz-overlapping-with-other-zones/#.V2jJu_l97RZ; Jeyup S. Kwaak and Yumi Otagaki, "South Korea, Japan Send Planes Into China's New Defense Zone," *The Wall Street Journal,* November 28 2013, http://www.wsj.com/news/articles/SB10001424052702304017204579225371188431160.
[100] Kimberly Hsu, "Air Defense Identification Zone Intended to Provide China Greater Flexibility to Enforce East China Sea Claims" (US-China Economic and Security Review Commission Staff Report, Washington DC, January 14, 2014), 1-2.
[101] Kwaak and Otagaki, "South Korea, Japan Send Planes Into China's New Defense Zone."

conflict in the region deepening. Things can take a dramatic turn for the worse if territorial conflicts and historical issues are merged with nationalism.[102]

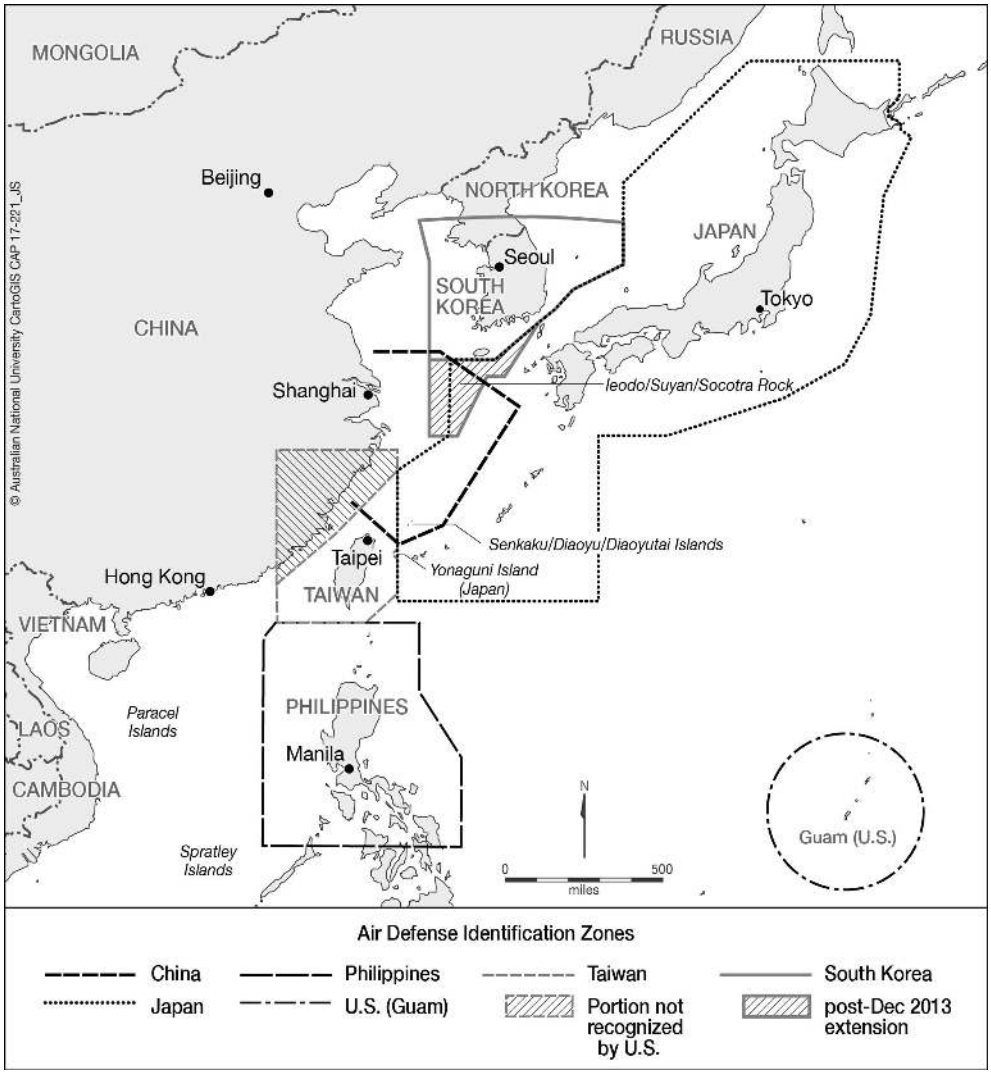

Figure 7.4: Air Defense Identification Zones 2015[103]

China's declaration of its ADIZ made it impossible for South Korea to maintain its desired "neutral" position on China. Without taking a stand on Socotra, it would have been difficult to counteract China's growing assertiveness in claiming territories in the region. Three days after China's ADIZ announcement, South Korea announced the acquisition of three more *Aegis* destroyers to complement its fleet of three. The original 2012 shipbuilding plan claimed the rationale was to enhance "South Korean

[102] Quoted in Choe Sang-Hun, "China's Airspace Claim Inflames Ties to South Korea, Too," *The New York Times,* November 27, 2013, http://www.nytimes.com/2013/11/28/world/asia/chinas-airspace-claim-inflames-ties-to-south-korea-too.html.

[103] CartoGIS, College of Asia and the Pacific, Australian National University.

military capability against the rising threat posed by North Korea's nuclear and missile weapons as well as submarines." [104] However, the 2013 acquisition announcement stated that the additional ships were also a response to bolster South Korea's defense against its Asian neighbors, with Seoul stepping up patrols in its new ADIZ, particularly around its research station on Socotra.[105]

Added to this, diplomatic relations were further complicated by illegal Chinese fishing in South Korean waters. Seoul frequently requested that Chinese vessels respect the median line between the two countries in the Yellow Sea and restrict fishing to the Chinese side of the median until a permanent settlement of overlapping EEZs can be reached.[106] Until 2014, skirmishes never reached the hostile levels like those between South Korea and Japan over Takeshima/Dokdo Islands. That year encounters began to escalate. In October, the KCG stopped a Chinese fishing boat illegally fishing in South Korean waters. When KCG officials boarded the boat, they were attacked with knives and beer bottles, and in an effort to subdue the crew, the coast guard fired several warning shots which killed the Chinese captain.[107] By 2015, the cases of illegal Chinese fishing in South Korean waters increased, with the number of seized Chinese ships peaking at 600.[108]

The year 2016 saw a series of clashes, which led to the Korean government announcing tougher countermeasures, "using all possible means if needed, such as directly hitting and gaining control of those Chinese fishing boats, as

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[104] Republic of Korea Joint Chief of Staff spokesperson Col. Eom Hyo-sik quoted in "S. Korea to Build Three more Aegis Destroyers," *Yonhap News Agency,* December 10, 2013, http://english.yonhapnews.co.kr/national/2013/12/10/8/0301000000AEN20131210001651315F.html.
[105] "S. Korea to build three more Aegis destroyers."
[106] Michael McDevitt, "Regional Dynamics in Response to Alternative PLA Development Vectors," in *The Chinese People's Liberation Army in 2025,* ed. Roy Kampuhasen and David Lai (Carlisle: Strategic Studies Institute and US Army War College Press, July 2015): 272-273.
[107] "China Lodges Protest after South Korea Coast Guard Shoots Dead Chinese Fisherman," *The Straits Times,* October 11, 2014, http://www.straitstimes.com/asia/east-asia/china-lodges-protest-after-south-korea-coast-guard-shoots-dead-chinese-fisherman.
[108] "South Korea Cracks Down on Illegal Chinese Fishing," *The Wall Street Journal,* June 10, 2016, http://www.wsj.com/articles/south-korea-cracks-down-on-illegal-chinese-fishing-1465550310.

well as firing common weapons."[109] In January, South Korea announced it would deploy a new 5,000-ton patrol vessel to bolster protection over its valuable fishing grounds around Socotra and in the Yellow Sea, with regular patrols beginning in April.[110] The next month, the ROK Navy fired warning shots at a Chinese patrol boat that crossed the NLL between North and South Korea.[111] South Korea also bolstered its numbers of patrol and coastal combatants (both Coast Guard and Navy) not just to patrol the NLL and Socotra, but also to protect its overall territorial integrity. In June 2016, the KCG conducted joint operations with the UN Command in reaction to illegal Chinese fishing near the mouth of the Han River and the NLL.[112] In September, three Chinese fishermen were accidentally killed when the KCG, in the process of seizing a Chinese ship in Korean waters, threw grenades that ignited. In October, Chinese fishing boats rammed and sunk a KCG vessel just outside South Korea's EEZ.[113] Then in November, the KCG fired shots at two Chinese vessels fishing illegally in Korean waters. The vessels had been warned to stop fishing in South Korea's territorial waters and tried to ram the KCG vessel in response. After opening fire on the ships—reportedly the first time such a countermeasure had been used—the two Chinese vessels were seized.[114]

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[109] Ju-min Park, "South Korea Vows Greater Force Against China Fishing Boats," *Reuters,* October 11, 2016, http://www.reuters.com/article/us-southkorea-china-fishermen-idUSKCN12B09O.

[110] "S. Korea to Deploy 5,000-ton Vessel to Ieodo," *Yonhap News Agency,* January 26, 2016, http://english.yonhapnews.co.kr/national/2016/01/26/0301000000AEN20160126008300315.html.

[111] "South Korean Navy Fires Warning Shots at Chinese Patrol Boat," *Defense News,* December 8, 2015, http://www.defensenews.com/story/defense/2015/12/08/south-korean-navy-fires-warning-shots-chinese-patrol-boat/76988690/.

[112] Park Boram, "(LEAD) S. Korea, UN Crack Down on Illegal Chinese Fishing in Neutral Waters between Koreas," *Yonhap News,* June 10, 2016, http://english.yonhapnews.co.kr/news/2016/06/09/0200000000AEN20160609003851315.html?input=www.tweeter.com.

[113] Park Kyung-man and Lee Je-hun, "For the First Time, Chinese Boat Rams and Sinks a S. Korean Coast Guard Vessel," *the hankyoreh,* October 10, 2016, http://english.hani.co.kr/arti/english_edition/e_international/764968.html.

[114] Lisa Collins, "Is South Korea's Use of Force Against Chinese Fishing Vessels Illegal?" *CSIS Asia Maritime Transparency Initiative,* December 12, 2016, https://amti.csis.org/rok-force-chinese-vessels-illegal/; and Lyle J. Morris, "South Korea Cracks Down on Illegal Chinese Fishing, with Violent Results," *The RAND Blog.* November 4, 2016, http://www.rand.org/blog/2016/11/south-korea-cracks-down-on-illegal-chinese-fishing.html.

Second, compounding its rocky relations with Beijing, has been South Korea's even more complex relationship with Japan. Although both allies of the US, they have divergent perceptions on what is the most pertinent threat emanating from North Korea: its nuclear and missile program, its conventional and special forces, its international smuggling and other criminal activities, its human rights abuses and forced abductions, or its economic, political and social weaknesses that might release a flood of refugees across its borders.[115] This has also shaped their divergent attitudes towards the roles of US and China in the Asia-Pacific. On the one hand, Tokyo views Washington as instrumental in maintaining regional stability. On the other hand, for Seoul the American extended deterrent is not the sole shield to its regional interests and the threat posed by the "rise of China" is not as an immediate concern as it is for Japan.[116]

Respective military modernization programs exhibit elements of acquiring new capabilities to keep up with other navies. This has been influenced by not only technical modernization pressures but also the desire to remain strategically viable.[117] Whilst the primary motivation for Japan has been the qualitative improvement in Chinese military capabilities, Japan's "normalization" of its JSDF has also been a key impulse behind South Korea's modernization. Consequently, South Korea's modernization of its naval and associated air capabilities has targeted potential contingencies involving both China and Japan, which led to similar requirements regarding blue-water power projection and ASW capabilities (see Figure 7.5).

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[115] Ralph Hassig and Kongdan Oh, "Who's Afraid of North Korea? Japanese and South Korean Polling Data," *The Mansfield Asian Opinion Poll Database Commentary* C10-6 (October 29, 2010), http://www.mansfieldfn.org/polls/Commentaries/commentary-10-6.htm.

[116] Cheol Hee Park, "Cooperation Coupled with Conflicts: Korea-Japan Relations in the Post-Cold War Era," *Asia-Pacific Review* 15, no. 2 (2008), 16.

[117] W. S. G. Bateman, *Strategic and Political Aspects of the Law of the Sea in East Asian Seas* (PhD dissertation, Australian Defense Force Academy, University of New South Wales, Canberra, 2001), 85.

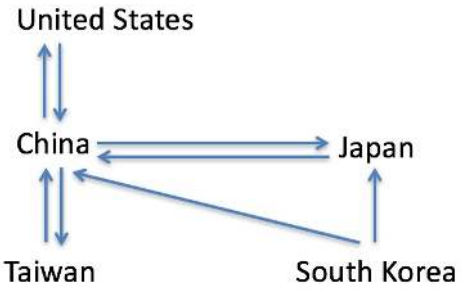

Figure 7.5: Interactive Arming Dynamics vis-à-vis ROK Military Modernization

Seoul has displayed increasing concern about Tokyo's significant blue-water assets and evolving power projection capabilities.[118] To be sure, much of Japan's capabilities have been acquired out of concern for China's growing power projection capabilities and its need to secure and defend its extended interests, including its EEZ and SLOCs. However, these sea-lanes and territories are mainly in the disputed territory of the Takeshima/Dokdo Islands, which are the objects of concern for Seoul. From South Korea's perspective, Japan's attempts to secure "its" trade routes and territory—in areas that overlap with Seoul's immediate neighborhood—implicitly poses a threat to South Korean economic and strategic interests. Consequently, while the ROK Navy has not undertaken any specific operational measures in response to Japanese and Chinese actions, its shipbuilding program and the construction of the naval base on Jeju Island were partly influenced because of China and Japan's future strategic direction.[119]

As a result, the ROK Navy initiated significant force upgrades to maintain its levels vis-à-vis Japanese modernization and implicitly hedge against Chinese intentions, particularly through qualitative and quantitative improvements of surface combatants, submarines and aircraft. [120] In 2010, the ROK Navy mobilized its first high mobility combat unit, "Mobile Flotilla," for the purpose of enhancing protection of its maritime areas and sea-lanes. [121]

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[118] "Abe Falls Short," *Yonhap News Agency,* May 1, 2015, http://english.yonhapnews.co.kr/search1/2603000000.html?cid=AEN20150501000800315;
[119] Roehrig, "Republic of Korea Navy and China's Rise," 76.
[120] The author's study of Japan-South Korea action-reaction dynamics and military modernization has previously been published as: "Burying the Hatchet?" The Sources and Limits of Japan-South Korea Security Cooperation," *Asian Security* 9, no. 2 (2013): 93-110.
[121] "South Korean Navy Launches its First High-Mobility Unit," *naval-technology.com,* February 2, 2010, http://www.naval-technology.com/news/news75759.html; and "S. Korea

However, the ROK Navy's most significant investment has been the *Aegis* KDX-III fleet. In 2010, South Korea commissioned its first of three *Aegis*-equipped KDX, and it planned to receive another three between 2023 and 2027. [122] The KDX-III *Sejong the Great* destroyers are the most technologically advanced ship in the ROK Navy with a full displacement of 11,000 tons, and are the largest surface combatants to carry the *Aegis* system, with larger displacements than the US *Arleigh Burke*-destroyers and the Japanese *Atago*-destroyers.[123] It is a multi-purpose vessel equipped with land-attack, ship-to-ship, air defense and ASW capabilities. Its large hull size also gives it greater fuel capacity as well as operational time at sea.[124] It has also been equipped with the *Phalanx* CIWS and SPY-1D radar that can track up to 1,000 targets and engage close to 20 of them simultaneously.[125]

Another key weapons platform has been its amphibious assault ship, the *Dokdo*-class, the first of which was commissioned in 2007. With a full displacement of 18,000 tons, it is capable of over-the-horizon landing operations, can carry up to 5 helicopters on its flight deck, and can accommodate six assault amphibious vehicles (AAV), two LCACs, six tanks and ten trucks.[126] It has acted as the command and control ship for its strategic mobile operation fleet and supports three-dimensional landing operations as well as maritime air operations.[127] Four ships of this class had been planned to enter into service by 2020, however, funding for the remaining three was cancelled during Lee Myung-Bak's administration due to high project cost.

Activates High-Mobility Combat Unit," *Yonhap News Agency,* February 1, 2010, http://english.yonhapnews.co.kr/national/2010/02/01/77/0301000000AEN20100201002900315F.HTML.

[122] Jung Sung-ki, "Navy Activates 1st Strategic Mobile Fleet," *The Korea Times,* February 1, 2010, http://www.koreatimes.co.kr/www/news/nation/2010/02/205_60079.html.

[123] "Aegis Weapon System Verified During Korean Navy Ship Trials," *Defence Talk,* August 2, 2010, http://www.defencetalk.com/aegis-weapon-system-verified-during-korean-navy-ship-trials-27828/; "Korea's KDX-III AEGIS Destroyers," *Defense Industry Daily*, 11 June 2015, http://www.defenseindustrydaily.com/drs-wins-multiplexing-contract-for-korean-aegis-destroyers-0431/; and "Sejong the Great Class / KDX-III Class Destroyer, South Korea," *naval-technology.com,* 2016, http://www.naval-technology.com/projects/sejongthegreatclassd/.

[124] "Sejong the Great Class / KDX-III Class Destroyer, South Korea"; and Mingi Hyun, "South Korea's Blue-water Ambitions," *The Diplomat,* November 18, 2010, http://thediplomat.com/2010/11/south-koreas-blue-water-ambitions/?allpages=yes.

[125] "Korea's KDX-III AEGIS Destroyers."

[126] "Dokdo Class Landing Platform Helicopter," *naval-technology.com,* 2016, http://www.naval-technology.com/projects/dodko-class/;.

[127] "Dokdo Class Landing Platform Helicopter."

The funding for the second ship, the *Marado,* was restored in 2012 off the back of rising regional tensions and North Korean incursions into South Korean waters.[128]

The ROK Navy also invested qualitatively and quantitatively in its submarine capability beyond targeting the DPRK Navy's midget submarine fleet that dates back to the 1950s.[129] In February 2015, it became only the sixth country in the world with an independent submarine command.[130] The ROK Navy has operated a submarine fleet of nine diesel-electric KSS-I *Chang Bogo*-class and six KSS-II *Son Wonil*-class hybrid diesel-electric/fuel cell vessels with an AIP system. The *Son-Wonil*-class is equipped with indigenous ship-to-ship cruise missiles with a maximum range of 1,500km and thus capable of carrying out precision strikes. It has a maximum underwater speed of 20knots and with AIP it can travel from South Korea to Hawaii and back without refueling and resurfacing, boosting South Korea's intelligence and interdiction capabilities.[131] The sixth *Son Wonil*-class submarine was commissioned in May 2015 and planned an additional three to be delivered before 2020, which would bring the ROK Navy force level to 18 operational conventional submarines.[132] The third phase of its submarine program, the KSS-III, concerns a next-generation indigenously developed submarine to be launched in 2022. The ROK Navy plans to acquire nine vessels of this class. It will have a displacement of 3,000tons and features a vertical launching system that can fire land-attack cruise missiles of 1,500km range.[133]

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[128] "LP-X Dokdo (London Platform Experimental) Amphibious Ship," *GlobalSecurity.org,* October 30, 2014, http://www.globalsecurity.org/military/world/rok/lp-x.htm.
[129] See Koh Swee Lean Collin, "North Korea's Asymmetric Submarine Doctrine," *The Diplomat,* July 23, 2014, http://thediplomat.com/2014/07/north-koreas-asymmetric-submarine-doctrine/.
[130] Yoo Kyong Chang and Erik Slavin, "South Korea Establishes Submarine Command," *Stars and Stripes,* February 3, 2015, http://www.stripes.com/news/south-korea-establishes-submarine-command-1.327421;
[131] Prashanth Parameswaran, "South Korea Reveals New Attack Submarine," *The Diplomat,* May 8, 2015, http://thediplomat.com/2015/05/south-korea-reveals-new-attack-submarine/.
[132] "South Korea Submarine Capabilities," *Nuclear Threat Initiative,* September 28, 2015, http://www.nti.org/analysis/articles/south-korea-submarine-capabilities/;
[133] Ridzwan Rahmat, "DSME Lays Keel for South Korea's First KSS-III Submarine," *IHS Jane's,* May 19, 2016, http://www.janes.com/article/60461/dsme-lays-keel-for-south-korea-s-first-kss-iii-submarine.

The naval base on Jeju Island (100km south of the Korean peninsula) has been critical to strengthening its blue-water capability. It was inaugurated in February 2016 and has served as the homeport for the ROK Navy's Strategic Mobile Fleet (SMF), accommodating 20 warships, including submarines and three KDX-III destroyers.[134] The SMF patrols the area south of Jeju Island to cover the entrance to the Korea Strait, west of Jeju to cover the SLOCs in the Yellow Sea, and south of Jeju to cover the traffic headed to and from the East China Sea.[135] The new naval base adds to its existing facilities at Busan and Jinhae. The facility is south-facing, offering unobstructed access to South Korea's major SLOCs passing through the Western Pacific.[136] The southern waters of Jeju are critical to the South Korean economy, with the vast majority of its maritime commercial traffic using these shipping lanes.[137] Strategically, Jeju naval base is significant due to its access to its contested territories in both the Yellow Sea and the East China Sea. The base is ideal for extended missions and has enhanced the ROK Navy's ability to influence its territorial disputes, including Socotra rock and its claim of an extended continental shelf EEZ down to the Okinawa trough.[138] Jeju naval base significantly helps South Korea counter China's increasingly assertive territorial claims over the buffer zone of Socotra reef. If Seoul would cede control of Socotra, South Korea would be exposed to the same security challenges faced at its western border islands along the NLL.[139]

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[134] David J. Suchyta, "Jeju Naval Base: Strategic Implications for Northeast Asia," *Strategy Research Project* (Carlisle: United States Army War College, 2013), 8.
[135] Balbina Y. Hwang, "Impact of the US Pivot on ROK Naval Power," in *Assessing Maritime Power in the Asia-Pacific: The Impact of American Strategic Re-Balance,* ed. Greg Kennedy and Harsh V. Pant (London: Routledge and the Corbett Centre for Maritime Policy Studies, 2016), Google e-book, Chapter 8.
[136] Euan Graham, "A Glimpse into South Korea's New Naval Base on Jeju Island," *Asia Times,* June 1, 2016, http://atimes.com/2016/06/a-glimpse-into-south-koreas-new-naval-base-on-jeju-island/.
[137] Kim Kang-nyeong, "National Strategic Value and Role of Jeju Naval Base," *Korea Focus,* December 2012, http://www.koreafocus.or.kr/design3/essays/view.asp?volume_id=129&content_id=104343&category=g.
[138] Sung-Wong Shim, "South Korea to Submit Claim on East China Sea Shelf to UN," *Reuters,* July 3, 2011, http://www.reuters.com/article/us-korea-eez-idUSTRE7620N120110703. See also Chris Acheson, "Disputed Claims in the East China Sea: An Interview with James Manicom," *NBR Japan-US Discussion Forum,* July 25, 2011, http://www.nbr.org/research/activity.aspx?id=159.
[139] Lee Tae-hoon, "Will Jeju Naval Base Trigger Arms Race in Asia?" *The Korea Times*, September 5, 2011, http://www.koreatimes.co.kr/www/news/nation/2011/09/116_94233.html.

South Korea has also modernized associated air platforms. In 2000, it upgraded its ageing S-2 maritime surveillance and patrol aircraft with eight P-3C *Orions* which substantially improved the ROK Navy's ocean surveillance capability. In 2010, the ROK Navy deployed a further eight refurbished P-3CKs and, since 2013, showed interest in purchasing 20 new P-8 *Poseidon* maritime patrol aircraft to modernize its P-3Cs.[140] To bolster its ASW and anti-surface warfare capabilities, the ROK Navy also acquired four multi-mission *Lynx* helicopters, with the first to be forward-deployed by 2017. Seoul also revealed plans to add 40 helicopters for offshore operations by 2030.[141] In June 2015, it further announced that it would purchase four air refueling tanker aircraft, which would increase the operational time of its fighter jets, particularly over the Takeshima/Dokdo Islands.[142]

Moreover, in December 2015, the ROK armed forces launched its largest ever procurement project, the KF-X stealth jet program, with KAI-Lockheed Martin and Indonesia as a development partner.[143] Six prototypes of the K-FX are scheduled for production by 2021, with initial operating capability planned for 2026, and 120 fighters to be produced by 2023 to replace the ROK's aging F-4 and F-5 fleets.[144] Despite not receiving four key technologies for transfer in the purchase agreement (as previously mentioned),

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[140] "South Korea Purchases Additional P-3 Aircraft," *defense-aerospace.com,* March 1, 2010, http://www.defense-aerospace.com/articles-view/release/3/112769/south-korea-buys-additional-p_3-aircraft.html; and "South Korea to Procure 20 Maritime Patrol Aircraft," *naval-technology.com,* May 28, 2013, http://www.naval-technology.com/news/newssouth-korea-to-procure-20-maritime-patrol-aircraft.

[141] Franz-Stefan Gady, "South Korea Receives Four New 'Submarine Killer' Helicopters," *The Diplomat,* June 15, 2016, http://thediplomat.com/2016/06/south-korea-receives-four-new-submarine-killer-helicopters/; and Elizabeth Shim, "South Korea Navy Adding Lynx Helicopters to Anti-submarine Operations," *UPI,* June 16, 2016, http://www.upi.com/Top_News/World-News/2016/06/16/South-Korea-navy-adding-Lynx-helicopters-to-anti-submarine-operations/3881466101524/.

[142] Aaron Mehta and Agence France-Presse, "South Korea Selects Airbus for $1.33B Tanker Contract," *Defense News,* June 30, 2015, http://www.defensenews.com/story/defense/international/asia-pacific/2015/06/30/south-korea-selects-airbus-military-contract/29519825/; and Jeyup S. Kwaak and Robert Wall, Airbus Beats Boeing in Contract for South Korean Refuel Tankers," *The Wall Street Journal,* June 30, 2015, http://www.wsj.com/articles/airbus-beats-boeing-in-contract-for-south-korean-refuel-tankers-1435656751.

[143] "KF-X Fighter: Korea's Future Homegrown Jet," *Defense Industry Daily,* June 20, 2016, http://www.defenseindustrydaily.com/kf-x-paper-pushing-or-peer-fighter-program-010647/; and Dave Majunder, "South Korea Launches Homegrown Stealth Fighter Jet," *The National Interest,* January 21, 2016, http://nationalinterest.org/blog/the-buzz/south-korea-launches-homegrown-stealth-fighter-project-14989.

[144] "KF-X Fighter: Korea's Future Homegrown Jet."

the KF-X program are likely to benefit from 21 other technology transfers from the ROK's 40 F-35A acquisition, which has a conventional take-off and landing capability and will be delivered between 2018 and 2021.[145] The ROK armed forces also purchased four long-range, high-altitude *Global Hawk* unmanned aerial vehicles, set for a 2017-2019 delivery.[146]

Findings

South Korean military modernization has two objectives: to maintain its traditional deterrent and littoral combat capabilities vis-à-vis North Korea; and second, to have a medium force that can at least stay in touch with Chinese and Japanese modernizations (H1). The triangular interactive dynamic that has emerged between China, Japan and South Korea demonstrates that arming and military modernization cannot be simply modeled as a bilateral "arms race" relationships (H2). Acquisition decisions made by both South Korea and Japan have targeted multiple shifts in their strategic environment (H4). Due to the high costs of investing and maintaining advanced weapons platforms, these countries have invested in capabilities which can respond to a multitude of contingencies (H3). Its alliance with the US has not prevented the ROK from reacting to both Chinese and Japanese arms acquisitions (H5). Additionally, due to their maritime environments many of the capabilities acquired by these three countries have been similar. In traditional "arms race" theories this dynamic could be labeled as a reactive response and "mirror reaction."

However, such explanations imply that advanced naval and associated air capabilities are proliferating in the East China Sea as regional countries are more concerned with mimicking each other as opposed to meeting maritime operational requirements to protect territorial waters and national interests. Traditional "arms race" theories also do not adequately capture the fact that

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[145] Franz-Stefan Gady, "South Korea Mulling Purcahse of 20 More F-35 Stealth Fighter Jets," *The Diplomat,* September 14, 2016, http://thediplomat.com/2016/09/south-korea-mulling-purchase-of-20-more-f-35-stealth-fighter-jets/.

[146] Kris Osborn, "Japan, South Korea 'Going for' Global Hawk Drones, Official Says," *DefenseTech,* March 24, 2016, http://www.defensetech.org/2016/03/24/japan-south-korea-going-for-global-hawk-drones-official-says/; and Bradley Perret, *Aviation Week,* November 4, 2013, http://aviationweek.com/defense/south-korean-global-hawks-set-2017-19-delivery.

reactive arming is often asymmetric—as demonstrated by both Japan and South Korea—and that arming behavior is likely to be complemented by other strategic behavior, such as bolstering self-reliant capabilities and defense cooperation. As well, Seoul's management of multiple shifts in its strategic environment, particularly its resistance to integrate into the US-led regional BMD network, has demonstrated that modernization is not just about adding capabilities, but also about foregoing some major options (H4). Decisions of restraint are also acquisitions decisions, and highlight that statesmen remain in control over armament policies (H6). The next chapter moves the empirical analysis to Vietnam, a Southeast Asian case that demonstrates a changing doctrine and increasing capability developments in response to the changing balance of power in Northeast Asia.

Chapter 8:
Vietnam

Key Impulses

The development of Vietnam's naval and associated air capabilities has been driven by two key impulses. First, it has demonstrated the political will to tackle major change in its policy settings, adjusting its defense doctrine, and implementing numerous complementary measures in the last two decades. Its surge in economic growth from the late 1990s allowed the replacement of obsolescent equipment. The ability to spend more on defense and replace aging equipment fueled investments in military capabilities. The majority of Vietnam's defense investments and expenditure is now focused on developing stronger, self-contained naval and associated air capabilities. These purchases were sourced not just from Russia but also other foreign suppliers such as Japan and India. Hanoi further recognized that its state-owned indigenous defense industry has been a key weakness in regard to reducing foreign dependence and has attempted bureaucratic reform.

Second, Vietnam is reacting to Chinese activities and militarization in the South China Sea. Without naval and associated air modernization, the capability gap would widen between the VPA and the PLA to the degree that Vietnam would risked losing its claimed territories in the South China Sea. Such acquisitions have been backed by broad domestic anti-Chinese sentiment. To this end, Vietnam is attempting to leapfrog from Cold War-era equipment to advanced platforms such as *Kilo*-class submarines and fourth-generation fighters. These capabilities have focused on developing a credible green-water deterrent for Vietnam's littoral waters, which are adjacent to the South China Sea. In reaction to China, Vietnam has also engaged in land reclamation and militarization activities on its occupied islands in the South China Sea. Investments in anti-ship and anti-aircraft capabilities, backed with investments in ISR, have increased the VPN's ability to deter other claimants from attacking Vietnam's claimed islands.

A Seachange in Doctrine

Vietnam has both a strong and nationalist military tradition.[1] The one party-state of Vietnam is run by the Communist Party of Vietnam (CPV) which exerts strong political influence over the Vietnam People's Army (VPA) and, by extension, the Vietnam People's Navy (VPN). Overall the armed forces are integrated closely into the states' infrastructure, having been assigned political, internal security and economic production roles.[2] Conversely, the military has held a privileged place in Vietnamese society due to its historical role as the "indispensable tool of the worker-peasant class to fight imperialist enemies both within and outside the state."[3] The priority of the VCP has been to protect Vietnam's national interests through three pillars: economic development; enhancing security and defense; and promoting the country's regional and international standing.[4]

Shifts in Vietnam's strategic environment, as well as strong economic growth, and popular and nationalistic support for its military, have resulted in widespread backing for a growing defense expenditure and focus on defense strategy. Improving its naval and air capabilities has become critical for Vietnam, with the objective of deterring China due to overlapping claims in the South China Sea. The challenge presented by China in the South China Sea has "generated pressures on the VPA to modernize its forces, raise its professional standards, and step up international defense cooperation with regional states in order to better defend Vietnam's sovereignty."[5] Much of the modernization of naval and associated air capabilities from the late 1980s to 1990s focused on the replacement of outdated platforms inherited from the

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[1] IISS, *The Military Balance 2016*, 296.
[2] Carlyle A. Thayer, "The Political Role of the Vietnam People's Army: Corporate Interests and Military Professionalism" (Paper to Panel on Understanding Vietnamese Politics: New Approaches and Issues from the Field, Association of Asian Studies Annual Conference, Toronto, Canada, March 15-19, 2012), 5.
[3] Thayer, "The Political Role of the Vietnam People's Army," 2-3.
[4] Tran Truong Thuy, "Vietnam's Relations with China and the US and the Role of ASEAN," in *Security Outlook of the Asia Pacific Countries and Its Implications for the Defense Sector,* NIDS Joint Research Series No. 14 (Tokyo: The National Institute for Defense Studies, 2016), 87.
[5] Carlyle A. Thayer, "Military Politics in Contemporary Vietnam," in *The Political Resurgence of the Military in Southeast Asia,* ed. Marcus Mietzner (Abingdon: Routledge, 2011), 66.

United States and the former Soviet Union in the 1950s and 1960s.[6] Recently, however, Hanoi started to invest in qualitatively more sophisticated air and naval capabilities in reaction to China's comprehensive military modernization and to protect its national interests in what it calls the "East Sea" (South China Sea). In 2009, the VPN's declared responsibility included: to strictly manage and control the waters and islands in the South China Sea under Vietnam's sovereignty; to counter any acts of violating sovereignty; the jurisdiction and national interests of Vietnam at sea; to secure the normal activities of Vietnam in its waters and islands in conformity with Vietnamese and international laws; to ensure maritime safety and participate in search-and-rescue operations in accordance with Vietnam's laws and the international conventions adopted by Vietnam; and to be ready for joint and combined operations to defeat any aggression from and at sea.[7]

In January 2007, Rear Admiral Nguyen Van Tinh emphasized the critical role of the navy in socio-economic development terms:

> apart from protecting the nation's territorial waters and continental shelf, the VPN has actively taken part in developing the national economy. We are organizing and completing fishing fleets, especially offshore fishing, as well as promoting aquaculture activities in coastal areas and the Spratly [archipelago]. Naval forces are also ready to play a key role in offshore fishing so that residents in coastal areas from northern to southern regions can improve their daily lives and further contribute to national economic development.[8]

Vietnam's 2009 defense white paper further stated that its national defense policy was one of peace and self-defense, "expressed in the guideline of not using force or threatening of using force in international relations." It added that "Vietnam advocates the general modernization of the VPA and

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[6] Bob Nugent, "Naval Acquisition Trends in Asia," in *Naval Modernisation in South-East Asia: Nature, Causes and Consequences,* ed. Geoffrey Till and Jane Chan (London and New York: Routledge, 2014), Google e-book, Chapter 2.
[7] Socialist Republic of Vietnam Ministry of National Defence, *Vietnam National Defence* (Hanoi: Ministry of National Defence, December 2009), 73.
[8] Quoted in "Vietnam," 3.

enhancement of the defense potential only to maintain its military power sufficient for self-defense capability. Vietnam opposes arms race (sic)."[9]

That said, Hanoi has devoted increased attention to security partnerships and cooperation with regional partners, particularly Russia, India, the US, the Philippines and Japan.[10] Moreover, by Southeast Asian standards (with the exception of Singapore[11]), Vietnam's military modernization and vested change to its strategic doctrine has been impressive. No other country in the sub-region has attempted to "leapfrog" from Cold War-era equipment to advanced platforms such as *Kilo*-class submarines. Hanoi has focused on developing capabilities for deterrence and a green-water navy for offshore territorial defense.[12]

However, Hanoi has also faced many challenges in implementing a comprehensive defense reform. Despite its significant maritime interests, the capabilities of the VPN have remained relatively weak compared to other regional navies of China, Singapore, Malaysia or Taiwan.[13] Vietnam has not taken apart in any unilateral or international naval operations other than routine patrols of the territorial waters and EEZ.[14] Its air and maritime

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[9] Socialist Republic of Vietnam Ministry of National Defence, *Vietnam National Defence,* 19.

[10] Rupakjyoti Borah, "Why India and Vietnam Need Each Other," *The Diplomat,* September 13, 2016, http://thediplomat.com/2016/09/why-india-and-vietnam-need-each-other/; Carl Thayer, "The Philippines and Vietnam Forge a Strategic Partnership," *The Diplomat,* March 10, 2015, http://thediplomat.com/2015/03/the-philippines-and-vietnam-forge-a-strategic-partnership/; and Pierre Tran, "Vietnam Seeks To Strengthen US, Japan Ties," *DefenseNews,* April 1, 2015, http://www.defensenews.com/story/defense/international/asia-pacific/2015/04/01/vietnam-seeks-to-strengthen-us-japan-ties/70777168/.

[11] See Huxley, *Defending the Lion City*; Swee Lean Collin Koh, "Seeking Balance: Force Projection, Confidence Building, and the Republic of Singapore Navy," *Naval War College Review* 65, no. 1 (Winter 2012): 75-92; Swee Lean Collin Koh, "'Best Little Navy' in Southeast Asia: The Case of the Republic of Singapore Navy," in *Small Navies: Strategy and Policy for Small Navies in War and Peace* ed. Michael Mulqueen, Deborah Sanders and Ian Speller (Corbett Centre for Maritime Policy Studies and Routledge: London 2016), Google e-book, Chapter 8; and Andrew T. H. Tan, "Punching Above Its Weight: Singapore's Armed Forces and Its Contribution to Foreign Policy," *Defence Studies* 11, no. 4 (2012): 672-697.

[12] Swee Lean Collin Koh, "Vietnam's Quest for a Greenwater Navy," *The Diplomat,* March 18, 2016, http://thediplomat.com/2016/03/vietnams-quest-for-a-greenwater-navy/.

[13] "Vietnam," *IHS Jane's World Navies,* IHS Aerospace, Defence & Security, 2014, 1.

[14] "Vietnam," 5; and Jane Perlez, "Q and A: Lyle Goldstein on China and the Vietnamese Military," *The New York Times,* July 5, 2014, http://sinosphere.blogs.nytimes.com/2014/07/05/q-and-a-lyle-goldstein-on-china-and-the-vietnamese-military/.

modernization also remained incremental despite an increasing defense budget. It will take years for Vietnam to complete its current round of modernization, as well as develop new doctrines and tactics to use its new platform. Vietnam has also been highly dependent on foreign supplies for advanced military hardware. It has imported the majority of its defense equipment from Russia which is likely to remain its primary arms dealer for the foreseeable future. Cost constraints and political divisions in Hanoi have also curbed Vietnam's appetite for procuring advanced American weaponry.[15]

In addition, Vietnam has also faced pressing domestic challenges, including reducing the poverty rate, as well as fighting bureaucratic inefficiency and corruption.[16] Moreover, the VPA has remained a central element of the country's political system due to its historical role in the Indochina wars, promoting the view that Vietnam is still a land power in the fight over defense resources. It has retained a strong role in the defense modernization process as the service responsible for internal security and for managing a huge land border with China.[17] An imbalanced force structure is thus highly likely for the foreseeable future. Indeed, as Vietnam has developed pockets of naval and air capabilities these acquisitions could prove to a double-edged sword due to the high costs of maintaining capabilities for what is still a relatively small defense budget. Therefore, the quantitative and qualitative edge belongs to China, and Vietnamese leaders' response to deterring Chinese expansion and land reclamation in the South China Sea can only be asymmetric.

Economic Growth and Enhanced Self-reliance

In the post-Cold War era, Hanoi became increasingly aware that the maritime domain took on greater prominence for the armed forces and that the dominant role of the VPA had to be reconsidered. The overall military modernization of Vietnam's military has been underpinned by its economic

[15] Phillip Orchard, "The US Opens Its Arms to Vietnam," *STRATFOR,* May 26, 2016, https://www.stratfor.com/analysis/us-opens-its-arms-vietnam.
[16] Keith Griffin, "Preface," in *Economic Reform in Vietnam*, ed. Keith Griffin (London: Macmillan Press, 1998), ix; and "Vietnam: Overview," *The World Bank,* September 26, 2016, http://www.worldbank.org/en/country/vietnam/overview
[17] Thayer, "Military Politics in Contemporary Vietnam," 65.

growth and the desire for self-reliance. In 1986, Hanoi instituted the *Doi Moi* ("economic renewal") reforms to transform Vietnam's socialist economy into what it termed a "socialist-oriented market economy," essentially a transition model which "conforms to principles of the market economy, and is based on and guided by principles and nature of socialism."[18] These reforms had a profound effect on propelling Vietnam's high growth rates as well as sharp reductions in poverty.[19] The CPV placed a high premium on economic development, as it recognized that economic growth enhances national security but also regime legitimacy. Conversely, economic underdevelopment breeds political instability and undermines the mandate of the CPV's one-party rule.[20]

The past 30 years of Vietnam's development have been remarkable, with its economy transformed from one of the world's poorest to a lower middle-income status.[21] Since 1990, Vietnam's per capita growth has been one of the fastest in the world, averaging 6.4 percent a year during the 2000s. In 2015, the World Bank's estimated a growth rate of 6.7 percent.[22] Hanoi remained determined to continue systematic transformation of its economy, which were often labeled "stabilization" or "structural adjustment" programs.[23] Its 2011-2020 *Socio-Economic Development Strategy* promoted hybridizing its political system—maintaining its one-party rule and emphasizing collective strength, whilst ensuring macroeconomic stability and effectiveness, maintaining political stability and national sovereignty, and strengthening Party leadership, particularly its management of state-owned enterprises.[24] In March 2016, Vietnam's National Assembly (its highest legislative body) agreed on a five-year socio-economic development plan for 2016-2020 which

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[18] Radio Voice of Vietnam, "Socialist-oriented Market Economy: Concept and Development Solutions," Embassy of the Socialist Republic of Vietnam in the United States of America, November 17, 2003, http://vietnamembassy-usa.org/news/2003/11/socialist-oriented-market-economy-concept-and-development-soluti.
[19] Brian Van Arkadie and Raymond Mallon, *Viet Nam: A Transition Tiger?* (Canberra: ANU Press, 2004), 1.
[20] Thuy, "Vietnam's Relations with China and the US and the Role of ASEAN," 87.
[21] "Vietnam: Overview."
[22] "Vietnam: Overview."
[23] Griffin "Preface," ix.
[24] Vietnam Government, *Vietnam's Socio-Economic Development Strategy for the Period of 2011-2020*, trans. Economica (Hanoi: Socialist Republic of Vietnam, June 11, 2012, http://www.economica.vn/portals/0/maubieu/1d3f7ee0400e42152bdcaa439bf62686.pdf.

set five targets: average annual GDP growth between 6.5 percent and 8 percent; GDP per capita between USD3,200 and USD3,500 by 2020; industry and service sectors to account for 85 percent of GDP by 2020; total social investment capital between 32 percent and 34 percent of GDP by 2020; and a state budget deficit of 4 percent of GDP by 2020.[25]

Sustained economic growth has facilitated increases in defense expenditure. Although its defense spending started from a relatively low base, since 1995 Vietnam has had the highest increase in defense budget among Southeast Asian countries. After the Asian Financial Crisis, its proportion of GDP on defense spending actually decreased from 4.2 percent in 1998 to 2.5 percent in 2015. However, in terms of real dollar value its military expenditure increased from USD1.15 billion in 1998 to USD4.8 billion in 2015, a 254 percent increase.[26] In 2015, Vietnam had the fourth largest defense expenditure in Southeast Asia behind Singapore, Indonesia and Thailand, which all have significantly larger economies. Significantly, it also came second with regards to the proportion of its GDP allocated to defense (See Table 8.1).[27]

Rank	Country	Military expenditure (USD billion)	Proportion of GDP on Defense (%)
1	Singapore	9.96	3.4
2	Indonesia	7.78	0.9
3	Thailand	6.05	1.5
4	Vietnam	5.00	2.4
5	Malaysia	4.03	1.4
6	Philippines	3.99	1.3

Table 8.1: Comparison of Military Expenditure in Maritime Southeast Asian Countries (2016)

[25] "Economy Set to Grow 6.5-7% Over Five Years," *Viet Nam News,* March 22, 2016, http://vietnamnews.vn/politics-laws/294102/economy-set-to-grow-65-7-over-five-years.html#fjKEQrdTjem614FL.97; and Andrew Harker, "Latest Five-year Socio-economic Development Plan Launched in Vietnam," *IHS Markit Commentary,* April 29 2016, http://www.markit.com/Commentary/Get/29042016-Economics-Latest-five-year-socio-economic-development-plan-launched-in-Vietnam.

[26] Based on figures from *WMEAT*, *The Military Balance*; and IMF *World Economic Database*.

[27] Based on figures from IISS, *The Military Balance 2016*, 256, 286, 293, 296; *WMEAT;* and IMF *World Economic Database*.

Some analysts have argued that Vietnam's real defense expenditure is likely to be much higher as the current figures did not include R&D expenditure or revenue generated from defense-owned industries, in particular VietTel, Vietnam's largest telecommunications provider.[28] It must be noted that Vietnamese defense policy and breakdowns of defense expenditure has remained relatively opaque.

There are no official breakdowns of Vietnam's military expenditure, but according to the IISS the Army has 412,000 personnel compared to the Navy's 40,000 personnel (of which 27,000 are naval infantry).[29] The VPN is also entirely an all-volunteer force with a reserve commitment at the end of service.[30] Additionally, Vietnam has faced a continuing challenge in securing its extensive land border with China, Laos and Cambodia. Whilst the Vietnam-China land border was demarcated in 2009,[31] Vietnam's borders with Laos and Cambodia remain porous and considerable resources are necessary to monitor internal security challenges such as, illegal migration, Hmong ethnic minority unrest in the Central Highlands, and organized crime.[32]

The VPA has also played a prominent role in Vietnam's commercial activities. It pursued two major strategic missions: national defense and economic production through the form of direct ownership of national defense industries and commercial enterprises.[33] These state-owned enterprises controlled by the VPA have yet to be privatized and have been problematic as the level of kickbacks and corruption remains high.[34] Transparency

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[28] Abuza and Nguyen, "Vietnam's Military Modernization."
[29] IISS, *The Military Balance 2016*, 297-298.
[30] "Vietnam," 2.
[31] "China and Vietnam Settle Border Dispute," *The New York Times,* January 1, 2009, http://www.nytimes.com/2009/01/01/world/asia/01iht-border.1.19027004.html.
[32] Carlyle A. Thayer, "Vietnam's Security Outlook" (Presentation to International Workshop on Asia-Pacific Security, National Institute of Defense Studies, Tokyo, January 17-18, 2012), 8-9. On the issue of the Hmong people, see "Hmong: Vietnam VPA, LPA Troops Attack Christians Villagers in Laos," Unrepresented Nations and Peoples Organization, January 26, 2010, http://unpo.org/article/10627.
[33] Thayer, "Military Politics in Contemporary Vietnam," 71; and Thayer, "The Political Role of the Vietnam's People's Army," 14.
[34] Ben Bland, "Vietnam Uncovers $1.5bn of 'Wrongful Spending,'" *Financial Times,* April 6, 2012, https://www.ft.com/content/837a2d08-7fc9-11e1-92d3-00144feab49a. See also Thuy Thu Nguyen and Mathijs A. van Dijk, "Corruption, Growth, and Governance: Private vs. State-owned Firms in Vietnam" (Working Paper, May 5, 2010).

International's 2016 "Corruption Perception Index" ranked Vietnam 113 out of 176 countries, with both its private and public sectors (in particular, public administration) impacted by significant bribery, political interference and facilitation payments.[35] For instance, the state-owned shipbuilding firm Vinashin was declared bankrupt in March 2011 after losing billions of dollars due to corruption and lack of government oversight.[36] The key exception to Vietnam's inefficient and corrupt SOEs has been the VPA-owned VietTel. Another source of military income, the company increased its annual revenue from USD2 million in 2000 to USD11 billion in 2015.[37]

Therefore, two main challenges to Vietnam's objective of self-reliant defense presented themselves. The first concerned the reform, development and maintenance of an indigenous defense industry. As aforementioned, many defense-owned SOEs suffered significant levels of corruption, graft, kickbacks and poor planning. In an attempt to rectify this, the 11th National Party Congress Political Report stated in January 2011 that the modernization of the armed forces and defense industry was one of five key national objectives. It also announced the goal "to further push the development of defense and security technology industry," and to "strengthen scientific research in military and security capable of defeating hi-tech wars from enemy forces."[38] Its 2016 Political Report from the 12th National Party Congress Political Report further emphasized the need for Vietnam to become a "modern industrial country."[39]

The second challenge has been how to shift its force structure from a focus to domestic security towards maritime contingencies. Towards the end of the 1990s, the Vietnamese government implemented a series of planned

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[35] "Corruption Perceptions Index 2016," *Transparency International, https://www.transparency.org/country/VNM*
[36] "Countries at the Crossroads 2012: Vietnam," *Freedom House Report,* 2012, https://freedomhouse.org/report/countries-crossroads/2012/vietnam.
[37] Tan Quiyi, "Vietnam's Viettel Harbours Global Ambitions," *Channel NewsAsia,* May 20, 2016, http://www.channelnewsasia.com/news/business/vietnam-s-viettel/2788562.html.
[38] Carlyle A. Thayer, "Background Briefing: Vietnam's Military Modernization and National Defence Industry," *Thayer Consultancy,* August 20, 2015, 1.
[39] Hong Van, "2016's Achievements Create Impetus for Future Development," *Vietnam Breaking News,* January 9, 2017, https://www.vietnambreakingnews.com/2017/01/2016s-achievements-create-impetus-for-future-development/.

acquisitions of modern naval platforms to monitor its naval and air domains in its territorial zones, continental shelf and EEZ.[40] This was marked by its significant investment in the *Kilo*-class submarine program, announced in 2009, despite a lack of previous experience in maintaining a sophisticated submarine capability. In 2011, the Central Committee issued a detailed maritime strategy for 2011-2020 in which the protection of maritime sovereignty and the maritime economy were two key national security pillars.[41] In June 2014, the National Assembly endorsed a USD747 million plan to boost Vietnam's maritime surveillance and defense capabilities. There were also indications that some of the funds would be used for new acquisitions for the Vietnamese Coast Guard and the Vietnam Directorate of Fisheries.[42] An independent market intelligence report also reported that these ships accounted for the largest category of imported defense equipment between 2011 and 2015.[43]

Compared to the growing investments in naval forces, the obsolescent equipment for ground forces derived from the Soviet Union from the 1970s to 1980s has also been modernized but on a much more modest scale.[44] At the end of the Second Indochina War, the Soviet Union supplied approximately 75 percent of North Vietnam's military hardware, and by the 1980s this figure had risen to about 97 percent.[45] Without Soviet assistance, Vietnam's 1978 invasion of Cambodia and its relative success against the Chinese in the 1979 land border incursion would not have been possible.[46] However, from the 1980s until recently, Vietnam did not invest in military modernization to the same degree as China, leaving Vietnamese military

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[40] Thayer, "Vietnam People's Army," 9.
[41] Murray Hiebert and Phuong Nguyen, "Vietnam Ramps Up Defense Spending, But its Challenges Remain," *CSIS: Asia Maritime Transparency Initiative,* March 18, 2015, https://amti.csis.org/vietnam-ramps-up-defense-spending-but-its-challenges-remain/.
[42] "Vietnam," 2.
[43] "The Vietnamese Defense Industry – Market Opportunities and Entry Strategy, Analyses and Forecasts to 2015," *Strategic Defence Intelligence,* August 2011, 37.
[44] Wendell Minnick, "Vietnam Pushes Modernization as China Challenge Grows," *DefenseNews,* August 30, 2015, http://www.defensenews.com/story/defense/naval/2015/08/30/vietnam-pushes-modernization-china-challenge-grows/32042259/.
[45] "Vietnamese People's Army (Ground Forces) – Modernization," *GlobalSecurity.org,* August 17, 2014, http://www.globalsecurity.org/military/world/vietnam/army-modernization.htm.
[46] Minnick, "Vietnam Pushes Modernization as China Challenge Grows."

equipment woefully inadequate compared to its Chinese neighbor.[47] Indeed, some Cold War equipment has remained in use until today. For instance, its 600-850 Soviet-made main battle type-T-54/T-55s tanks have not been replaced due to high costs. Instead, to save costs, with the assistance of Israel and Slovenia, Vietnam extended the operational life of the tanks through upgrades to combat capability, including sensors and targeting systems.[48] Overall, Hanoi's long-term focus has turned gradually towards naval and associated air procurements, and the establishment of a self-reliant defense posture sustained by its local industry. As will be discussed below, a major driver for this development has been Hanoi's reaction of the perceived threat to its national sovereignty from China.

Reacting to China

Vietnam's biggest challenge has been how to maintain its sovereignty and political autonomy while preserving stable relations with its powerful neighbor, China.[49] Memories of the 1979 Chinese "lesson teaching" invasion,[50] which was followed by more than a decade of hostility with China, and Beijing's intentional policy of isolating Vietnam have framed Hanoi's attitude towards Beijing.[51] The conflicted relationship has been further compounded by the maritime territorial dispute in the South China Sea. The two occasions (1974 and 1988) in which China used military force in the South China Sea both involved Vietnam and both involved a significant loss of life. The first was the short but intense 1974 clash involving the Chinese and South Vietnamese navies near the disputed Paracel Islands.[52] During the

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[47] See Bitzinger cited in Minnick, "Vietnam Pushes Modernization as China Challenge Grows."
[48] "Vietnamese People's Army (Ground Forces) – Modernization."
[49] For historical accounts of China-Vietnam relations see: Ang Cheng Guan, "Vietnam-China Relations Since the End of the Cold War," *Asian Survey* 38, no. 12 (December 1998): 1122-1141; and Brantley Womack, *China and Vietnam: The Politics of Asymmetry* (Cambridge: Cambridge University Press, 2006).
[50] See King C. Chen, *China's War with Vietnam, 1979: Issues, Decisions, and Implications* (Stanford: Hoover Institution, Stanford University, 1987); Harlan W. Jencks, "China's 'Punitive' War on Vietnam: A Military Assessment," *Asian Survey* 19, no. 8 (August 1979): 801-815; and Xiaoming Zhang, "China's 1979 War with Vietnam: A Reassessment," *The China Quarterly* 184 (December 2005): 851-874.
[51] Tran "Vietnam's Relations with China and the US and the Role of ASEAN," 89.
[52] Toshi Yoshihara, "The 1974 Paracels Sea Battle: A Campaign Appraisal," *Naval War College Review* 69, no. 2 (Spring 2016): 41.

1970s, China was Vietnam's only competitor in the Paracel Islands.[53] In 1974, the South Vietnamese Navy detected two Chinese fishing trawlers in the Crescent Group in the western Paracel Islands. Chinese crewmen had planted flags on islands over which Vietnam had established nominal control and set up a logistics team on Duncan Island. This latter act particularly angered the Vietnamese, as a decade earlier in 1959 the South Vietnamese Navy had forcibly evicted Chinese fisherman from Duncan Island, thereby conferring South Vietnamese control over the Crescent Group.[54]

The unsuccessful battle to retake Duncan Island led to an unspecified number of Vietnamese casualties, with extensive fire and machine-gun damage to naval vessels and civilian "freighters."[55] Up until today, the return of Duncan Island has remained Hanoi's top priority in the South China Sea.[56] As Ngo Minh Tri and Collin Koh have argued, this scenario has continued to inform Vietnam's maritime strategy towards China:

> The Battle of the Paracel Islands in 1974 highlighted the need to not just deny an adversary from blockading the South China Sea features but also to secure Vietnam's own access to those exposed and vulnerable garrisons. Only a shift from sea denial to sea control can hope to attain that. Given the durable peace along the land borders with her neighbors, Vietnam should logically emphasize air-sea warfighting capabilities. For status quo-oriented Vietnam, much akin for what Saigon was back in 1974, the foreseeable combat scenario in the renewed South China Sea clash will encompass the need for Vietnamese forces to recapture seized features, or at least reinforce existing garrisons in the face of hostile attack.[57]

Ngo and Koh further highlighted that Vietnam would require similar capabilities and doctrine to the Japanese navy due to similar operational requirements for recapturing islands in the East China Sea:

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[53] Michael G. Gallagher, "China's Illusory Threat to the South China Sea," *International Security* 19, no. 1 (Summer 1994): 169.
[54] Yoshihara, "The 1974 Paracels Sea Battle," 46.
[55] Marko Milivojevic, "The Spratly and Paracel Islands Conflict," *Survival* 31, no. 1 (1989): 70.
[56] Ha Hoang Hap, in discussion with the author, 17 November 2016, Singapore.
[57] Ngo Minh Tri and Koh Swee Lean Collin, "Lessons from the Battle of the Paracel Islands," *The Diplomat,* January 23, 2014, http://thediplomat.com/2014/01/lessons-from-the-battle-of-the-paracel-islands/.

> Under this scenario, Vietnam's defense predicament is perhaps no different from Japan's with respect to the East China Sea dispute … Certainly Vietnam cannot hope to muster the same range of capabilities as Japan could, given economic constraints. To build at least limited sea control capabilities, Hanoi ought to focus on improving early warning and expanding amphibious sealift capacity.[58]

The second, more recent incident, was a clash with Chinese forces in the Spratly Islands in March 1988. The Chinese Oceanographic Bureau had conducted extensive surveying operations in 1983, supported by a 20,000-ton PLAN vessel and 2,000-ton troop carrier. By 1987, after months of surveys, China concluded that Fiery Cross Reef was the best location for an oceanic observation station. Vietnam contested Chinese authority in the Spratlys and deployed troops to occupy islands and reefs and conducted frequent military exercise. Repeated confrontations led to an armed clash at Johnson Reef in 1988,[59] in which Vietnam lost more than 60 men and three vessels.[60]

Both countries have remained claimants over the Spratly and Paracel Islands in the South China Sea (See Figure 8.1), and the question of territorial sovereignty has continued to stoke Sino-Vietnamese enmity.[61] The outcome of the 1974 and 1988 incidents has been consequential, as for Vietnam the only acceptable resolution of the Paracel Islands territorial dispute would be the return of Duncan Island, which is rather unlikely.[62] Moreover, China has been building an unchallenged military hold on the Paracels, while asserting sovereignty over the Spratlys. The PLA has fortified its artificial structures at Fiery Cross Reef, Mischief Reef and Subi Reef, including with early warning radars and point-defense systems.[63]

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[58] Ngo and Koh, "Lessons from the Battle of the Paracel Islands."
[59] John W. Garver, "China's Push Through the South China Sea: The Interaction of Bureaucratic and National Interests," *The China Quarterly* 132 (December 1992): 1013.
[60] "Vietnam," 3.
[61] Yoshihara, "The 1974 Paracels Sea Battle," 42.
[62] Ha Hoang Hap, discussion.
[63] "China's New Spratly Island Defenses," *CSIS Asia Maritime Transparency Initiative,* December 13, 2016, http://amti2016.wpengine.com/chinas-new-spratly-island-defenses/; and Greg Torode, "Spratly Islands Dispute Defines China-Vietnam relations 25 years after naval clash," *South China Morning Post,* March 17, 2013, http://www.scmp.com/news/asia/article/1192472/spratly-islands-dispute-defines-china-vietnam-relations-25-years-after.

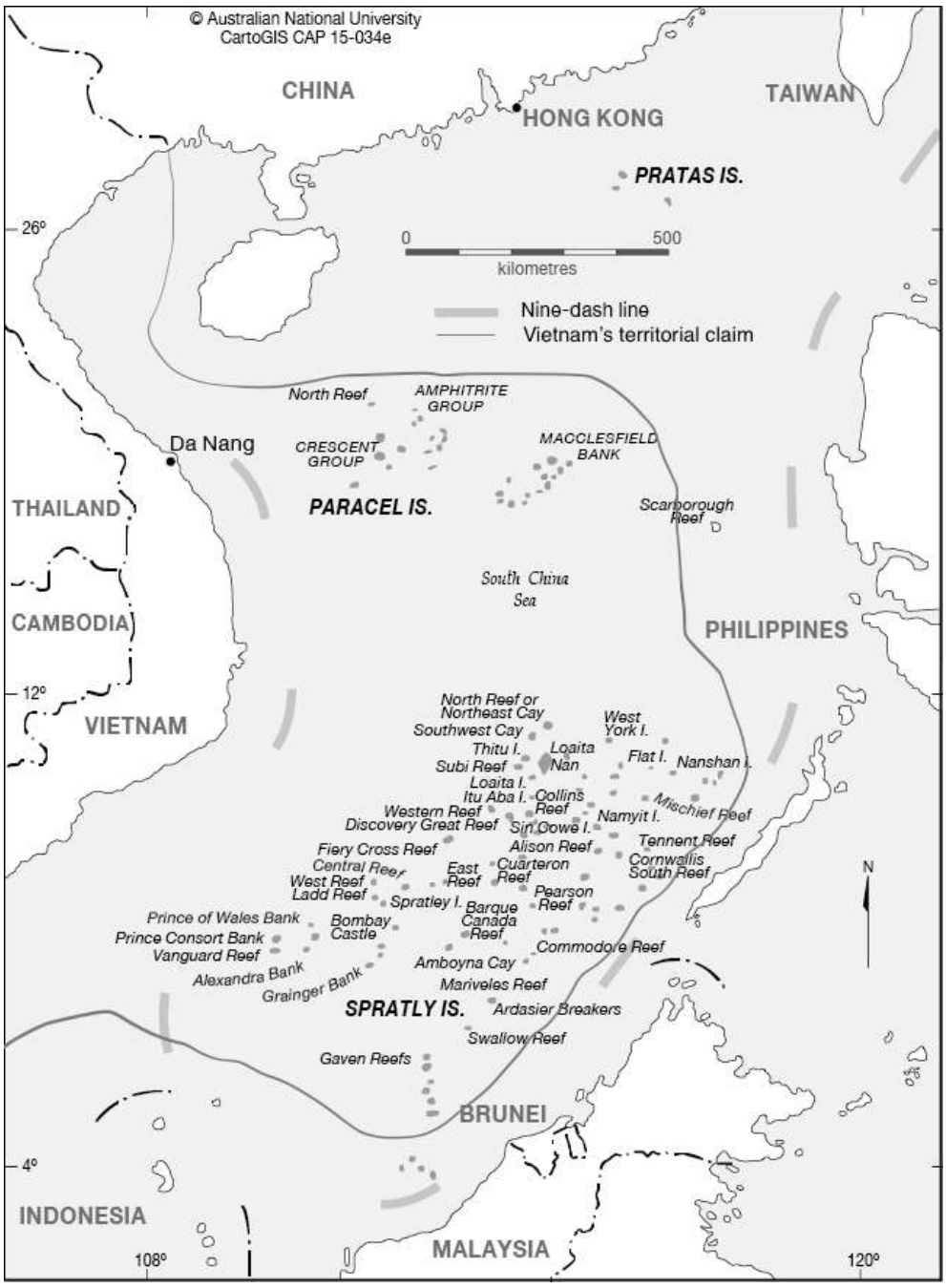

Figure 8.1: Vietnamese and Chinese Claims in the South China Sea[64]

Indeed, Vietnam has been at the forefront of China's slow expansion through the South China Sea which has been ongoing since the 1970s, when the PLAN began survey operations in the Amphitrite Group in the eastern Paracel Islands.[65] This expansion has consisted of a

[64] CartoGIS, College of Asia and the Pacific, Australian National University. Amended to include Vietnam's territorial claim line, see "Roiling the Waters," *The Economist,* July 7, 2012, http://www.economist.com/node/21558262.

[65] Garver, "China's Push through the South China Sea," 1000; and The-Kuang Chang, "China's Claim of Sovereignty Over Spratly and Paracel Islands: A Historical and Legal Perspective," *Case Western Reserve Journal of International Law* 23, no. 3 (1991): 401.

> seamless web of military buildups, establishment of administrative and logistic networks, military exercises and clashes, and diplomatic manoeuvres. However, more important than military instruments [are] the construction activities which [create] a physical base for ongoing Chinese control. Military moves [are] closely tied to the advance and consolidation of this infrastructure and the concomitant Chinese administrative control. These advances [serve], in turn, as bases for the next military advance, with an overriding political objective of consolidation of Chinese sovereignty over the South China Sea.[66]

Consequently, there has been much public discussion in Vietnam over how to defend the country's interests and deter further Chinese reclamation and militarization activities.[67] According to a Pew Research Center poll, only 16 percent of Vietnamese had a favorable view of China in 2014, rising only to 19 percent in 2015. In contrast, 76 percent had a favorable view of the United States in 2014, which rose to 78 percent in 2015.[68] The notion that Vietnam and China are natural partners based on shared Marxist-Leninist ideologies and historical experiences as socialist regimes has proven unsubstantiated.[69] According to Vietnamese media, in 2009 China detained or impounded 33 Vietnamese fishing boats and 433 Vietnamese crew.[70] In May 2011, the Haikou municipal government in Hainan province announced that it was imposing China's 1999 unilateral fishing ban in the South China Sea, supposedly[71] to promote sustainable fishing practices and protect marine

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[66] Garver, "China's Push through the South China Sea," 1000.
[67] Zachary Abuza and Nguyen Nhat Anh, "Little Fallout: Vietnam's Security Policy After the 12th Congress of the Vietnam Communist Party," *Real Clear Defense,* February 9, 2016, http://www.realcleardefense.com/articles/2016/02/09/little_fallout_109004.html.
[68] "Vietnam," *Pew Research Center: Global Indicators Database,* June 2016, http://www.pewglobal.org/database/indicator/24/country/239/.
[69] Tran, "Vietnam's Relations with China and the US and the Role of ASEAN," 91.
[70] "China seizes Vietnamese Fishing Boat," *Deutsche Presse-Agentur,* April 19, 2010; and "China Releases Vietnamese Fishermen but Keeps Boat," *Deutsche Presse-Agentur,* May 4, 2010. See also, "China's Seizure of Vietnamese Boats Illegal, Inhumane Act: Official," *Thanh Nien News,* April 4, 2010, http://www.thanhniennews.com/politics/chinas-seizure-of-vietnamese-boats-illegal-inhumane-act-official-17055.html.
[71] It has been widely reported that China's buildup in the South China Sea is wreaking environmental havoc, with the widespread destruction of coral reef eco-systems. There is also documented instances of Chinese fishermen indulging in the large-scale illegal capture of fish using cyanide, dynamite, and detonating cords. The range of sea life targeted and affected includes endangered sea turtles, giant clams, giant oysters, sharks, eels, and large pieces of highly ornamental coral. The 2016 Permanent Court of Arbitration in its "Philippines vs. China" ruling found that "China had caused severe harm to the coral reef environment." See "South China Sea Images Reveal Impact on Coral of Beijing's Military Bases," *The Guardian,* 2016, https://www.theguardian.com/world/ng-interactive/2015/sep/17/south-china-sea-images-reveal-impact-on-coral-of-beijings-

resources.[72] Vietnamese media pointed out that "China's unilateral execution of a fishing ban in the East Sea is a violation of Vietnam's sovereignty over the Hoang Sa (Paracel) archipelago, as well as [Vietnam's] sovereignty and jurisdiction over its exclusive economic zone and continental shelf."[73]

Anti-China rallies in Vietnam took place for approximately three months in 2011, and in 2012 a series of anti-China protests took place over the detention of 21 Vietnamese fishermen by Chinese vessels in waters around the Paracel Islands as well as China's claim that Sansha City (in the Paracel Islands) was China's new municipality.[74] In 2014, an anti-Chinese movement escalated into riots and violence, with 15 Chinese factories in Vietnam set on fire and looted, leading to over 3,000 people being evacuated.[75] Fighting then broke out between Vietnamese and Chinese workers in central Ha Tinh province, killing two people and wounding 140.[76] This was in response to Beijing's deployment of the oil rig, *Haiyang Shiyou 981* into waters south of the Paracel Islands, and 70nm inside Vietnam's 200nm EEZ.[77] The oil rig moved away

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military-bases; Rachael Bale, "Giant Clam Poaching Wipes Out Reefs in South China Sea," *National Geographic,* July 12, 2016, http://news.nationalgeographic.com/2016/06/south-china-sea-coral-reef-destruction/; Abhijit Singh, "Why the South China Sea is on the Verge of an Environmental Disaster," *The National Interest,* August 13, 2016, http://nationalinterest.org/blog/the-buzz/why-the-south-china-sea-the-verge-environmental-disaster-17348; Shannon Tiezzi, "South China Sea Ruling: China Caused 'Irreparable Harm' To Environment," *The Diplomat,* July 15, 2016, http://thediplomat.com/2016/07/south-china-sea-ruling-china-caused-irreparable-harm-to-environment/; and Rupert Wingfield-Hayes, "Why are Chinese Fishermen Destroying Coral Reefs in the South China Sea," *BBC Magazine,* December 15, 2015, http://www.bbc.com/news/magazine-35106631.

[72] Nguyen Dang Thang, "China's Fishing Ban in East Sea: Implications for Territorial Disputes," *Vietnamnet,* June 30, 2011, http://english.vietnamnet.vn/en/special-report/9991/china-s-fishing-ban-in-east-sea--implications-for-territorial-disputes.html; and Carlyle A. Thayer, "Chinese Assertiveness in the South China Sea and Southeast Asian Responses," *Journal of Current Southeast Asian Affairs* 30, no. 2 (2011): 85.

[73] "Vietnam Opposes Chinese Fishing Ban in Disputed Sea," *Reuters,* May 18, 2015, http://www.reuters.com/article/us-vietnam-china-fish-idUSKBN0O20PF20150518.

[74] Esmer Golluoglu, "Protests in Vietnam as Anger over China's 'Bullying' Grows," *The Guardian,* August 7, 2012, https://www.theguardian.com/world/2012/aug/06/protests-vietnam-china-bullying-grows; and Esmer Golluoglu, "Vietnamese Protests Against 'Chinese Aggression,'" *The Guardian,* July 22, 2012, https://www.theguardian.com/world/2012/jul/22/vietnamese-protesters-chinese-aggression.

[75] "Anti-China Riots in Vietnam Kill 2 as Workers Flee," *Bloomberg,* May 15, 2014, http://www.bloomberg.com/news/articles/2014-05-14/anti-china-protests-in-vietnam-spur-warnings-factory-closures.

[76] "Vietnam Anti-China Protest: Factories Burnt," *BBC News,* May 14, 2014, http://www.bbc.com/news/world-asia-27403851; and "Vietnam Stops Anti-China Protests after Riots, China Evacuates Workers," *Reuters,* May 18, 2014, http://www.reuters.com/article/us-china-vietnam-idUSBREA4H00C20140518.

[77] Adam Taylor, "The $1 billion Chinese Oil Rig that has Vietnam in Flames," *The Washington Post,* May 14, 2014,

from the Paracel Islands in August 2014, but returned to the South China Sea in June 2015, where it was deployed west of the Paracel Islands and closer to Hainan Island.[78] There were also tensions over Chinese vessels cutting the cables of Vietnamese exploration ships. In May 2011, Chinese Maritime Surveillance ships were filmed cutting the cables of a Vietnamese seismic survey ship, the *Binh Minh 02,* that was towing seismic monitoring equipment within Vietnam's EEZ.[79] In June 2011, a Chinese fishing boat also attempted to cut the cables of another of Vietnam's seismic survey ships, the *Viking II,* which was operating in the vicinity of Vanguard Bank in the Spratly Islands.[80]

Adding to the issues of detained fishermen, anti-Chinese sentiments, the oil rig incident and cable-cutting incidents, in 2016 Chinese staged military exercises in the contested area around the Paracel Islands.[81] The Chinese media claimed that the exercises were in response to the June 2016 Permanent Court of Arbitration "Philippines vs. China" ruling and that "China is a peace-loving country and deals with foreign relations with discretion, but it won't flinch if the US and its small clique keep encroaching on its interests on its doorstep."[82] *The China Daily* added that those in the US who saw the tribunal as invalidating its territorial claims had "underestimated China's determination to safeguard its sovereignty and territorial integrity … The days have long passed when [China is seen] as the "sick man of East Asia" whose

https://www.washingtonpost.com/news/worldviews/wp/2014/05/14/the-1-billion-chinese-oil-rig-that-has-vietnam-in-flames/.

[78] Shannon Tiezzi, "Vietnam to China: Move Your Oil Rig out of the South China Sea," *The Diplomat,* April 9, 2016, http://thediplomat.com/2016/04/vietnam-to-china-move-your-oil-rig-out-of-the-south-china-sea/.

[79] "Vietnam Accuses China in Seas Dispute," *BBC News,* May 30, 2011, http://www.bbc.com/news/world-asia-pacific-13592508; and Alex Watts, "Vietnam Accuses China of Sabotage," *The Sydney Morning Herald,* June 2, 2011, http://www.smh.com.au/world/vietnam-accuses-china-of-sabotage-20110601-1fgec.html.

[80] Jeremy Page "Vietnam Accuses Chinese Ships," *The Wall Street Journal,* December 3, 2012, http://www.wsj.com/articles/SB10001424127887323717004578157033857113510.

[81] Christopher Bodeen, "China to Close Part of South China Sea for Military Exercise," *Navy Times,* July 18, 2016, https://www.navytimes.com/story/military/2016/07/18/china-close-part-south-china-sea-military-exercise/87262566/; and Tom Phillips, "South China Sea: Beijing Begins Military Drills Ahead of Key Territorial Ruling," *The Guardian,* July 5, 2016, https://www.theguardian.com/world/2016/jul/05/south-china-sea-beijing-begins-military-drills-ahead-of-key-territorial-ruling.

[82] Shan Jie, "China to Hold Drills near Xisha Islands," *The Global Times,* July 4, 2016, http://www.globaltimes.cn/content/992071.shtml.

fate was at the mercy of a few western powers."[83] In response, a Vietnamese foreign affairs spokesperson stated in unusually stark terms:

> such activity once again seriously violates Viet Nam's sovereignty over Hoang Sa Archipelago and goes against the common viewpoint of high-ranking leaders of both countries. It also violates the international law including the 1982 UNCLOS and the DOC. Viet Nam strongly opposes the above-said action and demands China to respect Viet Nam's sovereignty, behave in a responsible manner, immediately stop the activity and restrain from further actions that threaten the security and safety of navigation in the East Sea or escalate tension in the region.[84]

These factors have contributed to the emergence of interactive arming dynamics, in which Vietnam has reacted to Chinese capabilities deployed in the South China Sea, while China has bolstered its capabilities to defend its maritime territorial claims vis-à-vis its opposing claimants (See Figure 8.2). While China has adopted a strategy of building up naval capabilities to counter the US Navy, Vietnam has employed a strategy to exploit asymmetry vis-à-vis the PLAN, especially since the sea-lanes used by China for the passage of global imports and exports passes by Vietnamese waters enroute to and from the Straits of Malacca.[85]

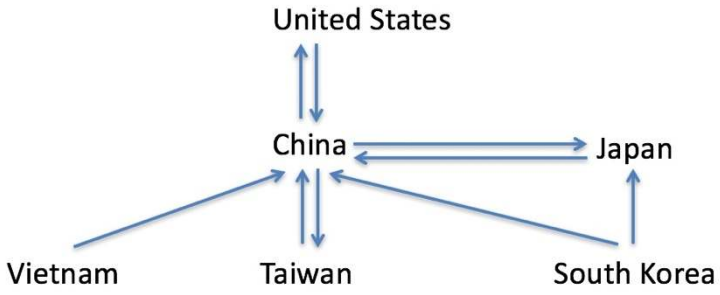

Figure 8.2: Interactive Arming Dynamics vis-à-vis Vietnamese Military Modernization

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[83] "China Will Not Swallow Bitter Pill of Humiliation," *China Daily,* July 5, 2016, http://usa.chinadaily.com.cn/opinion/2016-07/05/content_25965816.htm.

[84] Socialist Republic of Vietnam Ministry of Foreign Affairs, "Remarks by MOFA Spokesperson Le Hai Binh on Viet Nam's reaction to China's Announcing of Military Exercise from 5th to 11th July 2016 Within Area that Covers Viet Nam's Hoang Sa Archipelago," Foreign Press Center, Hanoi, July 6, 2016, http://presscenter.org.vn/remarks-by-mofa-spokesperson-le-hai-binh-on-viet-nams-reaction-to-chinas-announcing-of-military-exercise-from-5th-to-11th-july-2016-within-area-that-covers-viet-nams-hoang-sa-archipelago_t221c67n63627tn.aspx.

[85] "Vietnam's Restocking: Subs, Ships, Sukhois, and Now Perhaps F-16s and P-3s?," *Defense Industry Daily,* June 28, 2016, http://www.defenseindustrydaily.com/vietnams-russian-restocking-subs-ships-sukhois-and-more-05396/.

Both China and Vietnam still rely significantly on Russian armaments—submarines, destroyers, frigates and aircraft—to accelerate defense modernization efforts.[86] This has led to the argument of a "mirror reaction" of capabilities.[87] However, while there has clearly been a reactive element, Hanoi and Beijing have not been mimicking each other's procurements. Hanoi has demonstrated concerted efforts to create a long-term maritime defense capability, mainly based on sea denial within 200nm of Vietnam's littoral coast.[88] To this end, the VPN has planned to acquire at least 20 green-water vessels for littoral operations, and has also planned to modernize its Hong Ha and Ba Son shipyards.[89] China's military modernization, on the other hand, has been targeted at blue-water power projection. Furthermore, Russia has been a historical provider of arms to both countries and Russian armaments and support for maintenance has been relatively cheap. Indeed, as aforementioned, Vietnam's acquisition pattern is similar to Japan's even though both are not in a "mirror" action-reaction dynamic.

Moreover, Vietnam's investments in naval and associated air capabilities have focused on deterring China's encroachment on Vietnam's claimed territories in the South China Sea. This has overwhelmed the concerns for procuring cheaper platforms to replace its aging platforms. If Vietnam's primary concern was about cost-effective advanced weapons platforms, it would have invested in Chinese-produced acquisitions. The export-versions of the J-10 (the FC-20) and the J-20 (FC-31) are significantly cheaper than Russian jets of the same class, yet not of the same quality.[90] Instead, Vietnam

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[86] Perlez, "Q and A: Lyle Goldstein on China and the Vietnamese Military."
[87] See Ankit Panda, "Watch Out China: Vietnam's Coast Guard Will Fight Back," *The Diplomat,* September 11, 2015, http://thediplomat.com/2015/09/watch-out-china-vietnams-coast-guard-will-fight-back/.
[88] Nga Pham, "Why Vietnam wants US weapons," *BBC News,* May 23, 2016, http://www.bbc.com/news/world-asia-36360005.
[89] Carlyle A. Thayer, "Vietnam's Maritime Forces," in *Perspectives on the South China Sea,* ed. Murray Hiebert, Phuong Nguyen and Gregory B. Poling (Washington DC: CSIS Sumatro Chair for Southeast Asia Studies, September 2014), 138.
[90] Zhao Lei, "PLA's Fighter Jets Go Up for Sale," *China Daily,* February 18, 2016, http://www.chinadaily.com.cn/china/2016-02/18/content_23529890.htm; and Dave Majumdar, "America's F-35 Joint Striek Fighter vs. China's J-31. F-15SA and Russia's Su-35: Who Wins?" *The National Interest,* September 20, 2016, http://nationalinterest.org/blog/the-buzz/americas-f-35-joint-strike-fighter-vs-chinas-j-31-f-15sa-17767. Further calculations on costs based on Pakistan's interest in procuring Chinese-produced J-10 and J-20s, and Russian-produced Su-35s after its unsuccessful

has preferred Russian procurements, and pursued second-hand acquisitions from the US and Japan, as well as targeted defense cooperation with India.

The submarine acquisition is a case in point. Since 2008, there had been rumors about Vietnam's intentions to acquire submarines, with one option to buy second-hand boats from Serbia.[91] At the July 2009 IISS Shangri-La Dialogue, Vietnam officials confirmed their potential interest in buying *Kilo*-class submarines and *Sukhoi* fighters from Russia.[92] In December 2009, Hanoi indeed purchased six diesel-electric Russian Project 636 *Varshavyanka*-class (enhanced *Kilo*) boats at a cost of USD2 billion. It also announced the delivery of eight *Sukhoi* Su-30Mk2 fighters in 2010.[93] In December 2013, Vietnam reported the delivery of the first *Kilo*-class submarine to Cam Ranh Bay. The second was delivered in early February 2014, two more in 2015 and the last in 2016.[94] Hanoi's bold move to leapfrog generations of weapons platforms—from obsolescent Soviet-era equipment to Kilo-class submarines and advanced *Sukhois*—is testimony to its determination to give China pause to think.

Vietnam also acquired additional two Russian *Gepard* 3.9 *(Dinh Tien Hoang)*-class frigates to bring their total to six—two of which were optimized for surface attack and two were designated for anti-submarine warfare.[95] The *Gepard*-class ships are particularly suited for littoral operations—it is a relatively small ship with a short-to medium range but features a stealth-

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procurements of American F-16s. See Franz-Stefan Gady, "Blocked F-16 Deal: Pakistan Threatens to Buy Chinese or Russian Fighter Aircraft," *The Diplomat,* May 11, 2016, http://thediplomat.com/2016/05/blocked-f-16-deal-pakistan-threatens-to-buy-chinese-or-russian-fighter-aircraft/.

[91] Thayer, "Vietnam People's Army," 14.

[92] General Phung Quang Thanh, "Strengthening Defence Diplomacy in the Asia-Pacific: Q&A," IISS Shangri-La Dialogue 2009, Sixth Plenary Session Q&A, Singapore, May 31, 2009, https://www.iiss.org/en/events/shangri%20la%20dialogue/archive/shangri-la-dialogue-2009-99ea/sixth-plenary-session-fc25/strengthening-defence-diplomacy-in-the-asia-pacific-qa-9011.

[93] Nga Pham, "Vietnam Orders Submarines and Warplanes from Russia," *BBC News,* December 16, 2009, http://news.bbc.co.uk/2/hi/asia-pacific/8415380.stm.

[94] "Another Kilo-class Submarine Heading for Vietnam," *Vietnam Net Bridge,* February 2, 2014, available at: http://english.vietnamnet.vn/fms/society/94983/another-kilo-class-submarine-heading-for-vietnam.html.

[95] Franz-Stefan Gady, "Vietnam to Receive 2 Russian Anti-Submarine Warfare Ships in 2016," *The Diplomat,* May 18, 2016, http://thediplomat.com/2016/05/vietnam-to-receive-2-russian-anti-submarine-warfare-ships-in-2016/.

enhanced ship design, equipped with anti-ship missiles and capable of air defense as well as ASW.[96] In 2014, Vietnam also took delivery of the first two of six *Molniya*-class fast attack craft from Russia and licensed four more for domestic construction. It came alongside an additional agreement to license-build and equip the ships with Russian Kh-35 ship-to-shore missiles which will boost Vietnam's ability to target Chinese installations in the Spratly and Paracels Islands.[97] In 2014, Hanoi also purchased two Canadian Next-Gen DHC-6 *Twin Otter* maritime patrol aircraft equipped for amphibious operations. The acquisition could boost Vietnam's ISR capabilities to monitor its 200nm EEZ, and could be used for transport, resupply, and search and rescue operations in Vietnam's coastal regions.[98] On 8 July 2014, the Japanese government announced that it would provide Vietnam's coast guard with six naval ships to patrol the South China Sea.[99] Vietnam also considered the purchase of Dutch *SIGMA*-class corvettes[100] as well as maritime patrol craft from India.[101]

To boost its maritime denial capability, Vietnam has also investigated the possibility of importing India's anti-ship supersonic cruise missile, the *Brahmos*. Although the current variant of the Brahmos can only be used as a surface and aircraft launched weapon, versions are being tested for submarine-launches.[102] Currently, Vietnam's most robust deterrent is its missile force, which includes 40 Russian SS-N-26 *Yakhont* shore-to-ship cruise missiles. It has negotiated with Russia licenses for domestic production

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[96] "Vietnam's Restocking: Subs, Ships, Sukhois, and Now Perhaps F-16s and P-3s."
[97] "Vietnam Debuts 2 Warships Built Locally with Russian Technology," *Tuoi Tre News,* September 25, 2015, http://tuoitrenews.vn/society/30621/vietnam-debuts-2-warships-built-locally-with-russian-technology.
[98] "Patrol for Pennies: Vietnam's DHC-6 Twin-Otter 400s," *Defense Industry Daily,* July 15, 2014, http://www.defenseindustrydaily.com/Vietnamese-Navy-Orders-DHC-6-Twin-Otter-400s-06373/.
[99] "Vietnam asks Japan for Vessels to Strengthen Coastguard," *The Asahi Shimbun,* May 6, 2016, http://www.asahi.com/ajw/articles/AJ201605060001.html.
[100] "More than the Sum of Its Parts: Dutch SIGMA Ships for Vietnam," *Defense Industry Daily,* November 5, 2013, http://www.defenseindustrydaily.com/more-than-the-sum-of-its-parts-dutch-sigma-ships-for-vietnam-07173/.
[101] Sanjay Badri-Maharaj, "Indian Naval Sales – The Cautious Emergence of a New Supplier," *Institute for Defence Studies and Analyses Comment,* June 22, 2016, http://www.idsa.in/idsacomments/indian-naval-sales_sbmaharaj_220616.
[102] Sam LaGrone, "India Set to Sell Super Sonic Anti-Ship Cruise Missile to Vietnam," *USNI News,* June 1, 2016, https://news.usni.org/2016/06/01/india-set-sell-super-sonic-anti-ship-cruise-missile-vietnam-china-upset.

of three classes of advanced anti-ship missiles, including the P-5 SS-N-3 *Shaddock*, P-15 *Termit* and Kh-35E SS-N-25 *Switchblade*. Other anti-ship missiles in its arsenals include French-built *Exocets* and Russian built SS-N-27 *Sizzlers*, which reportedly will be deployed on its *Kilo*-class submarines.[103] In January 2016, it also increased its air combat capabilities through receiving an additional 2 Su-30MK2 combat aircraft from Russia, bringing the current number of combat capable fighters to 101. In 2016, it possessed 11 Su-27UBK *Flankers*, 32 Su-30MK *Flankers* and 28 Su-22M3 *Fitters*, all equipped for anti-ship and maritime operations.[104] Hanoi also contemplated the replacement of its third generation 144 MiG-21 fighters from the 1960s, with fourth-generation Russian MiG-35 multirole fighters, the French *Rafale* and the Swedish *Gripen* in the mix.[105] However, due to the high cost of modern fourth-generation fighters, it is unlikely Vietnam will be able to afford a one-to-one replacement of these aircraft any time soon.

These procurements have turned Vietnam into one of the world's top arms importers (See Table 8.2), and no other country in Southeast Asia has been as quick as Hanoi to bring such a large number of weapons platforms online. To further boost its capabilities and access to advanced weapons platforms, Hanoi lobbied the US government to lift its weapons ban in order to purchase an unspecified number of P-3C *Orion* maritime patrol aircraft for ASW.[106] In May 2016, in the process of strategic and economic normalization between the two countries, the Obama administration lifted the arms embargo to Vietnam.[107] Although Obama stated that arms sales would have to meet certain human rights requirements, he added that the decision supported the

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[103] Zachary Abuza, "Vietnam's Naval Upgrades Likely Will Limit but not Deter China in the South China Sea," *cogitAsia,* September 12, 2014, http://cogitasia.com/vietnams-naval-upgrades-likely-will-limit-but-not-deter-china-in-the-south-china-sea/.
[104] IISS, *The Military Balance 2016,* 297-298.
[105] Abuza and Nguyen, "Vietnam's Military Modernization"; and Maki Catama, "Russia's New MiG-35 May Replace Aging Vietnam's Fighter Jets," *ASEAN Military Defense Review,* August 2015, http://www.aseanmildef.com/2015/08/russias-new-mig-35-may-replace-aging.html.
[106] Joshua Kurlantzik, "The Final Normalization of US-Vietnam Relations," *CFR: Asia Unbound,* May 24, 2016, http://blogs.cfr.org/asia/2016/05/24/the-final-normalization-of-u-s-vietnam-relations/?cid=nlc-public-the_world_this_week--link9-20160527&sp_mid=51476268&sp_rid=c2hlcnluLmoubGVlQGdtYWlsLmNvbQS2.
[107] Carol E. Lee and James Hookway, "US Lifts Arms Embargo on Vietnam," *The Wall Street Journal,* May 23, 2016, http://www.wsj.com/articles/obama-meets-top-vietnamese-officials-to-strengthen-ties-1463979866.

objective of strengthening Vietnam's ability to defend itself, and that there was mutual concern over maritime issues and the importance of maintaining freedom of navigation in the South China Sea.[108] The lifting of the US' arms embargo on Vietnam sent a signal that Hanoi was now in a position to access advanced US defense technologies and experience,[109] such as F-16 fighter aircraft and refurbished P-3C *Orions* armed with torpedoes.[110] The US and Vietnam also enhanced military cooperation, including annual joint naval exercises. However, practical cooperation remained limited to areas such as military medicine, search and rescue and shipboard damage control.[111]

2016 Rank	1995-2016 Average Rank	Country
1	3	Saudi Arabia
2	13	Algeria
3	1	India
4	19	Iraq
5	10	Egypt
6	4	South Korea
7	6	UAE
8	18	Vietnam
9	11	Australia
10	2	China

Table 8.2: Top Arms Importers Based on Total Import Value (2016)[112]

In reaction to China's militarization of islands in the South China Sea, Vietnam also undertook militarization of islands it occupies in the Spratlys, though not on the same scale. In August 2016, it became public that Vietnam had fortified five bases in the Spratly Islands with new mobile rocket launchers capable of striking China's runways and military installations in this island grouping.[113] The launchers form part of Vietnam's *EXTRA* rocket

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[108] Lee and Hookway, , "US Lifts Arms Embargo on Vietnam."
[109] Nga, "Why Vietnam wants US weapons."
[110] Wendell Minnick, "Vietnam May Request F-16s, P-3 Orions From US," *DefenseNews,* May 25, 2016, http://www.defensenews.com/story/defense/international/asia-pacific/2016/05/25/vietnam-may-request-f-16s-p-3-orions-us/84904786/.
[111] Prashanth Parameswaran, "US-Vietnam Defense Relations: Problems and Prospects," *The Diplomat,* May 27, 2016, http://thediplomat.com/2016/05/us-vietnam-defense-relations-problems-and-prospects/.
[112] SIPRI, *SIPRI Arms Transfer Database*.
[113] Oliver Holmes, "Vietnam Sends Rocket Launchers to the South China Sea," *The Guardian,* August 20, 2016, https://www.theguardian.com/world/2016/aug/10/vietnam-sends-rocket-launchers-to-the-south-china-sea; and Greg Torode, "Exclusive: Vietnam

artillery system and *ACCULAR* precision guided rockets acquired from Israel. They have a range of 150km, carry 150kg warheads and can attack multiple targets.[114] In the future, these weapons could operate with targeting drones and compact radars enabling strikes amphibious and land targets, placing China's 3km runways and installations on Subi, Fiery Cross and Mischief Reef within range of many of Vietnam's tightly clustered holdings on 21 islands and reefs.[115] By November 2016, Vietnam had also nearly completed its upgrades of air infrastructure on Spratly Island, including a 1.2km runway which would be able to accommodate most planes in the Vietnamese air force.[116]

To protect its claimed islands, Vietnam has also invested in maritime surveillance capabilities, focused on ISR.[117] After a year of experimenting with communication satellites, Vietnam successfully launched its first "earth-observing" satellite in May 2013, the VNREDSat-1, reducing Vietnam's dependence on foreign-sourced images.[118] To support Vietnam's ISR capabilities, the Indian Space Research Organization has announced to fund and set up a satellite tracking and data reception center in Ho Chi Minh City. This would bolster India's space program but also provide Hanoi with access to data from Indian earth observation satellites that cover the region, including China and the South China Sea.[119] Additionally, after three years of testing indigenously produced unmanned aerial vehicles (UAVs), in December 2015 Vietnam's Academy of Science and Industry and the Ministry of Public Security with design assistance from Belarus unveiled its largest indigenously

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Moves New Rocket Launchers into Disputed South China Sea – Sources," *Reuters,* August 10, 2016, http://www.reuters.com/article/us-southchinasea-vietnam-idUSKCN10K2NE.
[114] Holmes, "Vietnam Sends Rocket Launchers to the South China Sea."
[115] Torode, "Exclusive: Vietnam Moves New Rocket Launchers into Disputed South China Sea – Sources."
[116] "UPDATED: Vietnam Responds with Spratly Air Upgrades," *CSIS: Asia Maritime Transparency Initiative,* December 1, 2016, https://amti.csis.org/vietnam-responds/.
[117] Swee Lean Collin Koh, "Vietnam's Master Plan for the South China Sea," *The Diplomat,* January 4, 2016, http://thediplomat.com/2016/02/vietnams-master-plan-for-the-south-china-sea/.
[118] Swee Lean Collin Koh, "Vietnam's Boosts Intelligence, Surveillance and Reconnaissance Capabilities in the South China Sea," *RSIS Broader Horizons: MSP Perspectives* (January 2016), 4.
[119] Sanjeev Miglani and Greg Torode, "India to Build Satellite Tracking Station in Vietnam that Offers Eye on China," *Reuters,* January 25, 2016, http://in.reuters.com/article/india-vietnam-satellite-china-idINKCN0V309W.

produced high-altitude long-endurance (HALE) UAV.[120] Vietnamese state media suggested it would be used for patrols in the South China Sea.[121] Such upgrades have not only reduced Vietnam's dependence on foreign purchases, but have also advanced Hanoi's objective of complicating Chinese activities in the region and its ability to expand its sphere of influence. Vietnam's overall military modernization has demonstrated a clear reaction to Chinese military modernization, as well as attempts to counter Chinese attempts to overwhelmingly tip the balance of power in favor of the PLAN in the South China Sea.

Yet many of the VPA's acquisitions also have exceeded cost expectations as in most instances Hanoi did not adequately factor in the long-term expense of maintaining advanced naval and associated air capabilities. Indeed, Vietnam still lacks modern operational experience, doctrine and command and control systems. Its armed forces will for the foreseeable future face major challenges in using and supporting these systems as capability development has not kept pace with acquisitions.[122] Hanoi, for instance, had to cancel the purchase of the P-3 *Orion* due to costs. Reportedly, it signaled interest in acquiring second-hand weapons platforms from Japan, in particular the *Kawasaki* P-3C maritime patrol aircraft.[123] Chinese analysts also noted that Vietnam still lacks any operational experience with submarines.[124] In particular, translating the *Kilo*-class submarine platform into a full military capability will pose enormous challenges, as Vietnam's only experience with submarines rests on two *Yugo*-class midget submarines acquired from North Korea in 1997.[125] Its modernization is also heavily reliant on foreign, particularly, Russian military technology. Whilst its fighter fleet has been upgraded, the Vietnamese air

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[120] Gordon Arthur, "Vietnam Unveils Indigenous HALE," *Shephard Media,* December 24, 2015, https://www.shephardmedia.com/news/uv-online/vietnam-unveils-indigenous-hale/.
[121] "Vietnamese HS-6l HALE UAV Aided By Belarus," *IHS Jane's 360*, December 30, 2015, http://www.uasvision.com/2015/12/30/vietnamese-hs-6l-hale-uav-aided-by-belarus/.
[122] Zachary Abuza and Nguyen Nhat Anh, "Vietnam's Military Modernization," *The Diplomat,* October 28, 2016, http://thediplomat.com/2016/10/vietnams-military-modernization/.
[123] Atsushi Tomiyama, "Vietnam Eyes Secondhand Japanese Defense Gear," *Nikkei Asian Review,* June 26, 2016, http://asia.nikkei.com/Politics-Economy/International-Relations/Vietnam-eyes-secondhand-Japanese-defense-gear.
[124] See comments made in Lyle J. Goldstein, "China's Nightmare: Vietnam's New Killer Submarines," *The Diplomat,* March 29, 2015, http://nationalinterest.org/feature/chinas-nightmare-vietnams-new-killer-submarines-12505?page=show.
[125] Bitzinger, "A New Arms Race?" 59; and Thayer, "Vietnam's Maritime Forces," 138.

force still lacks an aerial refueling capability, severely limiting its ability to extend its operational reach to the Spratlys. As well, the *Sukhoi* combat aircraft has remained under the purview of the air force and not the naval aviation wing.[126]

Consequently, with many procurement programs announced, but the majority falling through due to funding constraints, and the lack of training and operational experience to build and maintain capability, Vietnam has headed towards a haphazard force structure with critical capability gaps. The dynamic between Vietnam and China will remain asymmetric, thus, Vietnam's only option has been to develop the capabilities to exploit asymmetrical advantages. For instance, it will certainly seek to use its *Kilo*-class submarines to exploit Chinese weaknesses in ASW.[127]

Therefore, Vietnam has had limited options in both defense and diplomacy towards Beijing. On the one hand, Hanoi often accused China of "bullying" behavior towards its neighbors, but maintained regular meetings and visits between high-level officials from both countries.[128] As well, trade between Vietnam and China was estimated in 2015 to be USD95.8 billion, growing 14.6 percent since 2014, with Vietnam poised to become China's biggest ASEAN trade partner.[129] Yet due to China's comprehensive military modernization and the minimal possibility of China concluding a binding code of conduct for behavior in the South China Sea (which is Vietnam's objective), Vietnam has turned towards strengthening ties to regional partners. Russia and India remain the main sources of advanced weapons, as well as the main partners for training and intelligence cooperation. In September 2016, India provided a USD500 million credit for the acquisition of Indian

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[126] See IISS, *The Military Balance 2016*, 298.
[127] Franz-Stefan Gady, "US Arms Sales to Vietnam: A Military Analysis," *The Diplomat,* June 6, 2016, http://thediplomat.com/2016/06/us-arms-sales-to-vietnam-a-military-analysis/.
[128] McDevitt, "Small Navies in Asia," Chapter 6; and Shannon Tiezzi, "South China Sea Clash Complicates Vietnam-China Meeting," *The Diplomat,* June 16, 2015, http://thediplomat.com/2015/06/south-china-sea-clash-complicates-vietnam-china-meeting/.
[129] "Vietnam-China Trade May Leap to US$100 billion This Year," *Vietnamnet,* March 17, 2016, http://english.vietnamnet.vn/fms/business/152435/vietnam-china-trade-may-leap-to-us-100-billion-this-year.html.

defense systems.[130] The deal follows a similar 2004 agreement, where India provided Vietnam a USD100 million defense credit to buy naval patrol boats.[131]

Hanoi also diversified its foreign relations by building ties with the US, Japan and Australia. In October 2016, Vietnam's vice defense minister, Senior Lt. Gen. Nguyen Chi Vinh stated that "Vietnam will support the US and other partners to intervene in the region as long as it brings peace, stability and prosperity."[132] Earlier in the month two US warships made a port call to Cam Ranh Bay.[133] In September 2015, Japan and Vietnam signed an economic and strategic partnership.[134] In March 2015, it also signed with Australia a "Declaration on Enhancing the Australia Viet Nam Comprehensive Partnership," and agreed to establish a strategic partnership.[135]

Findings

The case of Vietnam demonstrates many characteristics of interactive arming behavior that does not fit traditional "arms race" theories. Vietnam's military modernization is an asymmetric response to China's military transformation, as these upgrades have increased the costs the VPN can impose on an opponent (H4). Additionally, land reclamation and militarization activities which support advanced weapons platforms have also been interactive elements of broad-based military modernization (H3). Traditional

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[130] Ho Binh Minh, "India Offers $500 million Defense Credit as Vietnam Seeks Arms Boost," *Reuters,* September 3, 2016, http://www.reuters.com/article/us-vietnam-india-idUSKCN11905U.
[131] "India to Give US$500 million 'Defence Credit' to Vietnam for Arms Deals," *South China Morning Post,* September 3, 2016, http://www.scmp.com/news/asia/southeast-asia/article/2014167/india-give-us500-million-defence-credit-vietnam-arms-deals.
[132] My Pham, "Vietnam Gives Thumbs-up to US Regional Role as Pivot Stumbles," *Reuters,* October 18, 2016, http://www.reuters.com/article/us-vietnam-usa-idUSKCN12I1BR.
[133] "Vietnam Backs US Military Intervention in Region," *The Japan Times,* October 19, 2016, http://www.japantimes.co.jp/news/2016/10/19/asia-pacific/vietnam-backs-u-s-military-intervention-region/#.WAmNOPl97Ra.
[134] Nguyen Thanh Trung and Truong-Minh Vu, "The Real Significance of the Japan-Vietnam Strategic Partnership," *The Diplomat,* September 16, 2015, http://thediplomat.com/2015/09/the-real-significance-of-the-japan-vietnam-strategic-partnership/.
[135] Australian Government, "A Declaration on Enhancing the Australia-Viet Nam Comprehensive Partnership," Department of Foreign Affairs and Trade, Canberra, 18 March 2015, http://dfat.gov.au/geo/vietnam/Pages/a-declaration-on-enhancing-the-australia-viet-nam-comprehensive-partnership.aspx.

explanations which focus on the number of acquisitions and planned upgrades overlook these supporting yet critical activities such as significant changes in doctrine, investments in supporting logistics and facilities, ISR and training. As previously identified in the Japan and South Korea chapters, "arms race" theories also cannot adequately account for increasing security cooperation. As part of Vietnam's attempts to create a favorable balance of power—and stymie changes by China—Hanoi has sought closer security and strategic cooperation with regional partners and even former enemies (H5).

Lastly, arms race theories do not factor in decisions of restraint. Vietnam's concern about the changing balance of power in the South China Sea in China's favor has outweighed its fiscal concerns regarding the expense of advanced weapons platforms. Hanoi's concerted political adjustments in its strategic doctrine to increase focus on maritime contingencies demonstrate a response to a darker security outlook (H1). A key example is its decision to overlook cheaper Chinese-produced export-versions of fighter aircraft in favor of procurements from Russia and second-hand acquisitions from the US and Japan, as well as targeted defense cooperation with India. Overall, however, as with the previous case studies, the domestic processes of Vietnam determine the scale and timing of its reactions, providing restraint over many armament decisions related to disputes and tensions (H6). The concluding chapter follows, which summarizes the findings, extends the framework for an "interactive arming" dynamic," argues for a return to the strategic studies approach to understanding armaments, and proposes cases and areas for future research.

Chapter 9:
Conclusion

This concluding chapter first summarizes the findings of the theoretical analysis of "arms races" and the empirical investigation. Second, it extrapolates the findings into an extension of the "interactive arming" framework. In doing so, it highlights the results of the tested hypotheses. This framework recognizes military modernization as arming, focuses on the political intent of actors, and examines interactive dynamics as opposed to "competition," "action-reaction," or "races." It also demonstrates that arming is a strategic behavior. Consequently, third, this chapter proposes a return to examining armaments through the strategic studies lens. In essence, "arms race" theories (predominantly now an occupation of the international relations discipline) have overlooked the strategic studies literature and its primary focus on the use of force for political objectives. Lastly, it identifies cases and areas for future research.

Summary of Findings

In the survey of the literature, the examination of the qualitative and quantitative approaches to understanding "arms races" has demonstrated their limitations. For one, these "arms race" theories cannot adequately account for the range of variables that contribute to arming dynamics and govern its progression. In both the qualitative and quantitative literature, a tendency exists to regard these impulses as quantifiable fixed values. Yet the motivation to find a pattern of "arms competition" or "arms race" dynamics to extrapolate a predictive theory has been "no more successful than the search for such theories in other areas of human existence … Similar causes do not always produce similar effects, and causes interact in ways unforeseeable even by the historically sophisticated."[1] Such approaches, despite attempting to model "a mad rush for armaments," deflect inquiry toward objective factors such as raw indices of military expenditure. However,

[1] MacGregor Knox, "Conclusion: Continuity and Revolution in the Making of Strategy," in *The Making of Strategy: Rulers, States, and War,* ed. Williamson Murray. MacGregor Knox and Alvin Bernstein (Cambridge: Cambridge University Press, 1994), 645.

strategy involves an understanding of the uncertain variables of "human passions, values, and beliefs, few of which are quantifiable."[2] Even if the "arms race" concept may initially have had some analytical utility in identifying "abnormally intense military competition"—such as in the cases of the Dreadnoughts and the Cold War nuclear competition—it has suffered from "conceptual stretching" and other shortfalls discussed in the previous pages, leading to impoverished analytical outcomes.[3] The "arms race" label in current debate has often impeded analytical thinking about the relationship between a state's strategy and its armament decisions.[4] The literature survey has demonstrated that theories of "arms race or arms racing," although widely employed and the subject of voluminous literature, are in fact a rather weak analytical device. The concept is not invalid—although the charge that it strips states of any reasoned and purposeful involvement in the armament process is a serious one. The essence of the problem might best be characterized as a case of tasking a concept to do nearly everything when, in reality, it is applicable only in very specific and therefore rare circumstances.

The empirical investigation has discovered the recurrence of important explanations that the "arms race" paradigm has suppressed. Labelling all arming dynamics as "races" or "competitive" has not explained the reasoning behind key political decisions to use the armed forces. All armed forces have military modernization programs since as "a military establishment it has to be provided and equipped, and it must develop and refine plans for its possible commitment to action."[5] The modernization of naval and associated air capabilities has been impacted by a range of variables that encompass both material and ideational influences—including a changing balance of power; alliance commitments; issues of sovereignty arising from maritime territorial disputes; requirements for surveillance and protection of EEZs; economic growth and increased financial investment in defense capabilities; technology

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[2] Williamson Murray and Mark Grimsley, "Introduction: On Strategy," in *The Making of Strategy: Rulers, States, and War,* ed. Williamson Murray. MacGregor Knox and Alvin Bernstein (Cambridge: Cambridge University Press, 1994), 1.
[3] See Sartori, "Concept Misinformation in Comparative Politics."
[4] Buzan and Herring, *The Arms Dynamic in World Politics,* 75.
[5] Brodie, *Strategy in the Missile Age,* 408.

acquisition or reverse engineering for defense industrial needs; and national prestige (See Table 9.1).

Independent Variables	**Dependent Variable: Military Modernization**				
	China	US	Japan	ROK	Vietnam
Balance of Power	●	●	●	●	●
Alliances	X	●	●	●	X
Maritime Disputes	●	X	●	●	●
EEZs	●	X	X	X	●
Economic Growth	●	Restraint	Restraint	●	●
Defense Industry	●	●	●	●	X
National Prestige	●	X	Restraint	●	●

Table 9.1: Impact of Independent Variables on Dependent Variable

While some variables have had a different influence from one country to the next, and from one period to another, a small number of variables recurred regularly.[6] All military modernization necessitates a reaction to the strategic environment, and this often overrides political concerns of, for instance, pork-barreling and constitutional constraints. As evidenced in the case studies of selected Asia-Pacific countries, despite political transitions and a quickening pace of technological change in weaponry, the strategic objectives of responding to a changing balance of power has largely remained constant. The perception of a changing balance of power, increasing maritime requirements and historical rivalries between many Asia-Pacific countries have led to a constant focus on bolstering naval and associated air capabilities for not only self-reliant defense and defense industry, but also to protect SLOCs, EEZs and claimed maritime territories. However, concerns for national identity and the allocation of economic resources can also be restraining influences on a country's military modernization. Overall, "interactive arming" in the Asia-Pacific has been largely influenced by the changing balance of power accorded to China's rapid military transformation, the assertion of territorial claims in the region, and the impact of technological innovation. Armaments remain directly related to a state's ability to secure its

[6] See Williamson and Murray, "Introduction," 7.

national interests and this involves responding to perceived shifts in the geostrategic environment to best ensure state survival.

The network of relationships that emerges from the case studies reflect multilateral dynamics in which some relationships are reciprocal and others are not, while some relationships are asymmetric and others are not (See Figure 9.1). However, all arming involves interaction. Such dynamics occur because all countries bring their respective frames of reference to bear on changes in the armament of others and respond accordingly. This reflects the Richardson and Rapoport's findings in their models of interlocking nature of weapons decisions and the basic interdependence of political decisions concerning the use of force in states with overlapping strategic visions.

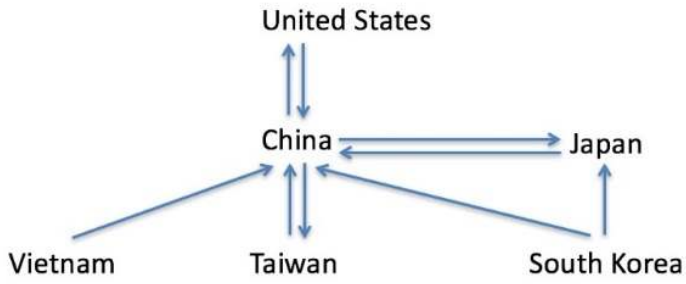

Figure 9.1: Interactive Arming Dynamics in the Asia-Pacific (Results from Empirical Study)

While arming dynamics involve both quantitative and qualitative improvements, the emphasis is on the latter. This is due to the demands for cost-effectiveness, as well as the pursuit of military innovation to achieve a technological edge in warfare.[7] This has been evident in the push for self-reliant defense industries in the Asia-Pacific where countries decreased their dependence on foreign purchases and aimed for cost-effective, country-specific weapons platforms that are capable of specific operations.

Upon further examination of the platforms acquired and the capabilities being developed, many military modernization programs appear to be mimicking each other. However, labeling this dynamic a "mirror-reaction" would mean that those countries are prioritizing copying each other as opposed to reacting

[7] See Michael C. Horowitz, *The Diffusion of Military Power: Causes and Consequences of Military Power* (Princeton: Princeton University Press, 2010).

to the necessary requirements of operating in a maritime domain and protecting maritime territories. The foremost naval functions have historically been and continue to be to exercise control over selected maritime spaces to ensure that critical SLOCs remain open for friends and allies, and to project naval power against hostile shores.[8] Sea control facilitates international commerce, an essential element of national power and prosperity. Offshore presence near flashpoints and critical areas puts naval forces in a position to respond expeditiously if crises occur.[9]

These requirements have necessitated capabilities, such as blue-water power projection (China, the US, Japan and the ROK), ASW (China, the US, Japan, ROK and Vietnam), sophisticated C4ISR (China and the US), and maritime constabulary (China, Japan, ROK and Vietnam). Each of the countries examined in the empirical investigation to varying degrees have invested in self-reliant defense and the capability to produce indigenous defense technologies without reliance on foreign purchases. The modernization of naval and associated air capabilities are reactions and attempts to counter or effect changes in the regional balance of power, as all countries had to constantly develop their armed forces in response to perceived changes in their strategic environments. As well, the peer competition between China and the US demonstrates that their military modernization is not a "status quo interactive arming," but rather, "belligerent interactive arming." Both countries perceive each other as a real and present danger, are both conscious the defense of their interest involves a risk of conflict, are both sufficiently undeterred from defending their interests, and both have the political objective to use force to affect the strategic environment.

The results of the empirical study also demonstrate that there is no detectable propensity for arms dynamics to generate their own momentum and to spill into blind competition or conflict, as assumed in the "arms race" literature. Armaments were not sought simply to counter an opponent's acquisitions.

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[8] John M. Collins, *Military Strategy: Principles, Practices, and Historical Perspectives* (Washington DC: Brassey's, 2002), 155.
[9] Clark G. Reynolds, *Command of the Sea: The History and Strategy of Maritime Empires* (New York: Morrow, 1974), 5.

Rather, the decision to arm remained within the realm of the statesmen, and has often been complemented by other strategic behavior to ensure survival. This has also been demonstrated through decisions of restraint. That is, it is not just about developing capabilities, but also what is not being done—decisions which are not factored into the traditional "arms race" theory. This is evident in South Korea's case, which has resisted full integration into the US-led regional BMD network in which Japan plays a large role, and instead has decided to enhance self-reliant defense options as its overarching goal is reunification of the Korean Peninsula. Such dynamics are also evident in the case of Vietnam. Due to its perception of China's threat in the South China Sea, Hanoi's arms acquisitions have preferred system from Japan, the US and Russia over cheaper options made in China.

This link between armaments and policy has been also demonstrated through competitive security behavior that does not directly involve the armed forces. In Vietnam's case, the closer embrace of the US has been politically difficult but a move that has exerted more immediate pressure on Beijing than increasing investments in sophisticated weaponry. Similarly, in the case of Japan, the competitive response to a darker security outlook was embodied in its constitutional revision. This was a clearer indicator of significant change in Japan's threat perception than movement in, for instance, the combined tonnage of its surface combatants. While it is significant to understand the contribution of technology to modern warfare, it is more imperative to understand the motivations driving changes to strategic doctrine and force structure, and the demand for advanced weaponry. Factoring in this behavior provides a clearer picture of how interactive arming manifests, and what reciprocal reactions by actors might be.

In the Asia-Pacific, behavior that does not directly involve the use of force (such as, bolstering strategic cooperation with partner countries) is actually an acknowledgement that, for most regional countries, the ability to modernize their own forces would at best result in an asymmetric response—this is true of China vis-à-vis the United States, as well as Japan, the ROK and Vietnam vis-à-vis China. Land reclamation and militarization of islands occupied by China and Vietnam, defense technology transfer agreements

between countries, the formalization of security cooperation and intelligence-sharing agreements, and other responses of this kind are certain to be missed by any quantification associated with "arms race" theories. These results confirm a major finding of the thesis, namely that the approach taken here results, at the very least, in a concise set of propositions on arming dynamics that is analytically richer and of greater utility as a guide to policy.

Media and increasingly the academic discourse tend to label any change in military programs as an "arms race" or "competition." Yet, this is inaccurate and misleading in nearly all cases, particularly if the intent is to support policy prescriptions. This dissertation has shown that the dynamics in the Asia-Pacific are better explained as interactive arming, with the US and China engaged in strategic competition. China, the US, Japan, the ROK and Vietnam are arming to achieve favorable balances of power. Not all countries are evaluating the same balance of power—each actor frames their arms acquisitions as a component of the broader national aspiration to achieve a favorable balance of power. Therefore, there are strong similarities between military modernization objectives identified in each case studies.

Interactive Arming: An Extension

The summary of the findings confirms the six key hypotheses, as well as demonstrates the utility of the new framework of "interactive arming" (See Table 9.2). The arming behavior of the five case studies were effectively accounted for by the six hypotheses. The two exceptions are first, H4 was not apparent in the China case study as China does not have any formal alliances or security guarantees. Second, H2 was not present in the Vietnam case study as their strategic concerns regarding the maritime theatre are solely focused on Chinese military transformation and actions in the South China Sea. Overall, the results of the empirical case study analysis demonstrate the utility of the new framework of "interactive arming." Such a framework encompasses the understanding of (1) a state's decision-making process regarding its own capabilities and objectives, and that of potential adversaries; (2) the likelihood of an adversarial response; (3) the impact of a mutual build-up on the countries' capabilities to achieve their objectives; (4) the impact of

strategic competition on states' relationships; and (5) how the anticipated changes over time impact a state's current arming behavior.

Hypotheses	**Case Studies**				
	China	US	Japan	ROK	Vietnam
H1	●	●	●	●	●
H2	●	●	●	●	X
H3	●	●	●	●	●
H4	●	●	●	●	●
H5	X	●	●	●	●
H6	●	●	●	●	●

Table 9.2: Results of Tested Hypotheses against Case Studies

First, interactive arms dynamics are driven by both material and ideational impulses: that is, a state's threat perception which, in turn, is shaped by its domestic institutions and preferences. Any armament behavior inherently implies an interactive process, previously explained by international relations theorists as a "security dilemma." Responding to one or more opponents' armaments implies that decision-makers have deemed an armaments policy necessary to secure state survival in response to a perceived threat (whether this is instead of, or additional to bandwagoning or external balancing). Because of the dynamic interactive of a number of explanatory variables that contribute to interactive arming, such a phenomenon is a spectrum of strategic behavior. That is, from a status quo position of responding to changes the strategic environment, to the purposeful intent of using force to fulfil political objectives and affect the strategic environment.

Second, interactive arming is a process that must involve two or more actors. States are reacting to their broader strategic environment rather than a single adversary. It can be a one-way or two-way process due to the gradation of capabilities and resources of the actors involved. This can range from multiples of mutually exclusive pairs to a more complex system, such as the one depicted in Figure 9.3:

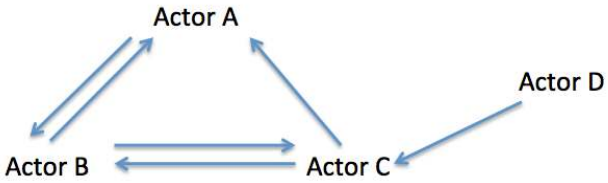

Figure 9.2: Example of Interactive Arming

These first two propositions are informed by geography and historical experience. The size and location of a country are crucial determinants of the way its policy-makers think about strategy, and about the choices among weapon systems.[10] Likewise, historical experience has profound effects on the strategic behavior of states. Due to incomplete information about one another's intentions, relationships between states are influenced by past grievances and the advantages or disadvantages conferred by geography.

Third, qualitative and quantitative changes in armaments must be present. A quantitative decrease in armaments does not necessarily mean the subsiding of interactive arming, but could reflect a technological change that allows the pursuit of political objectives through lower levels of armaments and expenditure. The cycle of military modernization fuels the need to replace obsolescent equipment, and often significant qualitative leaps in capabilities are signals of increased preparedness for warfighting.

Fourth, the defining feature of interactive arming becoming belligerent is political rivalry, when two opponents are attempting to gain superiority to compel the other to do their will. That is, an ambition that goes beyond seeking parity or maintaining the status quo to one that seeks superiority in warfighting capabilities to achieve a political objective. Arming—like war—cannot be divorced from policy but serves the state's political objectives. Although it can be considered as preparation for warfighting, the outcome is not necessarily conflict. Therefore, although the military expenditure and economic burden of arming are transparent indicators for states in an anarchical system, the level of political enmity and grievances are key impulses for interactive arming to occur.

[10] Murray and Grimsley, "Introduction," 1.

Fifth, an interactive arming dynamic exhibits highly competitive security behavior that does not directly involve the armed forces. This can take the form of enhanced strategic partnerships, intelligence-sharing and defense technology transfers. This is often a response to a perceived asymmetry in a relationship, in which a country acknowledges that its armed forces will never be equal to a potential opponent's. Therefore, other strategies such as balancing or bandwagoning are pursued.

Lastly, interactive arming in itself does not generate its own momentum towards conflict. For arming to become belligerent, strategic competition and political rivalry must be present, and thus a calculus is made that arming fulfills political objectives and are adequate preparations for warfighting. This is compounded by the "effect of fear" and the perception of threat, which often exaggerates inaccuracies. Armaments are often not perceived as targeting deficiencies in defense or deterrence, but as offensive measures. The argument that numerical advantage of an opponent can be the sole motivation for increasing the quantitative levels of armaments ignores the considerations of the advantages conferred by terrain and weapons technology, as well as other non-quantifiable factors such as alliances.[11]

Strategic Behavior and the Politics of Force

The analysis of the modernization of naval and associated air capabilities of China, the United States' forces in the Western Pacific, Japan, South Korea and Vietnam has demonstrated that arming is a normal strategic behavior of states and not an abnormal phenomenon as assumed by "arms race" theories. Regional countries in the Asia-Pacific are not reacting to singular arms build-ups in bilateral relationships. Rather, they are responding to changes in their strategic environment and perceived shifts in the balance of power. This arming takes the form of military modernization—both acquisitions and enhancements. However, the traditional "arms race" literature's attempt to identify arming dynamics as a unique phenomenon often isolates the decision to arm from other strategic behavior such as hedging, balancing or

[11] Handel, *Master of War,* 89.

bandwagoning. Therefore, arming is almost always perceived as competitive. This ignores the significant decision-making process involved in assessing a country's requirements to ensure its survival, and the necessary planning for the modernization of an armed force. The dynamics emerging between these countries can be described as "interactive arming," that is arming which responds to a country's own self-defense requirements, as well as changes to its strategic environment. However, the decisions to acquire armaments and modernize the armed forces are always attached to political objectives and are not arms purchases generating their own momentum. As Sun Tzu famously argued, "a sovereign cannot raise an army because he is enraged, nor can a general fight because he is resentful."[12] Similarly, arms acquisitions cannot occur in an "apolitical mad momentum model." Based on the theoretical and empirical findings, this section argues for a return to the strategic studies approach for understanding "strategic behavior" and the politics of the use of force.

Arming is a strategic behavior as by nature it involves the use or the threat of the use of force. Although "arms race" theories emerged from strategic thinking about conventional naval warfare in the 19th and 20th centuries, and the US-USSR Cold War relationship, its current formulation in the international relations discipline has often disregarded its strategic studies roots. That is, the study of the use of force for political objectives. Strategy and understandings of strategic behavior informs considerations of armaments, policy, the use of force and how they are linked. As Robert J. Art argues, the use of force is integral to policies related to security and foreign affairs because military power has effects even when it is not used forcefully:

> The forceful use of military power is physical: a state harms, cripples, or destroys the possessions of another state. The peaceful use of military power in intimidating: a state threatens to harm, cripple, or destroy, but does not actually do so. Only when diplomacy has failed is war generally waged. Mainly in the hope that war can be avoided are threats usually made. For any given state, war is the exception, not the rule, in its relations with other countries, because most of the time a given state is at

[12] Mark R. McNeilly, *Sun Tzu and the Art of Modern Warfare,* rev. ed. (Oxford: Oxford University Press, 2015), 139.

> peace, not war. Consequently states use their military power more frequently in the peaceful than in the forceful mode.[13]

Thus, governing the use of force remains firmly in the realm of politics and the "statesman" where key decisions on armaments relating to a strategic environment are made during peacetime. As Bernard Brodie argued: "Strategy in peacetime is expressed largely in choices among weapons systems, which are of course not bought ready-made off the shelf but developed selectively by a process which itself involves heavy costs and many pitfalls."[14] The use of force is an instrument of the state that does not exist in a vacuum, but which is affected by politics, ideology, geography and economics. Strategy is a process that involves domestic political influences and idiosyncratic behavior, as well as the external pressures of threats.[15] As Merze Tate's methodical history of the attempts at The Hague Conferences to effect substantial disarmament famously noted, arms are the primary instrument that a sovereign state has to ensure its survival:

> States will not disarm so long as they insist upon maintaining their national sovereignty intact; for the idea of absolute sovereignty involves in the last resort the right to do anything which may be held to serve the national interest, regardless of the consequences of such action upon the rest of the world. A sovereign state invariable asserts the power to be the ultimate judge in its own controversies, to enforce its own conception of rights, to treat its own nationals as it sees fit, to regulate its immigration policy and economic life, and to increase its armaments without limit. Moreover, sovereignty necessarily implies the right to make war in the national interest.[16]

The decisions to maintain the armed forces to ensure survival, maintain national sovereignty, and protect national interests, remain in the realm of policy-makers and defense-planners. As Clausewitz famously argued,

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[13] Robert J. Art, "The Fungibility of Force," in *The Use of Force: Military Power and International Politics,* ed. Robert J. Art and Kenneth N. Waltz, 5th ed. (Maryland: Rowman & Littlefield, 1999), 3.
[14] Brodie, *Strategy in the Missile Age,* 361
[15] Williamson and Murray, "Introduction," 21.
[16] Merze Tate, *The United States and Armaments* (Cambridge: Harvard University Press, 1948), 3-4.

> No major proposal required for war can be worked out of ignorance of political factors; and when people talk, as they often do, about harmful political influence on the management of war, they are not really saying what they mean. Their quarrel should be with the policy itself, not with its influence.[17]

Jomini similarly expounded that "we will suppose an army taking the field: the first care of its commander should be to agree with the head of state upon the character of the war."[18] And in the light of the Cold War, Bernard Brodie argued that "the fact that a general war will be fought and swiftly decided with forces in being at the outset indicates that most strategic decisions concerning that war must be made in the preceding period of peace."[19]

These decisions to arm are part of the strategic behavior of a sovereign state to ensure its survival, and survival entails preparedness for warfighting. When states hedge, balance or bandwagon, the military modernization must align with those objectives. Moreover, arming—broadly understood as military modernization—cannot be classified a "peacetime" activity, or one that upholds the peace, simply because it occurs during times of relative absences of major power conflict. Rather,

> Peace in military mouths to-day is a synonym for "war expected" … Every up-to-date dictionary should now say that "peace" and "war" mean the same thing, now *in posse,* now *in actu.* It may even reasonably be said that the intensely sharp preparation for war by the nations is the *real war,* permanent, unceasing; and that the battles are only a sort of public verification of the mastery gained during the "peace" interval.[20]

Interaction between two opponents occurs at the political roots of military modernization (the level of statesmen), as well as at the sharp end of tactical operating detail.[21] This latter detail was evidenced in the results of the empirical study, as well as being a characteristic identified in some of the

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[17] Clausewitz, *On War,* 608.
[18] Antoine Henri, Baron de Jomini, *The Art of War,* trans. G. H. Mendell and W. P. Craighill, rev. ed. (Mineola and New York: Dover, 2007) 59.
[19] Brodie, *Strategy in the Missile Age,* 360.
[20] William James, "The Moral Equivalent of War," in *Representative Essays in Modern Thought,* ed. Harrison Ross Steeves (1913), online edition. Emphasis in original.
[21] See Colin S. Gray, *Nuclear Strategy and National Style* (Lanham: Hamilton Press, 1986), 210 and 220.

literature. Desmond Ball, Charles Glaser and Geoffrey Till have argued that armaments can become reactive as a result of operational requirements and tactical objectives.[22] As Clausewitz noted, armaments must necessarily respond to perceived threats:

> If you want to overcome your enemy, you must match your effort against his power of resistance, which can be explained as the product of *two inseparable* factors, viz. *the total means at his disposable and the strength of his will.* The extent of the means at his disposal is a matter – though not exclusively – of figures, and should be measurable. But the strength of his will is much less easy to determine and can only be gauged approximately by the strength of the motive animating it.[23]

That is, arming and the decision to develop specific capabilities are made to meet political objectives in an actor's strategic environment, and are considered again when deploying the capability to meet operational requirements. These decisions involve assessing the needs for advanced weapons platforms, examining regional trends, and funding and allocating resources to these costly and often long-term modernization programs.

It is these political motivations which spur reactions from states in the form of bolstering their own modernization programs or revising foreign and defense policy. The traditional "arms race" theory emphasizes the "action-reaction" process—overriding political purpose and domestic decision-making processes—in the considerations of how to distribute and apply the use of force. In light of the empirical investigation, the strategic objectives of states in relation to their armaments are well-defined. Military modernization encompasses the process of arms acquisitions and enhancements and is a primarily peacetime activity that requires state resources. Consequently, the correlation of these material means to political ends is a constant process that does not lend itself to "spiraling out of control" or the "momentum of a race." The character of armaments remains dependent on the intensity of the political rivalry. The interaction between opponents is, effectively, the politics of using force, as Sun Tzu argued, "the political, diplomatic, and

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[22] See for instance, Ball, "Arms or Affluence"; Charles L. Glaser, "When are Arms Races Dangerous?"; and Till, *Asia's Naval Expansion.*
[23] Clausewitz, *On War,* 77.

logistical preparations for war *and* fighting itself [are] integral parts of the same activity."[24]

Cases and Areas for Future Research

Due to the breadth of the Asia-Pacific region, other potentially informative case studies could not be included due to space constraints, primarily Singapore, Taiwan and North Korea. The case of Singapore, for instance, demonstrates one of the most significant examples of the modernization of sophisticated naval and associated air capabilities in the Asia-Pacific. The primary role of the SAF "has been to maintain a favorable sub-regional balance of power in maritime Southeast Asia."[25] The city-state's survival relies on its access to the sea. The SAF has pursued a small version of "capability superiority," that is, having the best equipment but with a numerically small force to deter potentially aggressors. Singapore's deterrent capability is a "regional doomsday machine—intended to manipulate Singapore's regional threat environment by forcing neighboring states to treat the city-state with a degree of respect and caution which might otherwise be absent."[26] Its consistent investment in defense procurement, its growing defense research and industrial establishment, and emphasis on doctrinal development has made the SAF the best-equipped military in Southeast Asia. There is a clear element of maintaining sufficient deterrent capabilities to address a Malaysia or Indonesia contingency, but more significantly, the focus for Singapore's modernization is to address Sino-US strategic competition in the Asia-Pacific. Its strategic objectives are twofold: it is arming to enhance self-reliant defense, but also to hedge with the US against China.[27]

Second, the examination of Taiwan's military modernization would reveal how a country's armed forces adjusts to an extreme shift in the balance of

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[24] See Handel, *Masters of War,* 37.
[25] Huxley, *Defending the Lion City,* 70
[26] Huxley, *Defending the Lion City,* 31-32.
[27] Lim and Cooper, "Reassessing Hedging," 712.

power across the Taiwan Strait. Taiwan's acquisitions are an attempt to counter growing Chinese capabilities to force unification with the mainland, and Chinese capabilities are targeted at preventing American interference in contingencies such as the Taiwan Strait. Taiwanese defense planners continue to hope for a symmetrical response to China's military build-up which includes developing capabilities for air-to-air, naval-to-naval and ground-to-ground defensive interdiction, as well as acquiring counterforce and countervalue offensive weaponry.

However, Taiwan's 2013 *National Defense Report* highlighted the impact of the PLA's growing strength on US' ability to assist the island should Beijing decide to mount an offensive campaign, stating that by 2020 the PLA could be in a position to invade and occupy Taiwan.[28] Additionally, Taiwan faces a multitude of problems across various fronts. In contrast to China's robust military expenditure, Taiwan's defense budget fell to an all-time low of approximately 2 percent of GDP in 2014—well below Taipei's bipartisan goal of budgeting at 3 percent. Taiwan's defense expenditure is also strained by its dual imperatives of military reform and major procurement programs. It has lost the quantitative and qualitative edge against China, and faces the problem of aging aircraft and ships. Its declining demographics have added to the huge costs associated with setting up an all-volunteer force by 2017. It also faces the persistent issue that the US remains reluctant to supply Taipei with advanced weaponry, such as next generation combat aircraft and the *Aegis* combat system, mainly due to the fear of espionage.

Third, North Korea has had significant influence on the development of ballistic missile defense for the US, South Korea and Japan, as well as influencing the force structure development of the PLA. The North Korean armed forces field a large, conventional and forward-deployed military, capable of inflicting damage on South Korea, as evidenced by the 2010 *Cheonan* and *Yeonpyeong* incidents.[29] North Korea relies on deterrence

[28] ROC Ministry of National Defense, *National Defense Review 2013* (Taipei: Ministry of National Defense, October 2013), 66
[29] Office of the Secretary of Defense, *Military and Security Developments Involving the Democratic People's Republic of Korea 2015: Report to Congress* (Washington DC: Department of Defense, 2015), 1.

through its "nuclear weapons program and supporting delivery systems and conventionally by maintaining a large, heavily-armed, forward-deployed military that presents a constant threat to South Korea, especially the greater Seoul metropolitan area. These two aspects of its military strategy are meant to be mutually supporting: the threat posed by one is employed to deter an attack on the other."[30] Although North Korea faces immense resource challenges and the US-ROK alliance enjoys a military capability advantage—including in the nuclear domain—Pyongyang has been successful in deterring alliance military responses to its provocations by its ability to inflect unacceptable consequences on South Korea.[31] Pyongyang's unpredictability, willingness to use force, and commitment to the development of its nuclear technology and capabilities have led to regional reactions to adjust military doctrine, for instance South Korea's "proactive deterrence" policy.[32]

Furthermore, there are two key areas identified for future research. First, as mentioned in the previous section, a better understanding is needed of the distinctions between military power, military capability and weapons platforms. The conflation of weapons platforms and capabilities has often led to contradictory assessments of a country's military power and wherewithal. The academic discussion of armaments often overlooks capability with regard to understanding personnel figures, readiness, organization and doctrine, maintaining technical advantage, and the ability to equip and train the armed forces. There is also further misunderstanding in assessments of military power. These indices often focus on capabilities without quantifying soft power and reputation—dynamics which are central to the ability to threaten the use or use of force. Moreover, many assessments which use raw indices of military budgets, tonnage or weapons counts, do not take into account the broader military modernization cycle. In essence, Brodie's dictum that "strategy in peacetime is expressed largely in choices among weapons

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[30] Office of the Secretary of Defense, *Military and Security Developments Involving the Democratic People's Republic of Korea 2015,* 9.
[31] Michael McDevitt, "Deterring North Korean Provocations," *Brooking East Asia Commentary,* February 7, 2011, https://www.brookings.edu/research/deterring-north-korean-provocations/.
[32] See Hong Kyudok, "Option I: Enhancing Military Deterrence," *The Asan Forum: Special Forum,* June 11, 2015, http://www.theasanforum.org/option-1-enhancing-military-deterrence/.

systems" could be rephrased as "strategy in peacetime is expressed largely in the development of capabilities." The training, planning, organizing and implementation of arms acquisitions are better signals of political intent and wherewithal. Consequently, there is great scope for an examination of the linkage between strategy and military capabilities. For instance, a comparison of the impact of torpedoes, Dreadnoughts and submarines on naval warfare.[33]

Second, a number of key events occurred in early 2017 that are likely to further contribute to the narrative of arming in the Asia-Pacific. January 2017 kicked off with China indirectly retaliating against South Korea for its deployment of the US THAAD system.[34] This "indirect action" included rejecting applications by South Korean commercial carriers to add charter flights between the two countries, and blocking South Korean sales of toilet seat bidets.[35] There was also concerted effort by Japan's Prime Minister Shinzo Abe to bolster ties in Southeast Asia, visiting the Philippines, Australia, Indonesia and Thailand, in the face of rising tensions with China.[36] In the same month, China's only operational aircraft carrier, the *Liaoning,* and its accompanying fleet sailed through the Taiwan Strait after conducting drills and tests in the South China Sea.[37] This prompted Taiwan to scramble F-16s and dispatch a frigate to shadow the carrier group through the strait.[38] The move also came days after PLA bombers and reconnaissance planes were

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[33] See for instance, Katherine C. Epstein, *Torpedo: Inventing the Military-Industrial Complex in the United States and Great Britain* (Cambridge: Harvard University Press, 2014).

[34] Shin-hyung Lee and Christian Sheppard, "South Korea Minister Says China Indirectly Retaliating Against THAAD," *Reuters,* January 6, 2017, http://www.reuters.com/article/us-southkorea-china-idUSKBN14P2I8.

[35] Shin Kyung-Jin, "Retaliation by Beijing Extends to Bidet Imports," *Korea Joogang Daily,* January 20, 2017, http://mengnews.joins.com/view.aspx?aid=3028897&cloc=joongangdaily%7chome%7cnewslist1.

[36] Junko Horiuchi, "Abe Asia Tour to Focus on Bolstering Ties Amid Rising Chinese Assertiveness," *The Japan Times,* January 11, 2017, http://www.japantimes.co.jp/news/2017/01/11/national/politics-diplomacy/abe-asia-tour-focus-bolstering-ties-amid-rising-chinese-assertiveness/#.WIE45vl97RY.

[37] Michael Martina and J. R. Wu, "China Says its Aircraft Carrier Leaves Taiwan Strait," *Reuters,* January 11, 2017, http://www.reuters.com/article/us-china-taiwan-carrier-idUSKBN14W0D5.

[38] Michael Forsythe and Chris Buckley, "Taiwan Responds After China Sends Carrier to Taiwan Strait," *The New York Times,* January 10, 2017, https://www.nytimes.com/2017/01/10/world/asia/china-taiwan-strait-aircraft-carrier-trump.html.

detected flying over the East China Sea and the Sea of Japan.[39] By the end of the month, the JSDF carried out a simulated exercise of how the US military and JSDF would respond to a China-Taiwan military clash.[40]

Such actions point to irreversible shifts in the regional balance of power. Even before the announcement of the rebalance, many regional countries—particularly US allies—were increasingly uncertain about American commitments to the region as well as China's intentions.[41] The inauguration of President Trump will certainly not help the situation. On the one hand, due to American strategic and economic interests in the region, it is likely that Washington will maintain its presence in the Asia-Pacific as its key partnerships in the region are instrumental for maintaining a favorable balance of power.[42] President Trump has repeatedly stated that "history shows that when America is not prepared is when the danger is greatest. We want to deter, avoid and prevent conflict through our unquestioned military dominance."[43] He also pledged that upon taking office he would end defense sequestration (presumably the BCA and its multi-year caps), build a 350-ship navy, and expand military investment.[44] Two of his advisers, Alex Grey and Peter Navarro, have advanced a vision for US presence in the Asia-Pacific which seeks to maintain "primacy" to limit China's increasing influence.[45]

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[39] Jesse Johnson, "Japan Scrambles Fighters as Chinese Bombers Transit Tsushima Strait for First Time Since August," *The Japan Times,* January 9, 2017, http://www.japantimes.co.jp/news/2017/01/09/national/japan-scrambles-fighters-chinese-bombers-transit-tsushima-strait-first-time-since-august/#.WIFHg_l97RZ.

[40] "Japan Drill to Simulate China Clash with Taiwan," *The Straits Times,* January 20, 2017, http://www.straitstimes.com/asia/east-asia/japan-drill-to-simulate-china-clash-with-taiwan?utm_content=buffer4b20b&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer.

[41] Benjamin Soloway, "Under Trump, US Allies in Asia May Look to Themselves for Security," *Foreign Policy: The Cable,* November 11, 2016, http://foreignpolicy.com/2016/11/11/under-trump-u-s-allies-in-asia-may-look-to-themselves-for-security/.

[42] William T. Tow and Satu Limaye, "What's China Got to Do With It? US Alliances, Partnerships in the Asia-Pacific," *Asian Politics & Policy* 8, no. 1 (2016): 8.

[43] Seth McLaughlin, "Trump Calls for Massive Military Buildup," *The Washington Times,* September 7, 2016, http://www.washingtontimes.com/news/2016/sep/7/donald-trump-wants-bigger-military-bigger-defense-/.

[44] Joe Gould, "Trump's Big League Defense Buildup Would Face Hurdles in Congress," *DefenseNews,* November 10, 2016, http://www.defensenews.com/articles/trumps-big-league-defense-buildup-would-face-hurdles-in-congress.

[45] Mira Rapp-Hooper, "Deciphering Trump's Asia Policy: What "America First" Will Mean for Regional Order," *Foreign Affairs,* November 22, 2016, https://www.foreignaffairs.com/articles/asia/2016-11-22/deciphering-trumps-asia-policy.

On the other hand, due to his campaign pledges of fiscal-mindedness, Trump has called on Japan and South Korea to pay more for their own defense[46] and expressed openness (and later denied he did) to the idea of nuclear proliferation among American allies.[47] Three days after his January 2017 inauguration, Trump also fulfilled his campaign promise to end American participation in the 12-country Trans-Pacific Partnership (TPP), a central pillar of Obama's pivot.[48] Moreover, the Trump administration could prove to be a double-edged sword with regards to Sino-US relations:

> On the one hand, Trump threatens a break from long-standing US commitments to alliances, free trade and diplomacy with China. This risks producing strategic instabilities in an Asia riven by great-power rivalries and the insecurities of lesser states. On the other hand, some of the US president-elect's proposed policies may actually put him in sync with Asian powers that take a more nationalistic line on the uses of military power and economic statecraft. Perhaps the most significant potential shift in US policy concerns China. Trump takes a more hawkish line on China's militarization of the South China Sea, its military buildup, and its unfair trade practices than has President Barack Obama … Trump has also promised to ramp up US defense spending after its relative decline during the Obama years. His advisers have criticized the Obama administration's "pivot to Asia" as more talk than action and have pledged to rectify this by substantially increasing the US military presence through an accelerated naval buildup. The combination of standing up to China's neo-imperialistic behavior and expanding America's ability to project power could be a source of reassurance to Asian allies who lately have questioned US staying power in their region.[49]

The Trump administration will be a time of "intense polarization in Washington and continuing savage political struggles." [50] Trump's

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[46] Ankit Panda, "Donald Trump Won. Prepare for Uncharted Geopolitical Waters in Asia," *The Diplomat,* November 9, 2016, http://thediplomat.com/2016/11/donald-trump-won-prepare-for-uncharted-geopolitical-waters-in-asia.

[47] Stephanie Condon, "Donald Trump: Japan, South Korea Might Need Nuclear Weapons," *CBS News,* March 29, 2016, http://www.cbsnews.com/news/donald-trump-japan-south-korea-might-need-nuclear-weapons/.

[48] William Mauldin, "Donald Trump Withdraws US From Trans-Pacific Partnership," *The Wall Street Journal,* January 23, 2017, http://www.wsj.com/articles/trump-withdraws-u-s-from-trans-pacific-partnership-1485191020?mod=e2fb.

[49] Daniel Twining, "Pros and Cons of Trump's Emerging Asia Policy," *Nikkei Asian Review,* December 21, 2016, http://asia.nikkei.com/Viewpoints/Daniel-Twining/Pros-and-cons-of-Trump-s-emerging-Asia-policy.

[50] Paul Dibb, "The US Election is Dangerous for Australia," *ASPI: The Strategist,* October 5, 2016, https://www.aspistrategist.org.au/us-election-dangerous-australia/.

protectionist and isolationist rhetoric [51] could advance regional arguments that American primacy in Asia is over. American primacy in the region is not just founded on military capabilities but also mutual understandings of power and the shared ideals of liberal democracies. With a populist in charge of the White House from 2017, trading away shared values could arguably lead to accelerated pushes for enhanced self-reliance and the indigenization of defense industries, and a transformation of the regional balance of power.

[51] David E. Sanger and Maggie Haberman, "50 GOP Officials Warn Donald Trump Would Put Nation's Security 'at Risk,'" *The New York Times,* August 8, 2016, http://www.nytimes.com/2016/08/09/us/politics/national-security-gop-donald-trump.html.

Bibliography

Abbas, Tehmina, Eva Anderson and Katherine Dixon. "Regional Results Asia-Pacific: Government Defence Anti-Corruption Index." Report for Transparency International Defence and Security Program, November 2015.

Acheson, Chris. "Disputed Claims in the East China Sea: An Interview with James Manicom." *NBR Japan-US Discussion Forum,* July 25, 2011, http://www.nbr.org/research/activity.aspx?id=159.

Alexander, Arthur. *Of Tanks and Toyotas: An Assessment of Japan's Defense Industry.* Santa Monica CA: RAND, 1993.

Allison, Graham T. "Conceptual Models and the Cuban Missile Crisis." *The American Political Science Review* 63, no. 3 (September 1969): 689-718.

Anderton, Charles H. "Arms Race Modeling: Problems and Prospects." *The Journal of Conflict Resolution* 33, no. 2 (1989): 346-367.

Ang, Cheng Guan. "Vietnam-China Relations Since the End of the Cold War." *Asian Survey* 38, no. 12 (December 1998): 1122-1141.

Arakawa, Nao and Will Colson. "The Japan Coast Guard: Resourcing and Responsibility." *CSIS: Asia Maritime Transparency Initiative,* April 1, 2015, http://amti.csis.org/the-japan-coast-guard-resourcing-and-responsibility/.

Arakawa, Naohide. "The Japan Coast Guard FY2015 Budget in Brief and New Senkaku Patrol Fleet." *The Japan International Transport Institute (JITI) Journal* 2, no. 4 (September 2015): 1-6.

Arase, David. "Japan, the Active State? Security Policy after 9/11." *Asian Survey* 47, no. 4 (July/August 2007): 560-583.

Arkadie, Brian Van and Raymond Mallon. *Viet Nam: A Transition Tiger?* Canberra: ANU Press, 2004.

Armacost, Michael H. and Kenneth B. Pyle, "Japan and the Unification of Korea: Challenges for US Policy Coordination." *NBR Analysis* 10, no. 1 (March 1999).

Art, Robert J. "The Fungibility of Force." In *The Use of Force: Military Power and International Politics.* Edited by Robert J. Art and Kenneth N. Waltz. 5th Edition, 3-22. Maryland: Rowman & Littlefield, 1999.

Australian Government. "A Declaration on Enhancing the Australia-Viet Nam Comprehensive Partnership." Department of Foreign Affairs and Trade, Canberra, 18 March 2015, http://dfat.gov.au/geo/vietnam/Pages/a-declaration-on-enhancing-the-australia-viet-nam-comprehensive-partnership.aspx

Ayson, Robert. "Strategic Studies." In *The Oxford Handbook of International Relations,* edited by Christian Reus-Smit and Duncan Snidal, 559-575. Oxford: Oxford University Press, 2008.

Baldwin, David A. "Neoliberalism, Neorealism, and World Politics," in *Neorealism and Neoliberalism: The Contemporary Debate.* Edited by David A. Baldwin, 3-25. New York: Columbia University Press, 1993.

Baldwin, Hanson W. *The Great Arms Race: A Comparison of US and Soviet Power.* New York: Praeger, 1958.

Ball, Desmond. "Asia's Naval Arms Race." Paper Presented at the 25th Asia Pacific Roundtable, Kuala Lumpur, Malaysia, May 30, 2011.

Ball, Desmond. "Arms Modernization in Asia: An Emerging Complex Arms Race." In *The Global Arms Trade: A Handbook.* Edited by Andrew T. H. Tan, 30-51. London and New York: Routledge, 2010.

Ball, Desmond. "Arms and Affluence: Military Acquisitions in the Asia-Pacific region." *International Security* 18, no. 3 (Winter 1993/4): 78-112.

Ball, Desmond. "Trends in Military Acquisitions: Implications for Security and Prospects for Constraints/Control." In *The Making of a Security Community in the Asia Pacific.* Edited by Bunn Nagara and K.S. Balakrishnan, 132-141. Kuala Lumpur: Proceedings of the 7th Asia-Pacific Roundtable, June 6-9, 1993.

Ball, Desmond and Richard Tanter. *The Tools of Owatatsumi: Japan's Ocean Surveillance and Coastal Defence Capabilities.* Canberra: ANU Press, 2015.

Bateman, W. S. G. *Strategic and Political Aspects of the Law of the Sea in East Asian Seas.* PhD Dissertation, Australian Defense Force Academy, University of New South Wales, Canberra, 2001.

Beer, Laurence W. "Group Rights and Individual Rights in Japan." *Asian Survey* 21, no. 4 (April 191): 437-453.

Belasco, Amy. "Defense Spending and the Budget Control Act Limits," Congressional Research Service Report R44039. Washington DC: Library of Congress, July 22, 2015.

Benedict, Ruth. *The Chrysanthemum and the Sword: Patterns of Japanese Culture,* 2nd Edition. Boston and New York: Mariner, 2005.

Benford, Robert D. and Lester R. Kurtz. "Performing the Nuclear Ceremony: The Arms Race as a Ritual." *Journal of Applied Behavioral Science* 23, no. 4 (December 1987): 463-482.

Bennett, Bruce W. "The Korean Defense Reform 307 Plan." *Asan Institute Issue Brief* (April 18, 2011), http://en.asaninst.org/contents/issue-brief-no-8-the-korean-defense-reform-307-plan-by-bruce-w-bennett-the-rand-corporation1/.

Bennett, Bruce W. "A Brief Analysis of the Republic of Korea's Defense Reform Plan." Paper Prepared for the Republic of Korea Ministry of National Defense, RAND National Defense Research Institute, 2006.

Berteau, David J. and Michael J. Green. *US Force Posture Strategy in the Asia-Pacific Region: An Independent Assessment*. Washington DC: Center for Strategic and International Studies, June 27, 2012.

Biddle, Stephen D. *Military Power: Explaining Victory and Defeat in Modern Battle.* Princeton and Oxford: Princeton University Press, 2004.

Biddle, Stephen D. "The European Conventional Balance: A Reinterpretation of the Debate." *Survival* 30, no. 2 (March-April 1988): 99-121.

Biddle, Stephen D. and Ivan Oelrich. "Future Warfare in the Western Pacific: Chinese Anti-access/Area Denial, US AirSea Battle, and Command of the Commons in East Asia." *International Security* 41, no. 1 (Summer 2016): 7-48.

Bitzinger, Richard A. "Japan's Disappointing Entrée into the Global Arms Market." *RSIS Commentary* 128 (May 27, 2016).

Bitzinger, Richard A. "Reforming China's defense industry." *The Journal of Strategic Studies* 39, nos. 5-6 (2016): 762-789.

Bitzinger, Richard, A. "A New Arms Race? Explaining Recent Southeast Asian Military Acquisitions." *Contemporary Southeast Asia* 32, no. 1 (2010): 50-69.

Bitzinger, Richard A. "Transforming the US Military: Implications for the Asia-Pacific." *ASPI: Strategy* (Barton: Australian Strategic Policy Institute, December 2006).

Bitzinger, Richard A. "Going Places or Running in Place? China's Efforts to Leverage Advanced Technologies for Military Use." In *People's Liberation Army After Next.* Edited by Susan M. Puska. Carlisle: Strategic Studies Institute, US Army War College, August 2000.

Bitzinger, Richard A. "South Korea's Defense Industry at the Crossroads." *Korean Journal of Defense Analysis* 7, no. 1 (1995): 233-249.

Blasko, Dennis J. "Evaluating Chinese Military Procurement from Russia." *Joint Forces Quarterly* (Autumn/Winter 1997-98): 91-96.

Bolks, Sean and Richard J. Stoll. "The Arms Acquisition Process: The Effects of Internal and External Constraints on Arms Race Dynamics." *Journal of Conflict Resolution* 44, no. 5 (2000): 580-603.

Boutin, J. D. Kenneth. "Arms and Autonomy: The Limits of China's Defense-Industrial Transformation." In *The Modern Defense Industry: Political,*

Economic, and Technological Issues. Edited by Richard A. Bitzinger, 212-226. Santa Barbara: Praeger, 2009.

Bowers, Ian. "The Republic of Korea Navy – A 'Big' Small Navy," in *Small Navies: Strategy and Policy for Small Navies in War and Peace.* Edited by Michael Mulqueen, Deborah Sanders and Ian Speller, 95-116. London and New York: Routledge, 2014.

Bowers, Ian. "The Republic of Korean and Its Navy: Perceptions of Security and the Utility of Seapower." *The Journal of Strategic Studies* 37, no. 3 (2014): 442-464.

Boyd, Dallas. "Advanced Technology Acquisition Strategies of the People's Republic of China." Report for US Defense Threat Reduction Agency, Advanced Systems and Concept Office, ASCO 20120-021 (September 2010).

Bradford, John. "US Strategic Interest and Cooperative Activities in Maritime Southeast Asia." *Maritime Security in Southeast Asia: US, Japanese, Regional, and Industry Strategies,* NBR Special Report No. 24 (November 2010).

Brands Jr., H. W. "Testing Massive Retaliation: Credibility and Crisis Management in the Taiwan Strait." *International Security* 12, no. 4 (Spring 1988): 124-151.

Bresnahan, Timothy F. and Manuel Trajtenberg. "General Purpose Technologies: 'Engines of Growth?'" *Journal of Econometrics* 65, no. 1 (January 1995): 83-108.

Brodie, Bernard. *War and Politics.* New York: Macmillan, 1973.

Brodie, Bernard. *Strategy in the Missile Age.* Princeton: Princeton University Press, 1959.

Brooks, Harvey. "The Military Innovation System and the Qualitative Arms Race." *Daedalus* 104, no. 3 (1975): 75-97.

Brooks, Stephen G. and William C. Wohlforth. "The Rise and Fall of the Great Powers in the Twenty-first Century: China's Rise and the Fate of America's Global Position." *International Security* 40, no. 3 (Winter 2015/16): 7-53.

Bukh, Alexander. "Japan's History Textbooks Debate. National Identity in Narratives of Victimhood and Victimization." *Asian Survey* 47, no. 5 (2007): 683-704.

Bull, Hedley. "Strategic Studies and Its Critics." *World Politics* 20, no. 4 (July 1968): 593-605.

Bull, Hedley. "International Theory: The Case for a Classical Approach." *World Politics* 18, no. 3 (1966): 361-377.

Bull, Hedley. *The Control of the Arms Race: Disarmament and Arms Control in the Missile Age.* New York: Praeger, 1965.

Bush, Richard C. *The Perils of Proximity: China-Japan Security Relations.* Washington DC: Brookings Institution Press, 2010.

Buzan, Barry. *An Introduction to Strategic Studies: Military Technology and International Relations*. Basingstoke and London: IISS and Macmillan Press, 1987.

Buzan, Barry and Eric Herring. *The Arms Dynamic in World Politics.* Boulder: Lynne Reiner, 1998.

Carlton, David and Carlo Schaerf, eds. *The Dynamics of the Arms Race.* London: Croom Helm, 1975.

Calder, Kent E. "Securing Security through Prosperity: The San Francisco System in Comparative Perspective," *The Pacific Review* 17, no. 1 (March 2004): 135-157.

Campbell, Kurt M. "Energizing the US-Japan Security Partnership." *Washington Quarterly* 23, no. 4 (2000): 125-134.

Campbell, Kurt M. and Brian Andrews. "Explaining the US 'Pivot' to Asia." *Chatham House* Americas 2013/01 (August 2013).

Carter, Ashton B. "President Obama's Fiscal 2016 Budget Request for Defense." Testimony by Deputy Secretary of Defense Ashton Carter before Senate Appropriations Committee, Subcommittee on Defense, transcript, Washington DC, May 6, 2013.

Carter, Ashton B. and Jennifer C. Bulkeley. "America's Strategic Response to China's Military Modernization." *Harvard Asia-Pacific Review* (Winter 2007): 50-52

Caspary, William R. "Richardson's Model of Arms Races: Description, Critique, and an Alternative Model." *International Studies Quarterly* 11, no. 1 (March 1967): 63-88.

Catalinac, Amy L. "Why New Zealand Took Itself out of ANZUS: Observing 'Opposition for Autonomy' in Asymmetric Alliances." *Foreign Policy Analysis* 6 (2010): 317-388.

Cha, Victor D. "What's Next for the US-Korea Alliance." Statement before the House Committee on Foreign Affairs, Subcommittee on Asia and the Pacific, Washington DC, June 6, 2012.

Cha, Victor D. "Powerplay: Origins of the US Alliance System in Asia." *International Security* 34, no. 3 (Winter 2009/2010): 158-196.

Cha, Victor D. "Strategic Culture and the Military Modernization of South Korea." *Armed Forces & Society* 28 (2001): 99-127.

Cha, Victor D. “Abandonment, Entrapment, and Neoclassical Realism in Asia: The United States, Japan, and Korea.” *International Studies Quarterly* 44, no. 2 (2000): 261-291.

Cha, Victor D. *Alignment Despite Antagonism: The US-Korean-Japan Security Triangle.* Stanford: Stanford University Press, 1999.

Chadwick, Stephen Howard. “Defense Acquisition: Overview, Issues, and Options for Congress.” Congressional Research Service Report RL34026. Washington DC: Library of Congress, June 4, 2007.

Chai, Sun-Ki. “Entrenching the Yoshida Defense Doctrine: Three Techniques for Institutionalization.” *International Organization* 51, no. 3 (Summer 1997): 389-412.

Chang, The-Kuang. “China’s Claim of Sovereignty Over Spratly and Paracel Islands: A Historical and Legal Perspective.” *Case Western Reserve Journal of International Law* 23, no. 3 (1991): 399-420.

Chanlett-Avery, Emma, William H. Cooper and Mark E. Manyin. “Japan-US Relations: Issues for Congress.” Congressional Research Service Report RL33436. Washington DC: Library of Congress, February 24, 2010.

Chanlett-Avery, Emma, Mark E. Manyin, Ian E. Rinehart, Rebecca M. Nelson and Brock R. Williams. “Japan-US Relations: Issues for Congress.” Congressional Research Service Report RL33436. Washington DC: Library of Congress, September 29, 2015.

Chanlett-Avery, Emily and Ian E. Rinehart. “The US-Japan Alliance,” Congressional Research Service Report RL33740. Washington DC: Library of Congress, February 9, 2016.

Chanlett-Avery, Emma and Ian E. Rinehart. “The US Military Presence in Okinawa and the Futenma Base Controversy.” Congressional Research Report R42645. Washington DC: Library of Congress, January 20, 2016.

Chanlett-Avery, Emma, Ian E. Rinehart and Mary Beth D. Nikitin. “North Korea: US Relations, Nuclear Diplomacy, and Internal Situation.” Congressional Research Service Report R41259. Washington DC: Library of Congress, January 15, 2016.

Chase, Michael S. and Andrew S. Erickson. “The Conventional Missile Capabilities of the Second Artillery Force: Cornerstone of Deterrence and Warfighting.” *Asian Security* 8, no. 2 (2012): 115-137.

Chase, Michael S. and Arthur Chan. *China’s Evolving Approach to “Integrated Strategic Deterrence.”* Santa Monica: RAND, 2016.

Chen, King C. *China’s War with Vietnam, 1979: Issues, Decisions, and Implications.* Stanford: Hoover Institution, Stanford University, 1987.

Christensen, Thomas J. *The China Challenge: Shaping the Choices of a Rising Power*. New York and London: W. W. Norton, 2015.

Christensen, Thomas J. "Posing Problems without Catching Up: China's Rise and Challenges for US Security Policy." *International Security* 25, no. 4 (Spring 2001): 5-40.

Clausewitz, Carl von. *On War*. Translated by Michael Howard and Peter Paret. Princeton, Princeton University Press, 1976.

Clinton, Hilary. "America's Pacific Century." *Foreign Policy,* October 11, 2011, http://foreignpolicy.com/2011/10/11/americas-pacific-century/.

Cohen, David. "Newest Small Leading Group to 'Deepen' Reform of National Defense and the Military." *The Jamestown Foundation: China Brief,* 14, no. 6 (2014), https://jamestown.org/program/newest-small-leading-group-to-deepen-reform-of-national-defense-and-the-military/.

Cole, Bernard D. "Reflections on China's Maritime Strategy: Island Chains and the Classics." *EMC Chair Conference Paper.* Newport: US Naval War College, March 24-26, 2014.

Collins, Gabriel, Andrew Erickson, Lyle Goldstein and William Murray. *Chinese Evaluations of the US Navy Submarine Force.* Newport: Naval War College Center for Naval Warfare Studies, 2008.

Collins, John M. *Military Strategy: Principles, Practices, and Historical Perspectives.* Washington DC: Brassey's, 2002.

Collins, Lisa. "Is South Korea's Use of Force Against Chinese Fishing Vessels Illegal?" *CSIS Asia Maritime Transparency Initiative,* December 12, 2016, https://amti.csis.org/rok-force-chinese-vessels-illegal/.

Cordesman, Anthony H. and Ashley Hess. *The Evolving Military Balance in the Korean Peninsula and Northeast Asia*. Washington DC: CSIS Burke Chair in Strategy, June 2013.

Coyne, Christopher J. Courtney Michaluk and Rachel Reese. "Unproductive Entrepreneurship in US Military Contracting." George Mason University Working Paper in Economics 15-50, September 30, 2015.

Crane, Keith, Roger Cliff, Evan Medeiros, James Mulvenon and William Overholt. *Modernizing China's Military: Opportunities and Constraints*. Santa Monica: RAND Project Air Force, 2005.

Crisher, Brian and Mark Souva. "Power At Sea: A Naval Power Dataset, 1865-2011." Working Paper, Florida State University, 2012.

Cusack, Thomas R. and Michael Don Ward. "Military Spending in the United States, Soviet Union, and the People's Republic of China." *Journal of Conflict Resolution* 25, no. 3 (1981): 429-469.

Dagget, Stephen. “Defense Burdensharing: Is Japan’s Host Nation Support a Model for Other Allies.” Congressional Research Service Report 95-515. Washington DC: Library of Congress, June 20, 1994.

Davies, Andrew. “Asian Military Trends and their Implications for Australia.” *ASPI Strategic Insights* 42 (July 2008).

Davies, Andrew, Peter Jennings, Benjamin Schreer and Daniel Nichola. “Expanding Alliance: ANZUS Cooperation and Asia-Pacific Security.” *ASPI: Strategy* (Barton: Australian Strategic Policy Institute, December 2014).

de Castro, Renato Cruz. “The Philippines and Japan Sign New Defense Agreement.” *CSIS Asia Maritime Transparency Initiative,* March 15, 2016, http://amti.csis.org/the-philippines-and-japan-sign-new-defense-agreement/.

Deudney, Daniel and G. John Ikenberry. “The Nature and Sources of Liberal International Order.” *Review of International Studies* 25, no. 2 (1999): 179-196.

Diehl, Paul F. “Arms Races to War: Testing Some Empirical Linkages.” *The Sociological Quarterly* 26, no. 3 (Autumn 1985): 331-349.

Diehl, Paul F. “Substitutes or Complements? The Effects of Alliances on Military Spending in Major Power Rivalries.” *International Interactions* 19, no. 3 (1994): 159-176.

Dickinson, Goldsworthy Lowes. *The International Anarchy, 1904-14.* Century: The University of California, 1926.

Dombrowski, Peter. “Third Offset Strategy and Arms Racing in Asia.” Arms Racing in Asia: The Naval Dimension, RSIS Maritime Security Programme-Military Transformation Programme Workshop, November 18, 2016, Singapore.

Dombrowski, Peter. “America’s Third Offset Strategy: New Military Technologies and Implications for the Asia Pacific.” *RSIS Policy Report* (June 2015).

Downs, Erica Strecker and Phillip C. Saunders. “Legitimacy and the Limits of Nationalism: China and the Diaoyu Islands.” *International Security* 23, no. 3 (Winter 1998/99): 114-146.

Dudden, Alexis. “Two Strategic Cultures, Two Japans: Executive Brief,” in *Strategic Asia 2016-17: Understanding Strategic Cultures in the Asia-Pacific.* Edited by Ashley J. Tellis, Alison Szalwinski and Michael Wills, 30. Washington DC: The National Balance of Asian Research, 2016.

Duscha, Julius. *Arms, Money & Politics.* New York: Ives Washburn, 1964.

Duus, Peter. *The Abacus and the Sword: The Japanese Penetration of Korea 1895-1910.* Berkeley: University of California Press, 1995.

Easton, Ian. "China's Maritime Strategy in the Asia-Pacific: Implications for Regional Stability." *Project 2049 Report* (September 26, 2013).

Eberstadt, Nicholas and Richard Katz. "Implications of Japan's Changing Demographics." *The National Bureau of Asian Research Roundtable* (October 10, 2012), http://nbr.org/research/activity.aspx?id=304

Eisenhower, Dwight D. "421-Farewell Radio and Television Address to the American People." January 17, 1961. The American Presidency Project, University of California Santa Barbara, http://www.presidency.ucsb.edu/ws/index.php?pid=12086&st=military-industrial+complex&st1=.

Erickson, Andrew S. "Rising Tide, Dispersing Waves: Opportunities and Challenges for Chinese Seapower Development." *Journal of Strategic Studies* 37, No. 3 (2014): 372-402.

Erickson, Andrew S. "China's Naval Modernization: The Implications of Seapower." *World Politics Review,* September 23, 2014, http://www.worldpoliticsreview.com/articles/14083/chinas-naval-modernization-the-implications-of-seapower.

Erickson, Andrew S. *Chinese Anti-Ship Ballistic Missile (ASBM) Development: Drivers, Trajectories and Strategic Implications.* Washington DC: The Jamestown Foundation, May 2013.

Erickson, Andrew S. Abraham M. Denmark and Gabriel Collins. "Beijing's 'Starter Carrier' and Future Steps." *Naval War College Review* 61, no. 1 (2012): 15-54.

Erickson, Andrew S. and Timothy Heath. "China's Turn Toward Regional Restructuring, Counter-Intervention: A Review of Authoritative Sources." *China Brief* 15, no. 22 (2015).

Erickson, Andrew S. and Justin D. Mikolay. "Guam and American Security in the Pacific." In *Rebalancing the Force: Basing and Forward Presence in the Asia-Pacific.* Edited by Carnes Lord and Andrew S. Erickson, Introduction. Annapolis: Naval Institute Press, 2014, Google e-book.

Erickson, Andrew S. and Joel Wuthnow. "Barriers, Springboards and Benchmarks: China Conceptualizes the Pacific 'Island Chains'." *The China Quarterly* (January 2016): 1-22.

Fritz W. Ermarth. "Contrasts in American and Soviet Strategic Thought," *International Security* 3, no, 2 (Fall 1978): 138-155.

Epstein, Katherine C. *Torpedo: Inventing the Military-Industrial Complex in the United States and Great Britain.* Cambridge: Harvard University Press, 2014.

Evangelista, Matthew. *Innovation and the Arms Race: How the United States and Soviet Union Develop New Military Technologies*. Ithaca: Cornell University Press, 1988.

Fairbank Jr., Charles H. "Arms Races: The Metaphor and the Facts." *The National Interest* 1 (1985): 75-90.

Fairbank, John K. "Tributary Trade and China's Relations with the West." *The Journal of Asian Studies* 1. no. 2 (February 1942): 129-149.

Fallodon, Viscount Grey. *Twenty-Five Years, 1892-1916,* Vol. 1. London: Hodder and Stoughton, 1925.

Federation of American Scientists. "Intermediate-Range Nuclear Forces [INF]." *FAS: Weapons of Mass Destruction*, http://fas.org/nuke/control/inf/.

Feickert, Andrew. "The Unified Command Plan and Combatant Commands: Background and Issues for Congress." Congressional Research Service Report R42077. Washington DC: Library of Congress, January 3, 2013.

Feng, Zhu. "China's First ADIZ Decision: One Year Later." *CSIS: Asia Maritime Transparency Initiative,* November 25, 2014, https://amti.csis.org/chinas-first-adiz-decision-one-year-later/.

Fern, Sean. "Tokdo or Takeshima?: The International Law of Territorial Acquisition in the Japan-Korea Island Dispute." *Stanford Journal of East Asian Affairs* 5, no. 1 (Winter 2005): 78-89.

Finkelstein, David M. "China's Military Strategy: An Overview of the "Military Strategic Guidelines." *Asia Policy* 4, no. 1 (2007): 67-72.

Finkelstein, David M. "Initial Thoughts on the Reorganization and Reform of the PLA." *Center for Naval Analysis China Studies* (January 2016), https://www.cna.org/CNA_files/PDF/DOP-2016-U-012560-Final.pdf.

Finnemore, Martha and Kathryn Sikkink. "Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics." *Annual Review of Political Science* 4, no. 1 (2001): 391-416.

Fisher, Richard A. "The Erosion of Japanese Pacifism: The Constitutionality of the 1997 US Japan Defense Guidelines." *Cornell International Law Journal* 32 (1999): 393-340.

Ford, Christopher A. "The Past as Prism: China and the Shock of Plural Sovereignty." *Joint Forces Quarterly* 47 (4th Quarter, 2007): 14-21.

Fravel, M. Taylor. "China's Changing Approach to Military Strategy: The Science of Military Strategy from 2001 and 2013." MIT Research Paper 2016-15 (2016).

Fravel, M. Taylor. "Explaining Stability in the Senkaku (Diaoyu) Islands Dispute." In *Getting the Triangle Straight: Managing China-Japan-US*

Relations. Edited by Gerald Curtis, Ryosei Kokubun and Wang Jisi, 3-21. Washington DC: Japan Center for International Exchange and Brookings Institution Press, 2010.

Fravel, M. Taylor. "Securing Borders: China's Doctrine and Force Structure for Frontier Defense." *Journal of Strategic Studies* 30, No. 4-5 (2007): 705-737.

Fravel, M. Taylor and Christopher P. Twomey. "Projecting Strategy: The Myth of Chinese Counter-intervention." *The Washington Quarterly* 37, no. 4 (Winter 2015): 171-187.

Freedman, Lawrence. *The Transformation of Strategic Affairs*. Adelphi Paper 379. London: IISS and Routledge, 2006.

Freedman, Lawrence. "Nuclear Weapons in Europe: Is There an Arms Race?" *Millennium* 13, no. 1 (1984): 57-64.

Friedberg, Aaron L. "The Future of US-China Relations: Is Conflict Inevitable?" *International Security* 30, no. 2 (Fall 2005): 7-45.

Friedberg, Aaron L. *The Weary Titan: Britain and the Experience of Relative Decline, 1895-1905*. Princeton: Princeton University Press, 1988.

Funabashi, Yoichi. *Alliance Adrift.* Washington DC: Brookings Institution Press, 1999.

Galdi, Theodor. "Revolution in Military Affairs? Competing Concepts, Organizational Responses, Outstanding Issues." Congressional Research Report for Congress 95-1170 F. Washington DC: Library of Congress, December 11, 1995, http://www.iwar.org.uk/rma/resources/rma/crs95-1170F.htm.

Gallagher, Michael G. "China's Illusory Threat to the South China Sea." *International Security* 19, no. 1 (Summer 1994): 169-194.

Gartzke, Eric. "The Capitalist Peace." *American Journal of Political Science* 51, no. 1 (January 2007): 166-191.

Garver, John W. "China's Push Through the South China Sea: The Interaction of Bureaucratic and National Interests" *The China Quarterly* 132 (December 1992): 999-1028.

George, Alexander. "Case Studies and Theory Development: The Method of Structured, Focused Comparison." In *Diplomacy: New Approaches in History, Theory, and Policy*. Edited by Paul Gordon Lauren, 95-124. New York: Free Press, 1979.

Gholz, Eugene and Harvey M. Sapolsky. "Restructuring the US Defense Industry." *International Security* 24, no. 3 (Winter 1999/2000): 5-51.

Gill, Bates. “Arms Acquisitions in East Asia.” In *SIPRI Yearbook 1994*, 551-562. Oxford: Oxford University Press and SIPRI, 1994.

Glaser, Charles L. “When Are Arms Races Dangerous? Rational versus Suboptimal Arming.” *International Security* 28, no. 4 (2004): 44-84.

Glaser, Charles L. “The Causes and Consequences of Arms Races.” *Annual Review of Political Science* 3, no. 1 (2000): 251-276.

Glaser, Charles L. “The Security Dilemma Revisited.” *World Politics* 50, no. 1 (1997): 171-201.

Glaser, Charles L. and Chairn Kaufmann. “What is the Offense-defense Balance and How Can We Measure It?” *International Security* 22, no. 4 (1998): 44-82.

Goertz, Gary and Paul F. Diehl. “Enduring Rivalries: Theoretical Constructs and Empirical Patterns.” *International Studies Quarterly* 37, no. 2 (June 1993): 147-171.

Goh, Evelyn. “Nixon, Kissinger, and the ‘Soviet Card’ in the US Opening to China, 1971-1974.” *Diplomatic History* 29, no. 3 (2005): 475-502.

Goldstein, Avery. “Great Expectations: Interpreting China’s Arrival.” *International Security* 22, no. 3 (Winter 1997/98): 36-73.

Goldstein, Lyle. “Beijing Confronts Long-Standing Weakness in Anti-Submarine Warfare.” *The Jamestown Foundation China Brief* 11, no. 14 (2011).

Goldstein, Steven M. and Randall Schriver. “An Uncertain Relationship: The United States, Taiwan, and the Taiwan Relations Act.” *The China Quarterly* 165 (March 2001): 141-172.

Gompert, David C. “North Korea: Preparing for the End.” *Survival* 55, no. 3 (2013): 21-46.

Gong, Ro-myung and Gerald Segal. “The Consequences of Arms Proliferation in Asia.” In *Asia’s International Role in the Post-Cold War Era,* Adelphi Paper 276. London: Brassey’s for the International Institute for Strategic Studies, 1993.

Grasso, Valeria Bailey. “Rare Earth Elements in National Defense: Background, Oversight Issues, and Options for Congress.” Congressional Research Service Report R41744. Washington DC: Library of Congress, March 31, 2011.

Gray, Colin S. “Nicholas John Spykman, the Balance of Power, and International Order.” *Journal of Strategic Studies* 38, no. 6 (2015): 873-897.

Gray, Colin S. "Out of the Wilderness: Prime Time for Strategic Culture." Report Prepared for the US Defense Threat Reduction Agency, Advanced Systems and Concepts Office, October 31, 2006.

Gray, Colin S. *Strategy for Chaos: Revolutions in Military Affairs and The Evidence of History.* London: Frank Cass, 2002.

Gray, Colin S. *Modern Strategy.* Oxford: Oxford University Press, 1999.

Gray, Colin S. "Strategic Culture as Context: The First Generation of Theory Strikes Back." *Review of International Studies* 25, no. 1 (January 1999): 49-69.

Gray, Colin S. "Arms Races and Other Pathetic Fallacies: A Case for Deconstruction." *Review of International Studies* 22, no, 3 (1996): 323-355.

Gray, Colin S. *Weapons Don't Make War: Policy Strategy, and Military Technology.* Lawrence: University of Kansas Press, 1993.

Gray, Colin S. *Nuclear Strategy and National Style.* Lanham: Hamilton Press, 1986.

Gray, Colin S. "Strategic Stability Reconsidered." *Daedalus* 109, no. 4 (Fall 1980): 135-154.

Gray, Colin S. "The Urge to Compete: Rationales for Arms Racing." *World Politics* 6, no. 2 (January 1974): 207-233.

Gray, Colin S. "The Arms Race is about Politics." *Foreign Policy* 9 (1972): 117-129.

Gray, Colin S. "The Arms Race Phenomenon." *World Politics* 24, no. 1 (October 1971): 39-79.

Green, Michael, Kathleen Hicks and Mark Cancian. *Asia-Pacific Rebalance 2025: Capabilities, Presence, and Partnerships: An Independent Review of US Defense Strategy in the Asia-Pacific*. Washington DC: Center for Strategic and International Studies, January 2016.

Greenert, Jonathon. "Before the Senate Armed Committee on the Impact of Sequestration on the National Defense." Testimony of the US Navy Chief of Naval Operations Admiral Jonathon Greenert, Washington DC, 7 November 2013, http://www.armed-services.senate.gov/hearings/impact-of-sequestration-on-the-national-defense.

Gries, Peter Hays. "Tears of Rage: Chinese Nationalist Reactions to the Belgrade Embassy Bombing." *The China Journal*. 46 (July 2001): 25-43.

Gries, Peter Hays, Qingmin Zhang, Yasuki Masui and Yong Wook Lee. "Historical Beliefs and the Perception of Threat in Northeast Asia: Colonialism, the Tributary System, and China-Japan-Korea Relations in the

Twenty-first Century." *International Relations of the Asia-Pacific* 9, no. 2 (2009): 245-265.

Griffin, Keith. "Preface." In *Economic Reform in Vietnam*. Edited by Keith Griffin, Preface. London: Macmillan Press, 1998.

Halpern, Paul G. *A Naval History of World War I.* Annapolis: Naval Institute Press, 1994.

Hammond, Grant T. *Plowshares into Swords: Arms Races in International Politics, 1840-1991*. Columbia: University of South Carolina Press, 1993.

Han, Suk-hee. "South Korea Seeks to Balance Relations with China and the United States: Current Issues in US-ROK Relations." *Council on Foreign Relations Report*, November 2012, http://www.cfr.org/south-korea/south-korea-seeks-balance-relations-china-united-states/p29447.

Harding, Harry. "Has US China Policy Failed?" *The Washington Quarterly* 38, no. 3 (2015): 95-122.

Harker, Andrew. "Latest Five-year Socio-economic Development Plan Launched in Vietnam." *IHS Markit Commentary,* April 29 2016, http://www.markit.com/Commentary/Get/29042016-Economics-Latest-five-year-socio-economic-development-plan-launched-in-Vietnam.

Harrison, Todd. *Defense Modernization Plans through the 2020s: Addressing the Bow Wave*. Washington DC: CSIS International Security Program, January 16, 2016.

Hartfiel, Robert and Brian Jobs. "Raising the Risks of War: Defence Spending Trends and Competitive Arms Processes in East Asia." Working Paper 44, Institute of International Relations, University of British Columbia, Vancouver, March 2005.

Hartnett, Daniel M. "China's Evolving Interests and Activities in the East China Sea." In *The Long Littoral Project: East China and Yellow Seas—A Maritime Perspective on Indo-Pacific Security.* Edited by Michael A. Devitt and Catherine K. Lea, 81-94. Alexandria: Center for Naval Analyses, September 2012.

Hassig, Ralph and Kongdan Oh. "Who's Afraid of North Korea? Japanese and South Korean Polling Data." *The Mansfield Asian Opinion Poll Database Commentary* C10-6 (October 29, 2010), http://www.mansfieldfn.org/polls/Commentaries/commentary-10-6.htm.

Hata, Hiroyuki and Go Nakagawa. *Constitutional Law of Japan.* Netherlands: Kluwer Law International, 1997.

Hatoyama, Yukio. "Address by H.E. Dr. Yukio Hatoyama Prime Minister of Japan at the Sixty-fourth Session of the General Assembly of the United Nations." Prime Minister of Japan and his Cabinet, September 24, 2009. http://www.un.org/ga/64/generaldebate/pdf/JP_en.pdf.

Hausman, Joshua K. and Johannes F. Wieland. "Abenomics: Preliminary Analysis and Outlook." *Brookings Papers on Economic Activity* (Spring 2014): 1-63.

Hiebert, Murray and Phuong Nguyen. "Vietnam Ramps Up Defense Spending, But its Challenges Remain." *CSIS: Asia Maritime Transparency Initiative,* March 18, 2015, https://amti.csis.org/vietnam-ramps-up-defense-spending-but-its-challenges-remain/.

Hirose, Taisuke. "Japan's New Arms Export Principles: Strengthening US-Japan Relations." *CSIS Japan Chair Platform,* October 14, 2014, http://csis.org/publication/japan-chair-platform-japans-new-arms-export-principles-strengthening-us-japan-relations.

He, Yinan. "History, Chinese Nationalism and the Emerging Sino-Japanese Conflict." *Journal of Contemporary China* 16, no. 50 (2007): 1-24.

Heath, Timothy R. "Developments in China's Military Force Projection and Expeditionary Capabilities." Testimony presented before the US-China Economic and Security Review Commission, January 21, 2016. http://www.rand.org/pubs/testimonies/CT450.html.

Heath, Timothy and Andrew S. Erickson. "Is China Pursuing Counter-Intervention?" *The Washington Quarterly* 38, no. 3 (Fall 2015): 143-156.

Hermann, Richard. "The Power of Perceptions in Foreign-Policy Decision Making: Do Views of the Soviet Union Determine the Policy Choices of American Leaders?" *American Journal of Political Science* 30, no. 4 (November 1986): 841-875.

Herz, John H. "Idealist Internationalism and the Security Dilemma." *World Politics* 2, no. 2 (January 1950): 157-180.

Hoang, Anh Tuan and Do Thi Thuy. "US-Vietnam Security Cooperation: Catalysts and Constraints." *Asian Politics and Policy* 8, no 1 (January 2016): 179-192.

Holsti, Kalevi J. "National Role Conceptions in the Study of Foreign Policy." *International Studies Quarterly* 14, no. 3 (1970): 233-309.

Holtom, Paul, Mark Bromley, Pieter D. Wezeman and Siemon T. Wezeman. "Trends in international arms transfers, 2009." *SIPRI Fact Sheet*, March 2010. http://books.sipri.org/files/FS/SIPRIFS1003.pdf.

Holmes, James R. and Toshi Yoshihara. *Chinese Naval Strategy in the 21st Century: The Turn to Mahan.* London: Routledge, 2008.

Hong, Kyudok. "Option I: Enhancing Military Deterrence." *The Asan Forum: Special Forum,* June 11, 2015, http://www.theasanforum.org/option-1-enhancing-military-deterrence/.

Horowitz, Michael C. *The Diffusion of Military Power: Causes and Consequences of Military Power.* Princeton: Princeton University Press, 2010.

Horta, Loro. "China turns to the Sea: Changes in the People's Liberation Army Navy Doctrine and Force Structure." *Comparative Strategy* 31, no. 5 (2012), 393-402.

Hoyt, Timothy. "The United States and the Cold War Arms Race." In *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century*. Edited by Thomas G. Mahnken, Joseph Maiolo, and David Stevenson, 141-157. Oxford: Oxford University Press, 2016.

Howard, Michael. *The Lessons in History.* New Haven: Yale University Press, 1992.

Howard, Michael. *The Causes of War.* Unwin: London, 1983.

Howard, Michael. *Studies in War and Peace.* London: Temple Smith, 1970.

Hsu, Kimberly. "Air Defense Identification Zone Intended to Provide China Greater Flexibility to Enforce East China Sea Claims." US-China Economic and Security Review Commission Staff Report, Washington DC, January 14, 2014.

Hsu, Kimberly and Craig Murray. "China's Expanding Military Operations in Foreign Exclusive Economic Zones." US-China Economic and Security Review Commission Staff Research Backgrounder, June 19, 2013.

Hughes, Christopher. "Japan's Security Policy, the US-Japan Alliance, and the 'War on Terror': Incrementalism Confirmed or Radical Leap?" *Australian Journal of International Affairs* 58, no. 4 (December 2004): 427-445.

Huisken, Ron. "The Emergence of China as a Military Power." Paper Presented to the 5th East Asia Security Outlook Seminar, Brunei Darussalam, 29 January 2013.

Huisken, Ron. "The Outlook for US-China Relations." In *Rising China: Power and Reassurance.* Edited by Ron Huisken, 9-19. Canberra: ANU Press, 2009.

Huntington, Samuel P. "Arms races: prerequisites and results." *Public Policy* 8, no. 1 (1958): 41-86.

Huxley, Tim. *Defending the Lion City: The Armed Forces of Singapore.* St Leonards: Allen & Unwin, 2000.

Hwang, Balbina Y. "Impact of the US Pivot on ROK Naval Power." In *Assessing Maritime Power in the Asia-Pacific: The Impact of American Strategic Re-Balance.* Edited by Greg Kennedy and Harsh V. Pant, Chapter 8. London: Routledge and the Corbett Centre for Maritime Policy Studies, 2016, Google e-book.

Hyde, Harlow A. *Scraps of Paper: The Disarmament Treaties Between the World Wars.* Nebraska: Media Publishing, 1988.

Hyun, Mingi. "Global Insider: South Korea Naval Shipbuilding." *World Politics Review* (5 January 2011), http://www.worldpoliticsreview.com/trend-lines/7472/global-insider-south-korea-naval-shipbuilding

IISS. "Asia's Growing Defence-Industrial Capabilities." In *IISS Strategic Dossier: Asia-Pacific Regional Security Assessment 2016.* London: International Institute for Strategic Studies, 2016.

IISS. *The Military Balance.* London: Routledge and IISS, http://www.iiss.org/en/publications/military-s-balance.

Ikenberry, G. John. "Between the Eagle and the Dragon: America, China, and Middle State Strategies in East Asia." *Political Science Quarterly* 131, no. 1 (2016): 9-44.

Ikenberry, G. John. "The Illusion of Geopolitics: The Enduring Power of the Liberal Order." *Foreign Affairs* 93, no 3 (May/June 2014): 80-90.

Ikenberry, G. John. "The Rise of China and the Future of the West: Can the Liberal System Survive." *Foreign Affairs* (2008): 23-37.

Ikle, Fred Charles. "Can Nuclear Deterrence Last out the Century." *Foreign Affairs* 51, no. 2 (January 1973): 267-285.

IMF. *World Economic Outlook,* http://www.imf.org/external/ns/cs.aspx?id=28.

Intriligator, Michael D. and Dagobert L. Brito. "Arms Races." *Defence and Peace Economics* 11, no. 1 (2000): 45-54.

Intriligator, Michael D. and Dagobert L. Brito. "Can Arms Races Lead to the Outbreak of War." *The Journal of Conflict Resolution* 28, no. 1 (March 1984): 63-84.

Isard, Walter and Charles H. Anderton. "A Survey of Arms Race Models." In *Arms Races, Arms Control, and Conflict Analysis.* Edited by Walter Isard, 17-85. Cambridge: Cambridge University Press, 1988.

Jackson, Van. "Red Teaming the Rebalance: The Theory and Risks of US Asia Strategy." *Journal of Strategic Studies* 39, no. 3 (2016): 365-388.

Jaishankar, Dhruva. "India and Japan: Emerging Indo-Pacific Security Partnership." *RSIS Commentary* 130 (May 30, 2016).

James, William. "The Moral Equivalent of War." In *Representative Essays in Modern Thought.* Edited by Harrison Ross Steeves (1913). Online Edition.

Japan Defense Agency. *Defense of Japan 1990.* Tokyo: Japan Defense Agency, 1990.

Japan Ministry of Defense. "China's Activities Surrounding Japan's Airspace." *Defense Activities,* 2016, http://www.mod.go.jp/e/d_act/ryouku/.

Japan Ministry of Defense. *Defense Programs and Budget of Japan: Overview of FY2016 Budget.* Tokyo: Ministry of Defense, 2016.

Japan Ministry of Defense. "The Guidelines for Japan-US Defense Cooperation (September 23, 1997)." *The 1997 Guidelines,* 2016, http://www.mod.go.jp/e/d_act/anpo/19970923.html.

Japan Ministry of Defense. *Defense Programs and Budget of Japan: Overview of FY2015 Budget.* Tokyo: Ministry of Defense, 2015.

Japan Ministry of Defense. *Defense of Japan 2015.* Tokyo: Ministry of Defense, 2015.

Japan Ministry of Defense. *The Interim Report on the Revision of the Guidelines of Japan-US Defense Cooperation*. Tokyo: Japan Ministry of Defense, October 8, 2014, http://www.mod.go.jp/e/d_act/anpo/20141008.html.

Japan Ministry of Defense. *Defense of Japan 2014.* Tokyo: Ministry of Defense, 2014, http://www.mod.go.jp/e/publ/w_paper/2014.html.

Japan Ministry of Defense. "Build of Defense Capability in FY2013." In *The National Defense Program Guidelines and the Build-Up of Defense Capabilities,* 114-117. Tokyo: Ministry of Defense, 2013.

Japan Ministry of Defense. *National Defense Program Guidelines for FY2014 and Beyond*. Tokyo: Security Council and Cabinet, December 17, 2013.

Japan Ministry of Defense. "Japan's BMD System." *Japan Defense Focus* 31 (August 2012), http://www.mod.go.jp/e/jdf/no31/specialfeature.html.

Japan Ministry of Defense. *National Defense Program Guidelines for FY2011 and Beyond*. Tokyo: Security Council and Cabinet, December 17, 2010.

Japan Ministry of Finance. "Trade Statistics." *Customs & Tariff,* 2016, http://www.customs.go.jp/toukei/info/index_e.htm

Japan Ministry of Foreign Affairs. "The Three Principles on Transfer of Defense Equipment and Technology." In *Japan's Security Policy,* April 6, 2016, http://www.mofa.go.jp/fp/nsp/page1we_000083.html.

Japan Ministry of Foreign Affairs. "Japan-Viet Nam Foreign Ministers' Meeting." *Japan-Viet Nam Relations,* May 5, 2016, http://www.mofa.go.jp/s_sa/sea1/vn/page3e_000488.html.

Japan Ministry of Foreign Affairs. "USFJ-related Costs Borne by Japan (JFY2012 Budget)." *Japan-United States of America Relations,* April 13, 2016, http://www.mofa.go.jp/region/n-america/us/security/pdfs/arrange_ref6.pdf.

Japan Ministry of Foreign Affairs. "Agreement between the Government of Japan and the Government of the Republic of India Concerning the Transfer of Defence Equipment and Technology." Government of Japan and Government of Republic of India, December 2015, http://www.mofa.go.jp/files/000117470.pdf.

Japan Ministry of Foreign Affairs, "Japan-Indonesia Foreign and Defense Ministerial Meeting." *Japan-Indonesia Relations,* December 18, 2015, http://www.mofa.go.jp/s_sa/sea2/id/page3e_000437.html.

Japan Ministry of Foreign Affairs. "The Guidelines for Japan-US Defense Cooperation." *Japan-US Security Arrangements,* April 27, 2015, http://www.mofa.go.jp/region/n-america/us/security/guideline2.html.

Japan Ministry of Foreign Affairs. "Takeshima." *Japanese Territory,* July 30, 2014, http://www.mofa.go.jp/region/asia-paci/takeshima/index.html.

Japan Ministry of Foreign Affairs. "Cabinet Decision on Development of Seamless Security Legislation to Ensure Japan's Survival and Protect its People." *Japan's Security Policy*, July 1, 2014, http://www.mofa.go.jp/fp/nsp/page23e_000273.html.

Japan Ministry of Foreign Affairs. "The Three Principles on Transfer of Defense Equipment and Technology." *MOFA Press Releases*, April 1, 2014, http://www.mofa.go.jp/press/release/press22e_000010.html

Japan Ministry of Foreign Affairs. "Japan-US Joint Declaration on Security – Alliance for the 21st Century." *Japan-US Security Arrangements,* April 17, 1996, http://www.mofa.go.jp/region/n-america/us/security/security.html.

Jencks, Harlan W. "China's 'Punitive' War on Vietnam: A Military Assessment." *Asian Survey* 19, no. 8 (August 1979): 801-815.

Jervis, Robert. *The Logic of Images in International Relations*. Revised Edition. Columbia: Columbia University Press, 1989.

Jervis, Robert. "Perceiving and Coping with Threat." In *Psychology and Deterrence.* Edited by Robert Jervis, Richard Ned Lebow, and Janice Gross Stein, with contributions by Patrick M. Morgan and Jack L. Snyder, 13-33. Baltimore: The John Hopkins University Press, 1985.

Jervis, Robert. "Cooperation Under the Security Dilemma." *World Politics* 30, no. 2 (1978): 167-214.

Jervis, Robert. *Perception and Misperception in International Politics*. Princeton: Princeton University Press, 1976.

Jomini, Antoine Henri, Baron de. *The Art of War.* Translated by G. H. Mendell and W. P. Craighill. Revised Edition. Mineola and New York: Dover, 2007.

Kahn, Herman. "The Arms Race and Some of Its Hazards." *Daedalus* 89, no. 4 (Fall 1960): 744-780.

Kaiser, David E. "Germany and the Origins of the First World War." *The Journal of Modern History* 55, no. 3 (1983): 442-474.

Kang, David C. "International Relations Theory and the Second World War." *International Studies Quarterly* 47, no. 3 (September 2003): 301-324.

Kang, David C. "Between Balancing and Bandwagoning: South Korea's Response to China." *Journal of East Asian Studies* 9, no. 1 (January-April 2009): 1-28.

Kelly, Robert. "A 'Confucian Long Peace' in Pre-Western East Asia?" *The European Journal of International Relations* (July 2011): 407-430.

Kennedy, John F. "Annual Message to the Congress on the State of the Union." January 30, 1961. The American Presidency Project, University of California Santa Barbara. http://www.presidency.ucsb.edu/ws/index.php?pid=8045&st=arms+race&st1=.

Kennedy, Paul. *Strategy and Diplomacy*. Aylesbury: Fontana, 1984.

Kehr, Eckart. *Battleship Building and Party Politics in Germany, 1894-1901: A Cross Section of the Political, Social, and Ideological Preconditions of German Imperialism*. Translated by Pauline R. Anderson and Eugene N. Anderson. Revised Edition. Chicago: University of Chicago Press, 1973.

Kinsella, David. "Forces Driving Third World Military Industrialization: Interests and Passions." Paper Presented at the Annual Meeting of the International Studies Association, San Diego, April 17-21, 1996.

Kitchen, Nicholas. "Systemic Pressures and Domestic Ideas: A Neoclassical Realist Model of Grand Strategy Formation." *Review of International Studies* 36 (2010): 117-143.

Kim, Hyun-Soo. "The 1992 Chinese Territorial Sea Law in the Light of the UN Convention." *The International and Comparative Law Quarterly* 43, no. 4 (October 1994): 894-904.

Kimball, Daryl and Tom Z. Collina. "US-Russian Nuclear Arms Control Agreements at a Glance." *Arms Control Association*, April 2014, https://www.armscontrol.org/factsheets/USRussiaNuclearAgreementsMarch2010;

Klare, Michael T. “The Next Great Arms Race.” *Foreign Affairs* 72, no. 3 (Summer 1993):136-152.

Knox, MacGregor. “Conclusion: Continuity and Revolution in the Making of Strategy.” In *The Making of Strategy: Rulers, States, and War.* Edited by Williamson Murray. MacGregor Knox and Alvin Bernstein, 614-645. Cambridge: Cambridge University Press, 1994.

Koda, Yoji. “The Emerging Republic of Korea Navy: A Japanese Perspective.” *Naval War College Review* 63, no. 2 (Spring 2010): 13-36.

Koh, Swee Lean Collin. “‘Best Little Navy’ in Southeast Asia: The Case of the Republic of Singapore Navy.” In *Small Navies: Strategy and Policy for Small Navies in War and Peace.* Edited by Michael Mulqueen, Deborah Sanders and Ian Speller, Chapter 8. Corbett Centre for Maritime Policy Studies and Routledge: London 2016, Google e-book.

Koh, Swee Lean Collin. “Vietnam’s Boosts Intelligence, Surveillance and Reconnaissance Capabilities in the South China Sea.” *RSIS Broader Horizons: MSP Perspectives* (January 2016).

Koh, Swee Lean Collin. “Seeking Balance: Force Projection, Confidence Building, and the Republic of Singapore Navy.” *Naval War College Review* 65, no. 1 (Winter 2012): 75-92.

Kopp, Carlo. “Advances in PLA C4ISR Capabilities.” *Jamestown: China Brief* 10, no. 4 (February 2010), http://www.jamestown.org/programs/chinabrief/single/?tx_ttnews%5Btt_news%5D=36052&cHash=1e3d991d9b#.VrE6l7J97RY.

Kurth, James R. “The Political Consequences of the Product Cycle: Industrial History and Political Outcomes.” *International Organization* 33, no. 1 (Winter 1979): 1-34.

Kuzuhara, Kazumi. “The Korean War and The National Police Reserve of Japan: Impact of the US Army’s Far East Command on Japan’s Defense Capability.” *Boei Kenkyusho Kiyo (NIDS Security Studies)* 8, no. 3 (March 2006): 39-79.

Lampton, David M. *Same Bed, Different Dreams: Managing US-China Relations, 1989-2000.* Berkeley: University of California Press, 2001.

Langdon, F. C. *Japan’s Foreign Policy.* Vancouver: University of British Columbia Press, 1973.

Lankov, Andrei. “Why Nothing Can Really Be Done about North Korea’s Nuclear Program.” *Asia Policy* 23 (January 2017): 104-110.

Lautenschlater, Karl. “The Submarine in Naval Warfare, 1901-2001.” *International Security* 11, no. 3 (Winter 1986-1987): 94-140.

Lawrence, Susan V. "US-China Relations: An Overview of Policy Issues." Congressional Research Service Report, R41108. Washington DC: Library of Congress, August 1, 2013.

Layne, Christopher. "China's Challenge to US hegemony." *Current History* 107, no. 705 (January 2008): 13-18.

Layne, Christopher. "China's Role in American Grand Strategy: Partner, Regional Power, or Great Power Rival?" In *The Asia-Pacific: A Region in Transition*. Edited by Jim Rolfe, 54-80. Honolulu: Asia-Pacific Center for Security Studies, 2004.

Lee, John. "China's Economic Slowdown: What are the Strategic Implications?" *The Washington Quarterly* 38, no. 3 (2015): 123-142.

Lei, Ya-Wen. "The Political Consequences of the Rise of the Internet: Political Beliefs and Practices of Chinese Netizens." *Political Communication* 28, no. 3 (2011): 291-322

Leifer, Michael. "Chinese Economic Reform and Security Policy: The South China Sea Connection." *Survival* 37, no. 2 (Summer 1995): 44-59.

Leitenberg, Milton. *Studies of Military R&D and Weapons Development*. Washington DC: Federation of American Scientists, April 1983.

Levi, Margaret. "Reconsiderations of Rational Choice in Comparative and Political Analysis." In *Comparative Politics: Rationality, Culture, and Structure.* Edited by. Mark Irving Lichbach and Alan S. Zuckerman, 117-133. 2nd Edition. Cambridge: Cambridge University Press, 2009.

Levin, Norman D. and Yong-Sup Han, *Sunshine in Korea: The South Korean Debate over Policies Toward North Korea.* Santa Monica: RAND Center for Asia-Pacific Policy, 2002.

Levy, Jack S. "Domestic Politics and War." *The Journal of Interdisciplinary History* 18, no. 4 (Spring 1988): 653-673.

Lewis, Jeffrey. "North Korea Is Practicing for Nuclear War." *Foreign Policy,* March 9, 2017, http://foreignpolicy.com/2017/03/09/north-korea-is-practicing-for-nuclear-war/.

Li, Nan. "The Evolution of China's Naval Strategy and Capabilities: From 'Near Coast' and 'Near Seas' to Far Seas.'" *Asian Security* 5, no. 2 (2009): 144-169.

Li, Victor H. "China and Off-Shore Oil: The Tiao-yü Tai Dispute." *Stanford Journal of International Studies* 10 (1975): 143-162.

Lichbach, Mark Irving. "When Is an Arms Rivalry a Prisoner's Dilemma? Richardson's Models and 2x2 Games." *The Journal of Conflict Resolution* 34, no. 1 (March 1990): 29-56.

Liddell Hart, Basil H. *Strategy: The Indirect Approach.* London: Faber and Faber, 1967.

Liff, Adam P. "Whither the Balancers: The Case for a Methodological Reset." *Security Studies* 25, no. 3 (2016): 420-459.

Liff, Adam P. and G. John Ikenberry. "Racing toward Tragedy?: China's Rise, Military Competition in the Asia Pacific, and the Security Dilemma." *International Security* 39, no. 2 (Fall 2014): 52-91.

Lim, Darren J. and Zack Cooper. "Reassessing Hedging: The Logic of Alignment in East Asia." *Security Studies* 24, no. 4 (2015): 696-272.

Lim, Yves-Heng. "Expanding the Dragon's Reach: The Rise of China's Anti-access Naval Doctrine and Forces." *Journal of Strategic Studies* (2016): 1-23.

Liu, Huaqing. *Liu Huaqing Huiyilu* [Memoirs of Liu Huaqing]. Beijing: PLA Publishing House, 2004.

Liu, James H. and Tomohide Atsumi. "Historical Conflict and Resolution between Japan and China: Developing and Applying a Narrative Theory of History and Identity." In *Meaning in Action: Constructions, Narratives, and Representations*. Edited by Toshio Sugiman, 135-148. Tokyo: Springer Japan, 2008.

Liu, Mingfu. *Zhongguo meng: hou Meiguo shidai de daguo siwei zhanlue dingwei* [The China Dream: The Great Power Thinking and Strategic Position of China in the Post-American Era]. Beijing: Zhongguo youyi chuban gongsi, 2010.

Lobell, Steven E. "Threat Assessment, the State, and Foreign Policy: A Neoclassical Realist Model." In *Neoclassical Realism, the State, and Foreign Policy*. Edited by Steven E. Lobell, Norrin M. Ripsman and Jeffrey W. Taliaferro, 42-74. Cambridge: Cambridge University Press, 2009.

Luttwak, Edward N. *Strategy and History: Collected Essays, Volume Two.* New Brunswick and Oxford: Transaction Books, 1985.

Mack, Andrew and Desmond Ball. "The Military Build-up in the Asia-Pacific Region: Scope, Causes and Implications for Security." SDSC Working Paper 264, Canberra: Australian National University, 1992.

Mahnken, Thomas G. "Introduction to Part III: The Cold War Arms Race." In *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century.* Edited by Thomas G. Mahnken, Joseph Maiolo, and David Stevenson, 135-140. Oxford: Oxford University Press, 2016.

Mahnken, Thomas G. "Conclusion." In *Competitive Strategies for the 21st Century: Theory, History, and Practice,* 301-306. Edited by Thomas G. Mahnken. Stanford: Stanford University Press, 2012.

Mahnken, Thomas G. "Thinking about Competitive Strategies." In *Competitive Strategies for the 21st Century: Theory, History, and Practice,* 3-11. Edited by Thomas G. Mahnken. Stanford: Stanford University Press, 2012.

Mahoney, James and P. Larkin Terrie. "Comparative Historical Analysis in Contemporary Political Science." In *The Oxford Handbook of Political Methodology* Edited by Janet M. Box-Steffensmeier, Henry E. Brady, and David Collier, 737-755. New York: Oxford University Press, 2008.

Maiolo, Joseph. "Introduction to Part II: Between the Two World Wars" In *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century.* Edited by Thomas G. Mahnken, Joseph Maiolo and David Stevenson, 61-68. Oxford: Oxford University Press, 2016.

Majeski, Stephen J. "Expectations and Arms Races." *American Journal of Political Science* 29, no. 2 (May 1985): 217-245.

Manyin, Mark E., Emma Chanlett-Avery, Mary Beth D. Nikitin, Brock R. Williams, Jonathon R. Corrado. "US-South Korea Relations." Congressional Research Service Report, R41481. Washington DC: Library of Congress, April 26, 2016.

Marksuen, Ann. "Dismantling the Cold War Economy." *World Policy Journal* 9, no. 3 (Summer 1992): 389-399.

Martinage, Robert. *Toward a New Offset Strategy: Exploiting US Long-Term Advantages to Restore US Global Power Projection Capability*. Washington DC: Center for Strategic and Budgetary Assessments, 2014.

Matthews, Ron and Curie Maharani. "The Defense Iron Triangle Revisited," in *The Modern Defense Industry: Political, Economic, and Technological Issues.* Edited by Richard A. Bitzinger, Chapter 3. Santa Barbara: Praeger Security, 2009, Google e-book.

Matthews, Eugene A. "Japan's New Nationalism." *Foreign Affairs* 82, no. 6 (November/December 2003), https://www.foreignaffairs.org/articles/asia/2003-11-01/japans-new-nationalism.

Mawdsley, Evan. "Land Armaments, 1919-1941." In *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century.* Edited by Thomas G. Mahnken, Joseph Maiolo and David Stevenson, 69-92. Oxford: Oxford University Press, 2016.

McDevitt, Michael. "Small Navies in Asia: The Strategic Rationale for Growth." In *Small Navies: Strategy and Policy for Small Navies in War and Peace.* Edited by Michael Mulqueen, Deborah Sanders and Ian Speller, Chapter 6. London: Routledge and Corbett Centre For Maritime Policy Studies, 2016. Google e-book.

McDevitt, Michael. "Regional Dynamics in Response to Alternative PLA Development Vectors." In *The Chinese People's Liberation Army in 2025.* Edited by Roy Kampuhasen and David Lai, 269-300. Carlisle: Strategic Studies Institute and US Army War College Press, July 2015.

McDevitt, Michael. "Deterring North Korean Provocations." *Brooking East Asia Commentary,* February 7, 2011, https://www.brookings.edu/research/deterring-north-korean-provocations/

McNaugher, Thomas L. *New Weapons, Old Politics: America's Military Procurement Muddle.* Washington DC: The Brookings Institution, 1989.

Mearsheimer, John J. "China's Unpeaceful Rise." *Current History* 150, no. 690 (April 2006): 160-162.

Mearsheimer, John J. *The Tragedy of Great Power Politics.* New York and London: W. W. Norton, 2001.

Medeiros, Evan S. "Strategic Hedging and the Future of the Asia-Pacific." *The Washington Quarterly* 29, no. 1 (2005): 145-167.

Milivojevic, Marko. "The Spratly and Paracel Islands Conflict," *Survival* 31, no. 1 (1989): 70-78.

Mohr, Mark. "Japan's Declining Population: Clearly a Problem, But What's the Solution?" *Woodrow Wilson International Center for Scholars Asia Program Special Report* 141 (July 2008), https://www.wilsoncenter.org/sites/default/files/Asia_141.pdf.

Morgenthau, Hans J. *Politics Among Nations: The Struggle for Power and Peace.* 6th Edition. Boston: McGraw Hill, 1993.

Moll, Kendall D. and Gregory M. Luebbert. "Arms Race and Military Expenditure Models: A Review." *The Journal of Conflict Resolution* 24, no. 1 (March 1980): 153-185.

Montague, Karen. "A Review of South Korean Missile Defense Programs." *George C. Marshall Institute Policy Outlook* (March 2014): 1-10.

Montgomery, Evan Braden. "Contested Primacy in the Western Pacific: China's Rise and the Future of US Power Projection." *International Security* 38, no. 4 (Spring 2014): 115-149.

Moon, Chung-in. "Managing North Korean Nuclear Threats." *Asia Policy* 23 (January 2017): 74-82.

Moon, Chung-in and Jin-Young Lee. "The Revolution in Military Affairs and the Defence Industry in South Korea." *Security Challenges* 4, no. 4 (Summer 2008): 117-134.

Mulgan, Aurelia George. "Managing the US Base Issue in Okinawa: A Test for Japanese Democracy." *Japan Studies* 20, no. 2 (2000): 159-177.

Murray, Williamson and Mark Grimsley. "Introduction: On Strategy." In *The Making of Strategy: Rulers, States, and War.* Edited by Williamson Murray. MacGregor Knox and Alvin Bernstein, 1-23. Cambridge: Cambridge University Press, 1994.

Nakatani, Gen. "Foreword: On the Publication of Defense of Japan 2015." In *Defense of Japan 2015.* Tokyo: MOD, 2015.

Nanto, Dick K. "Economics and National Security: Issues and Implications for US Policy." Congressional Research Service Report R41589. Washington DC: Library of Congress, January 4, 2011.

Narusawa, Muneo. "The Overseas Dispatch of Japan's Self-Defense Forces and US War." *The Asia-Pacific Journal: Japan Focus* 12, issue 31, no. 2 (July 2014): 1-4.

Nguyen, Thuy Thu and Mathijs A. van Dijk. "Corruption, Growth, and Governance: Private vs. State-owned Firms in Vietnam." Working Paper, May 5, 2010.

McNeilly, Mark R. *Sun Tzu and the Art of Modern Warfare.* Revised Edition. Oxford: Oxford University Press, 2015.

NIDS. "Japan Examining the Dynamic Defense Force." In *East Asian Strategic Review 2013,* 105-137. Tokyo: National Institute for Defense Studies, 2013.

The Nippon Foundation. "Japan Coast Guard Law (Law No. 28 of April 27, 1948 as amended through Law No. 102 of 1999)." In *Japan Coast Guard Laws and Regulations.* Tokyo: The Nippon Foundation Library, 2001. https://nippon.zaidan.info/seikabutsu/2001/00500/contents/00021.htm.

Nitta, Keith A. "Paradigms." In *US-Japan Relations in a Changing World.* Edited by Steven Vogel, 63-93. Washington DC: Brookings Institution Press, 2002.

Nixon, Richard. "Address to the Nation on Returning From the Soviet Union." July 3, 1974. The American Presidency Project, University of California Santa Barbara. http://www.presidency.ucsb.edu/ws/index.php?pid=4288&st=arms+race&st1=.

Njølstad, Olav. "The Development of the Arms Race and How We Think About It." In *International Relations Since the End of the Cold War: New & Old Dimension.* Edited by Geir Lundestad, 167-190 (Oxford: Oxford University Press, 2013).

Noel-Baker, Phillip. *The Arms Race: A Programme for Disarmament.* London: Oceana Publications, 1958.

Noland, Marcus. "American Economic Relations with Asia." *Asian Economic Policy Review* 4 (2009): 181-199.

Nugent, Bob. "Naval Acquisition Trends in Asia." In *Naval Modernisation in South-East Asia: Nature, Causes and Consequences.* Edited by Geoffrey Till and Jane Chan, Chapter 2. London and New York: Routledge, 2014, Google e-book.

Nye, Joseph S. "The Nye Report: Six Years Later." *International Relations of the Asia-Pacific* 1, no. 1 (2001): 95-103.

Ogawa, Shinichi. "Conventional Deterrence and Japan's Security." *NAPSNet Special Reports* (22 May 2012), http://nautilus.org/napsnet/napsnet-special-reports/conventional-deterrence-and-japans-security/.

Oh, Kongdan. "US-ROK: The Forgotten Alliance." *Brookings East Asia Commentary* 22 (October 2008), http://www.brookings.edu/research/opinions/2008/10/south-korea-oh.

O'Hanlon, Michael E. "US Military Modernization: Implications for US Policy in Asia." In *Strategic Asia 2005-06: Military Modernization in an Era of Uncertainty*. Edited by, Ashley J. Tellis and Michael Willies, Executive Summary. Seattle: The National Bureau of Asian Research, 2006.

O'Hanlon, Michael E. "Dollars at Work: What Defense Spending Means for the US Economy." *Brookings,* August 19, 2015, https://www.brookings.edu/blog/order-from-chaos/2015/08/19/dollars-at-work-what-defense-spending-means-for-the-u-s-economy/.

Organski, A. F. K. and Jacek Kugler with Daniel J. Fox. "Deterrence and the Arms Race: The Impotence of Power." *International Security* 4, no. 4 (Spring 1980): 105-138.

Oros, Andrew L. "The Politics of National Security." In *Routledge Handbook of Japanese Politics.* Edited by Alisa Guander, 320-333. Abingdon: Routledge, 2011.

O'Rourke, Ronald. "China Naval Modernization: Implications for US Navy Capabilities – Background and Issues for Congress." Congressional Research Service Report RL33153. Washington DC: Library of Congress, June 17, 2016.

O'Rourke, Ronald. "Maritime Territorial and Exclusive Economic Zone (EEZ) Disputes Involving China: Issues for Congress." Congressional Research Service Report R42784. Washington DC: Library of Congress, December 22, 2015.

O'Rourke, Ronald. "Navy Aegis Ballistic Missile Defense (BMD) Program: Background and Issues for Congress." Congressional Research Service Report RL33745. Washington DC: Library of Congress, March 28, 2016.

O'Rourke, Ronald. "Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress." Congressional Research Service Report RL32665. Washington DC: Library of Congress, January 8, 2016.

O'Rourke, Ronald. "Navy Ohio Replacement (SSBN[X]) Ballistic Missile Submarine Program: Background and Issues for Congress." Congressional Research Service Report R41129. Washington DC: Library of Congress, April 5, 2016.

Ousley, Kate. "Wartime Operational Control." In *2006 SAIS US-Korea Yearbook,* 31-38. Washington DC: John Hopkins University, 2006.

Pajon, Céline. "Japan's Coast Guard and Maritime Self-Defense Force: Cooperation among Siblings." *Maritime Awareness Project,* December 1, 2016, http://maritimeawarenessproject.org/2016/12/01/japans-coast-guard-and-maritime-self-defense-force-cooperation-among-siblings/.

Panton, Michael A. "Politics, Practice and Pacifism: Revising Article 9 of the Japanese Constitution." *Asian-Pacific Law & Policy Journal* 11, no. 2 (2010): 164-218.

Park, Cheol Hee. "Cooperation Coupled with Conflicts: Korea-Japan Relations in the Post-Cold War Era." *Asia-Pacific Review* 15, no. 2 (2008): 13-35.

Park, Hwee Rhak. "South Korea's Failure to Implement 'Defense Reform 2020,'" *Korean Journal of International Studies* 12, no. 2 (December 2014): 379-401.

Patalano, Alessio. "Japan as a Seapower: Strategy, Doctrine, and Capabilities under Three Defence Reviews, 1995-2010." *Journal of Strategic Studies* 37, no. 3 (2014): 403-441.

Patalano, Alessio and James Manicom. "Rising Tides: Seapower and Regional Security in Northeast Asia." *Journal of Strategic Studies* 37, no. 3 (April 2014): 335-344.

Pauker, Guy J. Steven Canby, A. Ross Johnson and William B. Quandt. "In Search of Self-Reliance: U.S. Security Assistance to the Third World Under the Nixon Doctrine." A Report prepared for Defense Advanced Research Projects Agency, R-1092-ARPA (June 1973).

Pedrozo, Raul. "Close Encounters at Sea: The USNS *Impeccable* Incident," *Naval War College Review* 62, no. 3 (Summer 2009): 101-111.

Perlo-Freeman, Sam. "Deciphering China's Latest Defence Budget Figures." *SIPRI Newsletter*, March 31, 2014. https://www.sipri.org/node/377.

The Philippines Department of National Defense. "The Philippines, Japan sign defense agreement." *Official Gazette,* March 3, 2016, http://www.gov.ph/2016/03/03/ph-jp-sign-defense-agreement/

Pietrucha, Michael W. "Making Places, Not Bases a Reality." *US Naval Institute Proceedings Magazine* 141/10/1, no. 352 (October 2015), http://www.usni.org/magazines/proceedings/2015-10/making-places-not-bases-reality.

Pillsbury, Michael. *The Hundred Year Marathon: China's Secret Strategy to Replace America as the Global Superpower.* New York: Henry Holt and Co., 2015.

Pillsbury, Michael. "China's Military Strategy Towards the US: A View from Open Sources." In *US-China Commission Congressional Report*. Washington DC: National Defense University Press, 2001.

Porch, Douglas. "The Taiwan Strait Crisis of 1996: Strategic Implications for the United States Navy." *Naval War College Review* 53, no. 2 (Summer 1999): 15-48.

Porter, Gene H., Kathleen M. Conley, C. Vance Gordon, R. Royce Knees, Jr., Brian R. Rieksts, Alan H. Shaw and David M. Tate. "Affordability of Defense Acquisition Programs." *Institute for Defense Analyses Paper* P-5243 Redacted (February 2015).

Posen, Barry. "Command of the Commons: The Military Foundation of US Hegemony." *International Security* 28, no. 1 (Summer 2003): 5-46.

Posen, Barry. *The Sources of Military Doctrine: France, Britain and Germany Between the World Wars.* Ithaca: Cornell University Press, 1984.

Posen, Barry R. and Andrew L. Ross. "Competing Visions for US Grand Strategy." *International Security* 21, no. 3 (Winter 1996/1997): 5-53.

Postol, Theodore A. "Lessons of the Gulf War Experience with Patriot." *International Security* 16, no. 3 (Winter 1991-1992): 119-171.

PRC Ministry of National Defense. *China's Military Strategy.* Beijing: The State Council Information Office of the People's Republic of China, May 2015.

PRC Ministry of National Defense. *The Diversified Employment of China's Armed Forces.* White Paper. Beijing: Information Office of the State Council, April 2013. http://eng.mod.gov.cn/Database/WhitePapers/index.htm.

PRC Taiwan Affairs Office & Information Office of the State Council. *The Taiwan Question and Reunification of China*. Beijing: The People's Republic of China, August 1993, http://www.china.org.cn/english/taiwan/7953.htm.

President of the United States of America. *2015 National Security Strategy.* Washington DC: The White House, 2015.

President of the United States of America. *National Security Strategy.* Washington DC: The White House, May 2010.

Prime Minister of Japan and His Cabinet. *The Constitution of Japan*, http://japan.kantei.go.jp/constitution_and_government_of_japan/constitution_e.html.

Putnam, Robert D. "Diplomacy and Domestic Politics: The Logic of Two-level Games." *International Organization* 42, no. 3 (Summer 1988): 427-460.

Pyle, Kenneth B. "Japan's Postwar National Purpose." In *Japan and North America, Volume II: The Postwar.* Edited by Ellis Krauss and Benjamin Nyblade, 37-57. London and New York: RoutledgeCurzon, 2004.

Pyle, Kenneth B. *The Japanese Question: Power and Purpose in a New Era.* 2nd Edition. Washington DC: The AEI Press, 1996.

Radchenko, Sergey. "The Soviet Union and the Cold War Arms Race." In *Arms Races in International Politics: From the Nineteenth to the Twenty-First Century*. Edited by Thomas G. Mahnken, Joseph Maiolo, and David Stevenson, 158-175. Oxford: Oxford University Press, 2016.

Radio Voice of Vietnam. "Socialist-oriented Market Economy: Concept and Development Solutions." Embassy of the Socialist Republic of Vietnam in the United States of America, November 17, 2003, http://vietnamembassy-usa.org/news/2003/11/socialist-oriented-market-economy-concept-and-development-soluti.

Ranasinghe, Dhara. "Singapore, the tiny state with military clout." *CNBC,* February 9, 2014, http://www.cnbc.com/2014/02/07/singapore-the-tiny-state-with-military-clout.html.

Rapoport, Anatol. "Mathematical Methods in Theories of International Relations: Expectations, Caveats and Opportunities." In *Mathematical Models in International Relations.* Edited by D. A. Zinnes and J. V. Gillespie, 10-36. New York: Praegar, 1976.

Rapoport, Anatol. *Fights, Games and Debates*. Ann Arbor: University of Michigan Press, 1961.

Rapoport, Anatol. "Lewis F. Richardson's Mathematical Theory of War." *Conflict Resolution* 1, no. 3 (September 1957): 249-299.

Rapp-Hooper, Mira. "Deciphering Trump's Asia Policy: What "America First" Will Mean for Regional Order." *Foreign Affairs,* November 22, 2016, https://www.foreignaffairs.com/articles/asia/2016-11-22/deciphering-trumps-asia-policy.

Ratner, Ely. "Rebalancing to Asia with an Insecure China." *The Washington Quarterly* 36, no. 2 (Spring 2013): 21-38.

Rhee, Sang-Woo. *From Defense to Deterrence: The Core of Defense Reform Plan 307*. Washington DC: CSIS Korea Chair Platform, September 7, 2011, https://csis-prod.s3.amazonaws.com/s3fs-

public/legacy_files/files/publication/110907_FromDefensetoDeterrence_Rhee.pdf.

Ree, Jack Joo K., Gee Hee Hong, and Seoeun (Thelma) Choi. "Should Korea Worry about a Permanently Weak Yen?" *IMF Working Paper* WP/15/57 (July 2015).

Reiss, Mitchell B. "Drifting Apart? The US-ROK Alliance at Risk." *Korean Journal of Defense Analysis* 21 no.1 (2009): 11-31.

Reynolds, Clark G. *Navies in History.* Annapolis: Naval Institute Press, 1998.

Reynolds, Clark G. *History and the Sea: Essays on Maritime Strategies.* Columbia: University of South Carolina, 1983.

Reynolds, Clark G. *Command of the Sea: The History and Strategy of Maritime Empires.* New York: Morrow, 1974.

Richardson, Lewis F. *Statistics of Deadly Quarrels.* Pittsburgh: Boxwood Press, 1975.

Richardson, Lewis F. *Arms and Insecurity: A Mathematical Study of the Causes and Origins of War.* Edited by Nicolas Rachevsky and Ernesto Trucco. Pittsburgh: Boxwood Press, 1960.

Richardson, Lewis F. "Variation of the Frequency of Fatal Quarrels with Magnitude." *Journal of American Statistical Association* 43 (1948): 523-546.

Richardson, Lewis F. "War Moods: I." *Psychometrika* 13 (1948): 147-174.

Richardson, Lewis F. "War Moods: II." *Psychometrika* 13 (1948): 197-232.

Rigger, Shelley. *Why Taiwan Matters: Small Island, Global Powerhouse.* Lanham: Rowman & Littlefield, 2011.

Rinehart, Ian E. and Bart Elias. "China's Air Defense Identification Zone (ADIZ)." Congressional Research Service Report R43894. Washington DC: Library of Congress, January 30, 2015.

Rinehart, Ian E., Steven A. Hildreth and Susan V. Lawrence. "Ballistic Missile Defense in the Asia-Pacific Region: Cooperation and Opposition." Congressional Research Service Report R43116. Washington DC: Library of Congress, April 3, 2015.

Ripsman, Norrin M. "Neoclassical Realism and Domestic Interest Groups." In *Neoclassical Realism, the State, and Foreign Policy.* Edited by Steven E. Lobell, Norrin M. Ripsman and Jeffrey W. Taliaferro, 170-193. Cambridge: Cambridge University Press, 2009.

ROC Ministry of National Defense. *National Defense Review 2013.* Taipei: Ministry of National Defense, October 2013.

Roehrig, Terence. “Republic of Korea Navy and China’s Rise: Balancing Competing Priorities.” CNA Maritime Asia Project, Workshop 2: Naval Developments in Asia, Arlington, August 2012.

ROK Ministry of Foreign Affairs. “Why Dokdo is Korean Territory.” *Dokdo: Beautiful Island of Korea*, 2013, http://dokdo.mofa.go.kr/eng/dokdo/reason.jsp.

ROK Ministry of National Defense. “Republic of Korea Navy.” 2016 http://www.navy.mil.kr/NavyBoard/english/main/main.jsp.

ROK Ministry of National Defense, *2014 Defense White Paper.* Seoul: Ministry of National Defense, December 31, 2014.

ROK Ministry of National Defense. *2012 Defense White Paper.* Seoul: Ministry of National Defense, December 11, 2012.

ROK Ministry of National Defense. *2004 Defense White Paper*. Seoul: Ministry of National Defense, December 2004.

Rose, Gideon. “Review: Neoclassical Realism and Theories of Foreign Policy.” *World Politics* 51, no.1 (October 1998): 144-172.

Rosenberg, David and Christopher Chung. “Maritime Security in the South China Sea: Coordinating Coastal and User State Priorities.” *Ocean Development and International Law* 39, no. 1 (2008): 51-69.

Ross, Robert S. “China’s Naval Nationalism: Sources, Prospects, and the US Response.” *International Security* 34, no. 2 (Fall 2009): 46-81.

Roy, Denny. “The China Threat Issue: Major Arguments.” *Asian Survey* 36, no. 8 (August 1996): 758-771.

Samuels, Richard J. “‘New Fighting Power!’ Japan’s Growing Maritime Capabilities and East Asian Security.” *International Security* 32, no. 3 (Winter 2007/08): 84-112.

Sartori, Giovanni. “Concept Misinformation in Comparative Politics.” *The American Political Science Review* 64, no. 4 (December 1970): 1033-1053.

Sawyer, Nina. “USFK Realignment and Reduction.” In *2006 SAIS US-Korea Yearbook*. Edited by David Straub, 21-31. Washington DC: US-Korea Institute at SAIS, 2006.

Schelling, Thomas C. *Arms and Influence.* New Haven: Yale University Press, 1966.

Schelling, Thomas C. and Morton H. Halperin. *Strategy and Arms Control.* New York: Twentieth Century Fund, 1961.

Schreer, Benjamin. "The United States' Evolving Regional Military Posture." In *IISS Asia-Pacific Regional Assessment 2015: Key Developments and Trends,* 9-24. IISS: London, 2015.

Schreer, Benjamin. "US Conventional Prompt Strike: Potential Implications for the Asia-Pacific." *RSIS Policy Brief*. Singapore: S. Rajaratnam School of International Studies, June 2015.

Schreer, Benjamin. "Planning the Unthinkable War: 'AirSea Battle' and its Implications for Australia." *ASPI: Strategy* (Barton: Australian Strategic Policy Institute, April 2013).

Schriver, Randall and Isabella Mroczkowski. "Japan's Global Engagement: A Mapping Study of Japan's Global Role and International Contributions." Project 2049 Institute Report, April 2012.

Schwartz, Moshe. "Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process." Congressional Research Service Report, RL34026. Washington DC: Library of Congress, May 23, 2014.

Schwartz, Stephen I. *Atomic Audit: The Costs and Consequences of US Nuclear Weapons Since 1940.* New York: Brookings Institution Press, 1998.

Schweller, Randall L. "Domestic Structure and Preventive War: Are Democracies More Pacific?" *World Politics* 44 (January 1992): 235-269.

Scobell, Andrew. "Show of Force: Chinese Soldiers, Statesmen, and the 1995-1996 Taiwan Straits Crisis." *Political Science Quarterly* 115, no. 2 (Summer 2000): 227-246.

Scobell, Andrew and Andrew J. Nathan. "China's Overstretched Military." *The Washington Quarterly* 35, no. 4 (2012): 135-148.

Seiglie, Carlos. "Exploring Potential Arms Races." *Economics and Politics* 8, no. 3 (November 1996): 231-240.

Shapiro, Michael J. and G. Matthew Bonham. "Cognitive Process and Foreign Policy Decision-Making." *International Studies Quarterly* 17, no. 2 (June 1973): 147-174.

Shambaugh, David. "Containment or Engagement of China? Calculating Beijing's responses." *International Security* 21, no. 2 (1996): 180-209.

Silove, Nina. "The Pivot before the Pivot: US Strategy to Preserve the Power Balance in Asia." *International Security* 40, no. 4 (Spring 2016): 45-88.

Singapore Ministry of Defense. "Fact Sheet: Frequently Asked Questions – Deployment of the Littoral Combat Ship to Singapore," *MINDEF Singapore: Offical Releases,* March 12, 2013, https://www.mindef.gov.sg/imindef/press_room/official_releases/sp/2013/12mar13_speech/12mar13_fs.html.

SIPRI. *SIPRI Arms Transfers Database,* 2016, https://www.sipri.org/databases/armstransfers

SIPRI. *SIPRI Military Expenditure Database 1988-2015,* https://www.sipri.org/databases/milex.

Smith, Richard C. "Asian Military Modernisation." *Lowy Institute Perspectives* (October 7, 2008).

Smith, Theresa Clair. "Arms Race Instability and War." *The Journal of Conflict Resolution* 24, no. 2 (1980): 253-284.

Snidal, Duncan. "Relative Gains and the Pattern of International Cooperation." In *Neorealism and Neoliberalism: The Contemporary Debate.* Edited by David Baldwin, 170-208. New York: Columbia University Press, 1993.

Snyder, Glenn H. "Review: Alliances, Balance, and Stability." *International Organization* 45, no. 1 (Winter 1991): 121-142.

Snyder, Glenn H. "The Security Dilemma in Alliance Politics." *World Politics* 36, no. 4 (1984): 461-495.

Snyder, Jack L. "Perceptions of the Security Dilemma in 1914." In *Psychology and Deterrence.* Edited by Robert Jervis, Richard Ned Lebow, and Janice Gross Stein (eds.) with contributions by Patrick M. Morgan and Jack L. Snyder, 153-179. Baltimore: The John Hopkins University Press, 1985.

Snyder, Jack L. "The Soviet Strategic Culture: Implications for Limited Nuclear Operations." RAND Project Air Force Report, R-2145-AF (September 1977).

Snyder, Scott and See-Won Byun. "Cheonan and Yeonpyeong: The Northeast Asian Response to North Korea's Provocations." *The RUSI Journal* 156, no. 2 (2011): 74-81.

Socialist Republic of Vietnam Ministry of Foreign Affairs. "Remarks by MOFA Spokesperson Le Hai Binh on Viet Nam's Reaction to China's Announcing of Military Exercise from 5th to 11th July 2016 Within Area that Covers Viet Nam's Hoang Sa Archipelago." Foreign Press Center, Hanoi, July 6, 2016, http://presscenter.org.vn/remarks-by-mofa-spokesperson-le-hai-binh-on-viet-nams-reaction-to-chinas-announcing-of-military-exercise-from-5th-to-11th-july-2016-within-area-that-covers-viet-nams-hoang-sa-archipelago_t221c67n63627tn.aspx

Socialist Republic of Vietnam Ministry of National Defence. *Vietnam National Defence.* Hanoi: Ministry of National Defence, December 2009.

Son, Key-yong. *South Korean Engagement Policies and North Korea: Identities, Norms and the Sunshine Policy.* London and New York: Routledge, 2006.

Sorokin, Gerard L. "Arms, Alliances, and Security Tradeoffs in Enduring Rivalries." *International Studies Quarterly* 38, no. 3 (September 1994): 421-426.

Sprout, Harold and Margaret Sprout. *The Ecological Perspective on Human Affairs: With Special Reference to International Politics.* Princeton: Princeton University Press, 1965.

Spykman, Nicholas J. *America's Strategy in World Politics: The United States and the Balance of Power*. Revised Edition. New Brunswick: Transaction Publishers, 2007.

Stone, Jeremy J. *Containing the Arms Race: Some Specific Proposals.* Cambridge: MIT Press, 1966.

Strassler, Robert B. ed. *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War.* Translated by Richard Crawley. Revised Edition. New York, London, Toronto and Sydney: Free Press, 1969.

Suchy, Petr and Bradley A. Thayer. "How to Save the INF Treaty (and arms control): Invite China." *Bulletin of the Atomic Scientists*, July 1, 2015, http://thebulletin.org/how-save-inf-treaty-and-arms-control-invite-china8487.

Suchyta, David J. "Jeju Naval Base: Strategic Implications for Northeast Asia," *Strategy Research Project.* Carlisle: United States Army War College, 2013.

Suh, Choo-suk. "North Korea's "Military-First" Policy and Inter-Korean Relations." *Korean Journal of Defense Analysis* 14, no. 2 (2002): 167-185.

Sutter, Robert G. *The United States and Asia: Regional Dynamics and Twenty-First Century Relations.* Lanham: Rowman & Littlefield, 2015.

Suettinger, Robert L. *Beyond Tiananmen: The Politics of US-China Relations 1989-2000.* Washington DC: Brookings Institution Press, 2003.

Sumida, Jon Tetsuro. "Sir John Fisher and the Dreadnought: The Sources of Naval Mythology." *The Journal of Military History* 59, no. 4 (October 1995): 619.

Taagepera, Rein. "Stockpile-budget and Ratio Interaction Models for Arms Races," *Peace Science Society (International Papers)* 29 (1979-1980).

Taber, Charles S. "National Arms Acquisitions as a Rational Competitive Process." *Simulation & Gaming* 24, no. 4 (December 1993): 413-428.

Tamamoto, Masaru. "A Land Without Patriots: The Yasukuni Controversy and Japanese Nationalism." *World Policy Journal* 18, no. 3 (Fall 2001): 33-40.

Tan, Andrew T. H. *The Arms Race in Asia: Trends, Causes and Implications*. London: Routledge, 2014.

Tan, Andrew T. H. "Punching Above Its Weight: Singapore's Armed Forces and Its Contribution to Foreign Policy." *Defence Studies* 11, no. 4 (2012): 672-697.

Tan, Quiyi. "Vietnam's Viettel harbours global ambitions." *Channel NewsAsia,* May 20, 2016, http://www.channelnewsasia.com/news/business/vietnam-s-viettel/2788562.html.

Tate, Merze. *The United States and Armaments*. Cambrige: Harvard University Press, 1948.

Tellis, Ashley J. "Understanding Strategic Cultures in the Asia-Pacific." In *Strategic Asia 2016-17: Understanding Strategic Cultures in the Asia-Pacific.* Edited by Ashley J. Tellis, Alison Szalwinski, and Michael Wills, 3-26. Washington DC: The National Bureau of Asian Research, 2016.

Tellis, Ashley J. "Seeking Alliances and Partnerships: The Long Road to Confederationism in US Grand Strategy." In *Strategic Asia 2014-15: US alliances and partnerships at the center of global power.* Edited by Ashley J. Tellis, Abraham M. Denmark and Greg Chaffin, 3-32. Seattle: The National Bureau of Asian Research, 2015.

Tellis, Ashley J. Janice Bailly, Christopher Layne and Melissa McPherson. *Measuring National Power in the Postindustrial Age,* RAND Monograph Reports, MR-1110-A (2000).

Thayer, Carlyle A. "Background Briefing: Vietnam's Military Modernization and National Defence Industry." *Thayer Consultancy,* August 20, 2015.

Thayer, Carlyle A. "Vietnam's Maritime Forces." In *Perspectives on the South China Sea.* Edited by Murray Hiebert, Phuong Nguyen and Gregory B. Poling, 136-148. Washington DC: CSIS Sumatro Chair for Southeast Asia Studies, September 2014.

Thayer, Carlyle A. "The Political Role of the Vietnam People's Army: Corporate Interests and Military Professionalism." Paper to Panel on Understanding Vietnamese Politics: New Approaches and Issues from the Field, Association of Asian Studies Annual Conference, Toronto, Canada, March, 15-19 2012.

Thayer, Carlyle A. "Vietnam's Security Outlook." Presentation to International Workshop on Asia-Pacific Security, National Institute of Defense Studies, Tokyo, January 17-18, 2012.

Thayer, Carlyle A. "Chinese Assertiveness in the South China Sea and Southeast Asian Responses," *Journal of Current Southeast Asian Affairs* 30, no. 2 (2011): 77-104.

Thayer, Carlyle A. "Military Politics in Contemporary Vietnam." In *The Political Resurgence of the Military in Southeast Asia,* 63-84. Edited by Marcus Mietzner. Abingdon: Routledge, 2011.

Thorpe, Rebecca U. *The American Warfare State: The Domestic Politics of Military Spending.* Chicago: University of Chicago Press, 2014.

Till, Geoffrey. *Asia's Naval Expansion: An Arms Race in the Making?* Adelphi 52. Routledge and IISS: London, 2012.

Tilly, Charles. *Big Structures, Large Processes, Huge Comparisons*. New York: Russell Sage Foundation, 1985.

Tow, William T. "Assessing US Bilateral Security Alliances in the Asia Pacific's 'Southern Rim': Why the San Francisco System Endures." America's Alliances with Japan and Korea in a Changing Northeast Asia Project Discussion Papers, Stanford University Freeman Spogli Institute for International Studies, October 1999.

Tow, William T. and Satu Limaye. "What's China Got to Do With It? US Alliances, Partnerships in the Asia-Pacific." *Asian Politics & Policy* 8, no. 1 (2016): 7-26.

Tran, Truong Thuy. "Vietnam's Relations with China and the US and the Role of ASEAN." In *Security Outlook of the Asia Pacific Countries and Its Implications for the Defense Sector,* NIDS Joint Research Series No. 14, 87-96. Tokyo: The National Institute for Defense Studies, 2016.

Twomey, Christopher P. "What's in a Name? Building Anti-Access/Area Denial Capabilities without Anti-Access/Area Denial Doctrine." In *Assessing the PLA under Hu Jintao.* Edited by David Lai, Roy Kamphausen, Travis Tanner, 129-171. Carlisle: Strategic Studies Institute, 2014.

UK Parliamentary Debates. British House of Commons. Hansard, 4th Series, Vol. 22 (1894).

UN. "Part V: Exclusive Economic Zone." *United Nations Convention on the Law of the Sea,* http://www.un.org/depts/los/convention_agreements/texts/unclos/part5.htm.

UN Division for Ocean Affairs and Law of the Sea. "United National Convention on the Law of the Sea." *United Nations*, December 10, 1982, http://www.un.org/depts/los/convention_agreements/texts/unclos/UNCLOS-TOC.htm

US Census Bureau. "Trade in Goods with Asia," 2016, https://www.census.gov/foreign-trade/balance/c0016.html.

US-China Economic and Security Review Commission. "2015 Report to Congress of the US-China Economic and Security Review Commission: Executive Summary and Recommendations." One Hundred Fourteenth Congress, First Session, November 2015.

US-China Economic and Security Review Commission. "Hearing: Impact of Military and Dual-Use Exports to China." January 17, 2002, http://www.uscc.gov/Hearings/hearing-impact-military-and-dual-use-technology-exports-china.

US Commercial Service. "Defense Industry Equipment." *export.gov,* December 28, 2015, http://www.export.gov/southkorea/doingbusinessinskorea/leadingsectorsforusexportsinvestment/defense/index.asp.

US Committee on International Relations. "Statement by Dr. Kurt M. Campbell, Deputy Assistant Secretary of Defense for Asian and Pacific Affairs, Before the House International Relations Committee, Subcommittee on Asia and the Pacific, 14 March 1996." In *Crisis in the Taiwan Strait" Implications for US Foreign Policy,* Papers from the Hearing before the One Hundred Fourth Congress, Second Session, Washington DC (14 March 1996).

US Congressional Budget Office. "The Budget and Economic Outlook: 2017 to 2027." *CBO Report*, January 24, 2016, https://www.cbo.gov/publication/52370#section1.

US Congressional Budget Office. "The Budget and Economic Outlook: 2016 to 2026." *CBO Report*, January 25, 2016, https://www.cbo.gov/publication/51129.

US Congressional Budgetary Office. "Long-Term Implications of the 2016 Future Years Defense Program." CBO Report, January 14, 2016, https://www.cbo.gov/publication/51050.

US Congressional Budgetary Office. "An Analysis of the Navy's Fiscal Year 2016 Shipbuilding Plan." *CBO Report*, October 29, 2015, https://www.cbo.gov/publication/50926.

US Constitution. "US Constitution – Article 1 Section 8." http://www.usconstitution.net/xconst_A1Sec8.html.

US Department of Defense. "Subpart 2.1—Definitions." *Federal Acquisition Regulation (FAR)* No. 2005-94, 2005-95, last modified January 19, 2017, https://www.acquisition.gov/?q=browsefar.

US Department of Defense. "Subpart 3.4—General." *Federal Acquisition Regulation (FAR)* No. 2005-94, 2005-95, last modified January 19, 2017, https://www.acquisition.gov/?q=browsefar.

US Department of Defense. *The Asia-Pacific Maritime Security Strategy: Achieving US National Security Objectives in a Changing Environment.* Washington DC: Department of Defense*,* August 2015.

US Department of Defense. *Annual Report to Congress on Military and Security Developments Involving the People's Republic of China 2015.* Washington DC: Department of Defense, 2015.

US Department of Defense. *Quadrennial Defense Review 2014.* Washington DC: Department of Defense, 2014.

US Department of Defense. *Sustaining US Global Leadership: Priorities for 21st Century Defense*. Washington DC: Department of Defense, January 2012.

US Department of Defense. *Quadrennial Defense Review Report.* Washington DC: Department of Defense, February 2010.

US Department of Defense. *Quadrennial Defense Review 2006.* Washington DC: Department of Defense.

US Department of the Navy. *A Cooperative Strategy for 21st Century Seapower*. Washington DC: Department of the Navy, March 2015.

US Department of State. *World Military Expenditures and Arms Transfers (WMEAT) 2016,* https://www.state.gov/t/avc/rls/rpt/wmeat/2016/index.htm.

US Department of State. "China: Maritime Claims in the South China Sea." *Limits in the Seas No. 143.* Office of Ocean and Polar Affairs, Bureau of Oceans and International Environmental and Scientific Affairs, December 5, 2014.

US Deputy Chief of Naval Operations. *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for FY2015.* Washington DC: Office of the Chief of Naval Operations, June 2004. http://navylive.dodlive.mil/files/2014/07/30-year-shipbuilding-plan1.pdf.

US Deputy Secretary of Defense Bob Work. "Deputy Secretary of Defense Speech: The Third US Offset Strategy and its Implications for Partners and Allies." Speech at Willard Hotel, Washington DC, January 28, 2015, http://www.defense.gov/News/Speeches/Speech-View/Article/606641/the-third-us-offset-strategy-and-its-implications-for-partners-and-allies.

US General Accounting Office. *Measuring Military Capability: Progress, Problems and Future Direction.* Report to the Chairman, Committee on Armed Services, House of Representatives, Washington DC, GAO/NSIAD-86-72 (February 1986).

US General Accounting Office. "National Security: Impact of China's Military Modernization in the Pacific Region." Report to Congressional Committees, No. GAO/NSIAD-95-84 (June 1995).

US House of Representatives 109-452. "Report of the Committee on Armed Services, House of Representatives on H.R. 5122." May 5, 2006.

US National Research Council. *S&T Strategies of Six Countries: Implications for the United States.* Division on Engineering and Physical Sciences, Standing Committee on Technology Insight—Gauge, Evaluate, and Review, Committee on Global Science and Technology Strategies and Their Effect on US National Security. Washington DC: The National Academies Press, 2010.

US Office of Naval Intelligence. *World Submarine Challenges 1996.* Suitland: Office of Naval Intelligence, 1996.

US Office of Naval Intelligence. *The People's Liberation Army: A Modern Navy with Chinese Characteristics.* Suitland: Office of Naval Intelligence, August 2009.

US Office of the Secretary of Defense. *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2016*. Washington DC: Department of Defense, 2016.

US Office of the Secretary of Defense. *Military and Security Developments Involving the Democratic People's Republic of Korea: Report to Congress 2015*. Washington DC: Department of Defense, 2015.

USPACOM. "Headquarters, United States Pacific Command." *US Pacific Command,* 2015, http://www.pacom.mil/AboutUSPACOM.aspx.

US Secretary of Defense. *The United States Security Strategy for the East Asia-Pacific Region [East Asian Strategy Report]*. Washington DC: Department of Defense 1998.

US Under Secretary of Defense Frank Kendall. "Implementation Directive for Better Buying Power 3.0 – Achieving Dominant Capabilities through Technical Excellence and Innovation." Memorandum for Secretaries of the Military Departments and other DOD Officials, US Department of Defense: Acquisition, Technology and Logistics, Washington DC, April 9, 2015.

US Under Secretary of Defense for Acquisition, Technology and Logistics. *Annual Industrial Capabilities Report to Congress*. Washington DC: Department of Defense, October 2002.

US Under Secretary of Defense for Acquisition, Technology and Logistics. *Performance of the Defense Acquisition System: 2015 Annual Report*. Washington DC: Department of Defense, October 2015.

Valencia, Mark J. "Foreign Military Activities in Asian EEZs: Conflict Ahead?" *The National Bureau of Asian Research Reports* (May 2011).

Vaughn, Bruce. "US Strategic and Defense Relationships in the Asia-Pacific Region." Congressional Research Report RL33821, Washington DC: Library of Congress, January 22, 2007.

Vietnam Government. *Vietnam's Socio-Economic Development Strategy for the Period of 2011-2020*. Translated by Economica. Hanoi: Socialist Republic of Vietnam, June 11, 2012. http://www.economica.vn/portals/0/maubieu/1d3f7ee0400e42152bdcaa439bf62686.pdf.

Walt, Stephen M. "Alliances in a Unipolar World," *World Politics* 61, no. 1 (January 2009): 86-120.

Walt, Stephen M. “Alliance Formation and the Balance of Power.” *International Security* 9, no. 4 (1985): 3-43.

Waltz, Kenneth N. *Theory of International Politics.* Reading: Addison-Wesley, 1979.

Wan, Ming. “The AIID versus the World Bank and the ADB.” In *The Asian Infrastructure Investment Bank: The Construction of Power and the Struggle for the East Asian International Order*. Edited by Ming Wan, 58-91. New York: Palgrave Macmillan, 2016.

Wang, Liyu and Peter H. Pearse. “The New Legal Regime for China’s Territorial Sea.” *Ocean Development & International Law* 24, no. 4 (1994): 431-442.

Ward, Michael Don. “Differential Paths to Parity: A Study of the Contemporary Arms Race.” *The American Political Science Review* 78, no. 2 (June 1984): 297-317.

Warner, Geoffrey. “Nixon, Kissinger and the Rapprochement with China, 1969-1972.” *International Affairs* 83, no. 4 (2007): 763-781.

Watt, Donald C. “The Possibility of a Multilateral Arms Race: A Note.” *International Relations* 2, no. 6 (1962): 372-377.

Wayman, Frank W., J. David Singer and Gary Goertz. “Capabilities, Allocations, and Success in Militarized Disputes and Wars, 1816-1976.” *International Studies Quarterly* 27, no. 4 (1983): 497-515.

Weeks, Stanley B. and Charles A. Meconis. *The Armed Forces of the USA in the Asia-Pacific Region,* The Armed Forces of Asia Series. St. Leonards: Allen & Unwin, 1999.

Wendt, Alexander. “Anarchy is What States Make of It: The Social Construction of Power Politics.” *International Organization* 45, no. 2 (Spring 1992): 391-425.

Wesley, Michael. *Restless Continent: Wealth, Rivalry and Asia’s New Geopolitics*. Collingwood: Black Inc., 2015, Google e-book.

Wilson, Sandra. “Rethinking Nation and Nationalism in Japan.” In *Nation and Nationalism in Japan.* Edited by Sandra Wilson. Abingdon: Routledge, 2002.

Wohlstetter, Albert. “Is there a Strategic Arms Race?” *Foreign Policy* 15 (Summer 1974): 3-20.

Wohlstetter, Albert. “Rivals, but no Race.” *Foreign Policy* 16 (Fall 1974): 48-81.

Womack, Brantley. *China and Vietnam: The Politics of Asymmetry.* Cambridge: Cambridge University Press, 2006.

Wulf, Herbert. "China, India and the three Cs." *SIPRI Commentary*, March 6, 2014. https://www.sipri.org/commentary/blog/2014/china-india-and-three-cs.

Yahuda, Michael. "China's New Assertiveness in the South China Sea." *Journal of Contemporary China* 22, no. 81 (2013): 446-459.

Yahuda, Michael. *The International Politics of the Asia-Pacific.* 3rd Edition. London and New York: Routledge, 2003.

Yang, Kiwoong. "South Korea and Japan's Frictions over History: A Linguistic Constructivist Reading." *Asian Perspective* 32, no. 3 (2008): 59-86.

Yoshihara, Toshi. "The 1974 Paracels Sea Battle: A Campaign Appraisal." *Naval War College Review* 69, no. 2 (Spring 2016): 41-66.

Yost, David S. "Strategic Stability in the Cold War: Lessons for Continuing Challenges." *Proliferation Papers* 36 January 2011. Naval Postgraduate School, Monterey.

Yunzhu, Yao. "The Evolution of Military Doctrine of the Chinese PLA from 1985 to 1995." *The Korean Journal of Defense Analysis* 7, no. 2 (1995): 57-80.

Zhang Wannian Zhuan Xiezuozu [Biography of Zhang Wannian Writing Group]. *Zhang Wannian Zhuan, Xia Ceng* [The Biography of Zhang Wannian, Final volume]. Beijing: Jiefangjun chubanshe, 2011.

Zhao, Pening. "China: Top Ten Defense and Technology Industry." US Department of Commerce – National Trade Data Bank, December, 22, 1999, http://fas.org/nuke/guide/china/contractor/mark0055.htm.

Zhao, Suisheng. "The China Model: Can it Replace the Western Model of Modernization?" *Journal of Contemporary China* 19, no. 65 (June 2010): 419-436.

Zhao, Suisheng. "Chinese Nationalism and Approaches toward East Asian Regional Cooperation." Paper for International Institutions and Global Governance Program and Japan Program, Council on Foreign Relations, December 2009.

Zhao, Suisheng. "Nationalism's Double Edge." *The Wilson Quarterly* 29, no. 4 (Autumn 2009): 76-82.

Zhang, Xiaoming. "China's 1979 War with Vietnam: A Reassessment." *The China Quarterly* 184 (December 2005): 851-874.

Zhao, Suisheng. "Changing Leadership Perceptions: The Adoption of a Coercive Strategy." In *Across the Taiwan Strait: Mainland China, Taiwan,*

and the 1995-1996 Crisis. Edited by Suisheng Zhao, 99-126. New York: Routledge, 1999.

Zumwait, James P. "US-Republic of Korea Alliance." Statement before the House Committee on Foreign Affairs Subcommittee on Asia and the Pacific, Washington DC, June 6, 2012, http://www.state.gov/p/eap/rls/rm/2012/06/191869.htm.