Nuclear Weapons States and Post-Cold War Military Balancing

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Nuclear Weapons States and Post-Cold War Military Balancing

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To Drs Carlos and María Sueldo.

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Declaration

I certify that this thesis I have presented for examination for the PhD degree of King's College London is solely my own work, other than where I have indicated that it is the work of others, in which case the extent of any work carried out jointly by me and any other person is identified in the thesis.

The views expressed in this thesis, other than where I have clearly indicated that it is the work of others, are the author's own and do not necessarily reflect the views of any government, organization, or interviewee. All errors and omissions are the author's own.

I warrant that this declaration does not, to the best of my belief, infringe on the rights of any third party.

Abstract

Reliance on nuclear forces by nuclear weapons states evolved following the Cold War, and as the club of nuclear weapons states grew, the external military threats that nuclear weapons states faced demanded a reevaluation of how they rely on military capabilities to deter and use force against nuclear and nonnuclear threats. The ability of nuclear weapons states to supply adequate military capabilities across threats varied, conditioning balancing with varied self-help through deterrence and conflict.

The research analyses this variance by comparatively examining Russian, American, and Chinese balancing and, using a historical process tracing approach, examines their articulation and implementation of policies determinative of supply and demand of and reliance on military capabilities with varying self-help.

The findings indicate that, with or in the absence of external balancing, supply and demand policies convergent on adequate nonnuclear forces for nonnuclear threats are a necessary but insufficient condition of more efficient balancing with greater self-help.

Whereas conventional deterrence by denial absent the threat to use nuclear forces is a necessary but insufficient condition of deterring a nonnuclear threat, conventional deterrence by punishment is a sufficient but unnecessary condition to deter a nonnuclear threat if the threat of nuclear use is retained, assuming the resolve to use nuclear forces.

Incongruities between the articulation and implementation of policies diminish the credibility and effectiveness of balancing including due to reliance on the threat or use of nuclear forces with diminished utility to power through security and may increase adversarial gain through nonnuclear use of force due to inadequate nonnuclear forces.

Military modernization to address nonnuclear force inadequacies increases the frequency with which force is threatened or used and may spurn an arms race among adversaries and with their neighbours, driving the security dilemma. Political strategies to defuse threats that induce reliance on nuclear forces are thus crucial.

The analysis supports the link between military capabilities across threats and the anarchic system to help explain why during the years following the Cold War Russia and China underbalanced relative to the United States with diminished self-help.

Arguments advanced limit the utility of nuclear forces and challenge the view that nonnuclear forces are inferior to nuclear forces for deterrence and conflict or incidental to limiting escalation and supporting deterrence, strategic stability, and arms control.

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Acronyms and Abbreviations

A2/AD	Anti-access/area-denial challenge
ADHPM	Artillery-delivered high-precision munitions
ARW	Anti-radiation weapons
ASBM	Anti-ship ballistic missile
ASCM	Anti-ship cruise missile
ASM	Alternative security measure
C2	Command and control
C3	Command, control, and communications
C4	Command, control, communications, and computers
CEIP	Carnegie Endowment for International Peace
CMC	Chinese Central Military Commission
CPC	Chinese Communist Party
CSTO	Collective Security Treaty Organization
CTBT	Comprehensive Test Ban Treaty
DI	Defence industry
DIA	U.S. Defence Intelligence Agency
DOD	U.S. Department of Defence
DOE	U.S. Department of Energy
FALSG	Chinese Government Foreign Affairs Leading Small Group
FOI	Swedish Ministry of Defence Research Agency
GAM	Ground-attack munitions
GDP	Gross domestic product
GRU	Russian Main Intelligence Directorate
HDBT	Hardened and deeply buried target
IC	Intelligence community
ICBM	Intercontinental ballistic missile
IFRI	French Institute for International Relations
IISS	International Institute of Strategic Studies
INC	Investment in nuclear military capabilities
INF	Intermediate-Range Nuclear Forces Treaty
INNC	Investment in nonnuclear military capabilities
ISO	Intergovernmental Security Organization
IRBM	Intermediate-range ballistic missile
KGB	Russian Committee for State Security
LACM	Land-attack cruise missile
LSG	Chinese Government Leading Small Group
MAD	Mutually assured destruction
MD	Missile defence
MDA	U.S. Missile Defence Agency
MFA	Ministry of Foreign Affairs
MIRV	Multiple Independently Targetable Re-entry Vehicle
MND	Chinese Ministry of National Defence
MOD	Ministry of Defence
MRBM	Medium-range ballistic missile

NATO	North Atlantic Treaty Organization
NGO	Non-Governmental Organization
NPT	Nuclear Non-Proliferation Treaty
NPR	U.S. Nuclear Posture Review Report
NSC	U.S. National Security Council
NTI	Nuclear Threat Initiative
NWS	Nuclear weapons state
PGS	U.S. Prompt Global Strike
PLA	Chinese People's Liberation Army
PLAN	PLA Navy
PLAAF	PLA Air Force
PLASAF	PLA Second Artillery Force
PNI	Presidential Nuclear Initiative
PRC	People's Republic of China
PSC	Chinese Politburo Standing Committee
QDR	U.S. Quadrennial Defence Review Report
RFSC	Security Council of the Russian Federation
RUR	Russian Ruble
SALT	Strategic Arms Limitation Talks
SAM	Surface-to-air missile
SF	Stanley Foundation
SIPRI	Stockholm International Peace Research Institute
SLBM	Submarine-launched ballistic missile
SNF	Strategic nuclear force
SOANNC	Strategic offensive arms in nonnuclear configuration
SORT	Strategic Offensive Reductions Treaty
SRBM	Short-range ballistic missile
SSBN	Ballistic-missile submarine
START	Strategic Arms Reductions Treaty
TNW	Tactical nuclear weapon
U.S.	United States
USD	United States Dollars
USSR	Union of Soviet Socialist Republics
WMD	Weapon of mass destruction

Section I: Balancing

This section examines how nuclear weapons states rely on military capabilities for balancing and focuses on the adequacy of nonnuclear forces for self-help. Building on the literature, a framework to link balancing and the adequacy of military capabilities in the context of the mediating variables and an explanatory model to assess balancing are posited and applied to the cases in Section II. Lastly, this section previews descriptive and prescriptive arguments discussed in Section III and provides a research road map.

Chapter One advances an explanatory model based on the link between balancing through deterrence and conflict and the adequacy of military capabilities across threats. Chapter Two examines the literature that guides the analysis regarding balancing. The explanatory model is then operationalized through the research approach outlined in Chapter Three to link balancing and the adequacy of military capabilities across threats in the context of the mediating variables. Insights drawn from this comparative analysis have descriptive and prescriptive implications for nuclear weapons states.

Chapter One: Introduction

The end of the Cold War and evolving post-Cold War threats offer an opportunity to rethink how nuclear weapons states (NWSs) rely on military capabilities for balancing[1] through deterrence[2] and conflict.[3] The research is thus about how NWSs balance external military threats,[4] including adversarial relative military power gains.[5] Balancing is driven by the threat perceived from other states and is a function of power asymmetry perceived under anarchy[6] with the main measure being military power. States rely on balancing for self-help.[7] Understanding balancing is important because the balancing policies NWS domestic structures[8] articulate and implement affect interstate security,[9] particularly in a multipolar[10] post-Cold War defined by balancing for power[11] through security to mitigate adversarial relative gain, hindering states that underbalance[12] due to inadequate[13] forces.

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[1] Actions to increase power through security to reduce the real and percieved power and relative gains of others by challenging military advantage. Balancing results from a policy process that determines reliance on military capabilities available for deterrence and conflict vis-à-vis threats. States do not have to act with intent, policies to pursue power through security produce balancing. See Narang, 2009; Bendel, 1989. The research prioritizes military capabilities among means for balancing. Consider Waltz, 2010.

[2] The threat of force to convince a threat not to act because the costs would be unacceptable or the probability of success low. See Gerson, 2009.

[3] The use of military force.

[4] A situation in which an actor or group can inflict a negative effect on an actor or group, including because of relative gains in military power.

[5] Relative gains focus on zero–sum competition to increase power through security. Powell, 1991.

[6] In the absence of an overarching power, states mistrust others in an insecure context and leverage military capabilities for security as a derivative of power to deter threats and counterbalance adversarial gains driving insecurity and uncertainty but which vary with military capabilities. See Waltz, 2010.

[7] Attainment of realizable preferences in the anarchic system vis-à-vis threats through balancing.

[8] Institutions that articulate and implement policy for the state as a unitary rational actor.

[9] More or less external military threats to interests including adversarial relative military power.

[10] More than two states possess similar military capabilities, whereas unipolarity describes one state with primacy and bipolarity two states. For Waltz (1989), multipolarity is interdependence, threat diffusion, and confusion of responses, whereas bipolarity is self-dependence, threat clarity, and certainty of responses.

[11] Accomplishing interests or deterring threats to interests. Power is a means to security, is relative, and assessed in zero-sum terms. Military power is the best measure of balance of power. A state will change the international system if it has power over others. See Waltz, 2010; Rasheed, 1995.

[12] Diminished capacity to balance external military threats through deterrence and conflict, including counterbalancing military advantage. See Glaser, 1997.

[13] The potential or actual capacity to fulfill missions which are at risk when forces are inadequate or NWSs cannot bring them to bear. See National Commission on the Future of the Army, 2016.

The research focuses on balancing with nuclear and nonnuclear forces and asks, given a context dominated by nonnuclear threats and despite the impracticality of, and diminished reliance in articulated policies[14] on, nuclear forces, why do NWSs under-balance by inefficiently[15] increasing reliance on nuclear forces at the implementation stage[16] with diminished utility[17] to power because of reduced security with systemic implications? Except for existential threats,[18] nuclear forces are impractical as they are too destructive, the conflicts for which they are useful are rare and do not require significant nuclear forces, they are not credible against nonnuclear threats, they shift competition to hybrid and proxy conflicts,[19] and reduce gains without risking devastation. Nuclear forces thus add little to military power through security, particularly through offensive[20] deterrence[21] and targeting strategies,[22] do not support effective self-help, and reduce relative gains in the balance of power (or a context in the anarchic system in which states seek to increase power for security and decrease that of others) as NWSs are unlikely to pursue conflict they cannot win. Indeed, established NWSs balance but are unlikely to directly threaten each other except through nuclear deterrence.

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14 What a states says about military capabilities across threats in policies.

15 Policies that diminish the capacity to balance, and vice versa.

16 What a state does with military capabilities across threats through policies.

17 As rational states maximise self-help and costs to threats, utility is attaining realizable preferences (self-help) in the anarchic system. See Larsen and Kartchner, 2014; Bueno de Mesquita, 1988.

18 Even if nuclear deterrence fails, because of self-deterrence it may be irrational for the deterrer to respond with nuclear forces because of the destructive consequences that may befall it. See Nitze, 1976.

19 Hybrid and proxy conflicts in third parties employ conventional military capabilities, irregular tactics, terrorism, and criminal behaviour for political objectives. See Hoffman, 2009.

20 Offensive strategies (e.g., preemption or counterretaliation) limit adversarial offensive capabilities to increase costs of aggression and are more competitive, whereas defensive strategies are more cooperative and reduce adversarial benefits and increase costs leaving neither side with an incentive to act.

21 Offensive deterrence limits adversarial offensive military capabilities, increasing aggression costs through unacceptable punishment like a nuclear strike. Defensive deterrence limits adversarial offensive military capabilities by reducing potential gains by denying goals or confidence in them. See Bunn and Sokolsky, 2001; Steinbruner, 1987.

22 The means to achieve policy objectives through military capabilities. See Christianson, 2016; Dolman, 2005; Hart, 1991. Offensive strategies strike first, whereas defensive strategies reduce adversarial benefits and increase costs. See Glaser, 1992; Levy, 1984; Jervis, 1978; Quester, 1977; Osgood, 1967. States often know about adversarial military capabilities but not strategies. See Rosato, 2014.

During the Cold War, the deployment of forces in Europe was based on planning for massive interstate conventional conflict in which TNWs were an important instrument to maintain escalation[23] control if deterrence failed. Post-Cold War, hybrid and proxy conflicts and lacking deployment of significant forces capable of large–scale conflict illustrate the limited utility of nuclear forces for power through security but for deterring existential threats and escalation to nuclear use. Even the regional deployment of nuclear forces has had limited balancing effects. Consequently, while India and Pakistan threaten each other and, like Israel and North Korea, deter aggression through nuclear forces, because of limited external military threats, established NWS balancing aims to reduce relative military power by fomenting adversarial insecurity and uncertainty, even when not directly threatened, to maintain or contest dominance and deter challengers.

Per realism, security is not absolute but a spectrum, more or less external military threats including adversarial relative military power, which can be addressed by varied types and levels of capabilities. It encompasses adversarial non-military objectives to maintain or renew the power balance, contest dominance, and deter challengers. A useful approach to security is examining real and perceived threats, the means, and the period through security policies. The less security a NWS perceives, the more it values security, and vice versa. The cases deter one another through nuclear forces and there is no direct threat of armed conflict involving them. Still, the cases balanced real and perceived threats including adversarial military advantage. States identify threats by geographic proximity and real and perceived military power and offensive capabilities and strategies.

[23] Conflict grows in severity provided the adversary does not negate such ability by increasing its efforts. The fear of adversarial overreaction deters escalation, not necessarily the costs. The competition in risk-taking and resolve to increase efforts takes place. The research focuses on the military use of force in conflict escalation. See Kahn, 1965.

Threat perception is a function of power asymmetry, as risk is perceived under anarchy with perceived adversarial military power. States as unitary[24] actors rely on self-help to balance asymmetries driving perceived threats. For those NWSs, military capabilities thus relate to external military threats including balancing adversarial power for security.

Per realism, domestic structures for the state as a unitary rational actor identify and respond to security threats through policy. Policy choices are based on a cost-benefit analysis seeking to maximise self-help through realizable preferences and costs to threats through capabilities and strategies (Larsen and Kartchner, 2014). Conflict is mainly non-nuclear and intrastate, and interstate conflict has diminished but not altogether and may not escalate to high-intensity, all-out conflict because of military capabilities below the threshold of nuclear and nonnuclear deterrence. Threat perception undergirds adversarial post-Cold War nuclear forces. Despite their impracticality except for deterring existential threats and escalation to nuclear use, consistent with realism, NWSs leverage nuclear forces to balance power and, thereby, be perceived as threatening to support deterrence by manipulating adversarial perceived insecurity and uncertainty under anarchy.

But nuclear forces are impractical, placing a premium on nonnuclear forces to address prevailing nonnuclear threats and, thus, are a necessary but insufficient condition of balancing. Even so, nuclear forces are relied upon to balance adversarial relative gains because inadequate nonnuclear forces drive NWS insecurity, uncertainty, and relative loss under anarchy. This foments risk, power asymmetry, and the security dilemma[25] from adversarial military capabilities even absent direct or existential threats. This drives

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[24] A state acts as a single actor maximizing interests.

[25] Under anarchy, the security dilemma exists when the way an actor increases its security decreases that of others, conditioning cooperation, increasing competition, and raising conflict probability. See Jervis, 1978. But see Glaser, 1997. Building military capabilities cannot guarantee security, but failing to do so can guarantee insecurity. See Parent and Rosato, 2015.

counterbalancing[26] nuclear force offensive military capabilities and strategies that reduce adversarial security and certainty, increasing relative loss under anarchy—and thus risk and power asymmetry—with the threat perception of the capacity[27] to punish to reduce adversarial military advantage. Such threat perception increases with geographically proximate adversarial offensive military capabilities and strategies, including forward–deployed forces. NWSs thereby balance adversarial military power, as anticipated by balance of power, moreover inter-NWS strategic stability due to the stability-instability paradox[28] and military asymmetries that shift competition to hybrid and proxy conflicts.

Because in the absence of existential threats nuclear forces are impractical and lack credibility, nuclear forces add little to power through security. Such NWSs reacting to power asymmetries risk disadvantage and diminished realizable preferences through self-help with nuclear deterrence and conflict against NWSs and prevailing nonnuclear threats. This shifts competition to hybrid and proxy conflicts to manipulate adversarial threat perception to deter, prevent escalation, and for de-escalation. Further, reliance on low-yield[29] nuclear forces for coercion, deterrence, and limited counterforce targeting[30] is dangerous as it legitimizes nuclear forces in low-intensity scenarios with uncertain effects for deterrence, strategic stability,[31] conflict escalation, and arms control.[32] Offensive capabilities and strategies due to sub-optimal policies fomenting military asymmetries

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[26] Actions to increase power through security by challenging military advantage through insecurity and uncertainty to constrain and reduce a competitor's power and relative military power gains.

[27] The potential or actual ability to accomplish deterrence or conflict. See Haffa, 2018.

[28] Balancing is constant but NWSs avoid nuclear and nonnuclear conflict with NWSs. See Krepon, 2003; Snyder, 1965. But see Rajagopalan, 2006.

[29] The explosive energy released with nuclear force detonation.

[30] Countervalue targeting aims to eliminate adversarial urban centers whereas counterforce targeting aims to eliminate adversarial ability to prosecute aggression. See Ford, 2010.

[31] A situation with no incentive for nuclear use except aggression against vital interests absent non-nuclear alternatives. See Colby, 2013 and 2010; Lukasik, 2010.

[32] A NWS restricts military capabilities through interstate agreements typically involving inspections and verification. See Kolodkin, 2017.

provoke counterbalancing resulting in a net loss in power through diminished security, mutual insecurity, and greater adversarial power through defensive strategies.

The post-Cold War saw a diffusion of power, uneven growth and distribution of military capabilities, limited bandwagoning[33] and external balancing,[34] and power for relative gains through military capabilities. This included, despite the prevalence of non-nuclear threats, NWS great powers internally balancing[35] with nuclear forces and a global hegemon engaged in out-of-region projection to arrest competitors. Due to the stability–instability paradox, direct balancing was futile, so NWSs indirectly balanced one another through extended deterrence,[36] A2/AD challenges,[37] and hybrid and proxy conflicts. Resulting insecurity and uncertainty induced adversarial counterbalancing to maintain or gain systemic positions and stabilize or renew the balance of power.

This was acute for non-self-reliant NWSs with inadequate capabilities that relied on nuclear forces to manipulate adversarial threat perception of insecurity and uncertainty through offensive military capabilities and strategies to limit adversarial hegemony and counterbalance with low-yield nuclear forces for deterrence, coercion, and counterforce targeting. Such balancing may proffer power disproportionate to means even absent an acute threat or ASMs.[38] Despite a nonnuclear threat context and diminished reliance on nuclear forces in articulated policy, nuclear force revaluation at the implementation stage thus also characterized the post-Cold War context characterized by adversaries balancing American dominance, Russian resurgence, and Chinese ascendancy.

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33 Allying with a powerful state with rising, expansionist, and offensive strategies.

34 ASMs or weakening adversarial ASMs.

35 The development of military capabilities to manage threats.

36 Threat to retaliate against attacks on allies even if not directly threatened. See Montgomery, 2016.

37 A2 challenges exclude forces whereas AD challenges present barriers to theaters and operations by attacking vulnerabilities, resisting objectives, and imposing costs. See Freier, 2012.

38 Threats may be deterred or defeated by military or non-military measures other than indigenous military capabilities (e.g., allied security guarantees). See, e.g., Sokov, 2002.

Such revaluation shifted competition to the tactical level—illustrated by hybrid and proxy conflicts, limiting the utility of nonnuclear forces. This encouraged defensive nuclear force modernization to stabilize systemic positions and reduce competition, and offensive nuclear and nonnuclear force modernization to fuel uncertainty and insecurity and renew systemic positions and the balance of power. But the nonnuclear–prevailing threat context and absence of direct threats questions power projection and such reliance on nuclear forces. The research shows that NWSs do so to ensure dominance, pursue power, deter challengers, and show projection capacity. What states do in that case is telling of balancing and, therefore, research insights should be revealing.

Using a comparative case study method[39] and an inductive analytical review[40] of the articulation and implementation[41] of supply[42] and demand[43] policies by mediating domestic structures as input measures[44] and military capabilities across threats as output measures,[45] the research examines state–level policies to explain balancing of real and perceived external military threats, including adversarial relative gain, conditioning relative military power. The research finds that policy incongruities diminish balancing effectiveness[46] and credibility absent the threat or use of nuclear forces and increase adversarial relative gain through nonnuclear deterrence and conflict due to inadequate

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[39] Understanding single or multiple cases by combining qualitative and quantitative data to describe or test or create theory. See Yin, 2014; Eisenhardt, 1989; Strauss, 1987; Glaser and Strauss, 1967.

[40] Developing causal links by defining phenomena and comparatively examining cases vis-à-vis explanatory arguments continuously reformulated to examine and exclude facts that defy but refine the argument, limit explanatory applicability, and ensure causal homogeneity. See Tacq, 2007; Robinson, 1951; Znaniecki, 1934. But see Goldenberg, 1993.

[41] State domestic structures articulate policies at the articulation stage and implement policies at the implementation stage. See Van Dijk, 2001 and 1997; Luhmann, 1990; Foucault, 1981.

[42] Policy outputs including those in Table 3-3.

[43] Policies articulated by domestic structures vis-à-vis threats.

[44] Policies determining resources allocated conditioning capacity.

[45] Quantitative and qualitative outputs conditioning capacity.

[46] The research approach does not sysmetically study military operations but examines policies to supply adequate military capabilities to accomplish missions for security. The research assumes that NWSs act optimally to supply adequate military capabilities.

nonnuclear forces. Incongruities result in underbalancing and military asymmetries due to the reduced capacity to accomplish missions with diminished security as a derivative of power and, thus, the ability to balance efficiently (i.e., accomplish military missions).

Diminished effectiveness and credibility of conventional deterrence and conflict capacity may increase reliance on nuclear forces to deter nonnuclear threats but with diminished utility to security relative to adequate nonnuclear forces. That increases with acute external military threats, the absence of ASMs, the perceived utility of nuclear forces, or cost-effective security through nuclear forces. Adequate nonnuclear forces increase utility to security and, thus, are a necessary but insufficient condition[47] of balancing, with adequacy of military capabilities vis-à-vis the mediating variables[48] explaining balancing. The research shows that internal balancing is preferred to external balancing and bandwagoning, NWSs balance against threats including real and perceived power even absent direct threats, and while military power distribution is dispositive, threat perception is conditioned by geographic proximity and offensive capabilities and strategies with asymmetries from inadequate military capabilities driving underbalancing.

The research comparatively examines American, Russian, and Chinese balancing to address the research question and explain why, despite a nonnuclear threat–dominated context and the impracticality of, and diminished reliance in articulated policies on, nuclear forces, Russia and China pursued offensive capabilities and strategies and their nuclear reliance at the implementation stage increased, reducing self-help. The research also explains why American nuclear reliance decreased, capitalizing on greater self-help.

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[47] Adequate nonnuclear forces, and thus effective conventional deterrence, is a necessary condition for efficient balancing but cannot guarantee it and thus is an insufficient condition because, for example, a NWS may rely on the threat or use of nuclear forces for nonexistential threats.

[48] They link the independent and dependent variables. Demand policies are the mediating variables.

The research examines domestic policies that seek to balance with military capabilities and capitalize on self-help, limit conflict escalation, and strengthen arms control and strategic stability. The research shows that nuclear force reliance diminished and was more efficient due to nonnuclear threat assessments and reactive and proactive[49] supply and demand policies convergent[50] on reliance on adequate nonnuclear forces for nonnuclear threats and nuclear forces for existential threats[51] and limiting escalation.

Table 1-1: U.S.–Soviet/Russian Arms Control

Initiative	Year	Type	Reduction Levels		
			Warheads	Total Platforms	Deployed Platforms
SALT I	1972	Bilateral	Froze nuclear forces at treaty–date levels.		
SALT II[a]	1979		Reduced all delivery vehicle types to 2,250.		
INF[b]	1987		Eliminated nuclear and nonnuclear ground–launched ballistic and cruise missiles with intermediate ranges (500–5,500 km.).		
START I[c]	1991		6,000	1,600	-
START II[d]	1993		Banned MIRVs on ICBMs.		
PNIs	1991	Unilateral	Proportional TNW reductions.		
SORT[e]	2002	Bilateral	-	-	1,700–2,200
New START	2010		1,550	800	700

[a] - not ratified by America because of the Soviet invasion of Afghanistan in December 1979.
[b] - terminated in 2019 following Russian non-compliance.
[c] - removed 80% of all strategic nuclear forces (expired in 2009).
[d] - terminated in 2002 after Russian withdrawal in response to the U.S. withdrawal from the ABM Treaty.
[e] - superseded in 2010 by New START.

Arms control evolved with balancing policies. While arms control exhibited periods of prominence in articulated policy, the implementation stage exposes a nuanced balancing story. Nuclear forces remained the main Russian deterrent against adversarial nuclear and superior nonnuclear threats. Though American nuclear reliance diminished, thereby affording arms control flexibility, high Russian reliance hindered arms control,

[49] Proactive policies address incongruities in the policy cycle for efficient balancing whereas reactive policies react to incongruities or external factors like threats that may encourage underbalancing.
[50] Convergence is coordination to supply adequate military capabilities for deterrence and conflict with the greatest possible self-help and lowest costs, and vice versa with divergence.
[51] Existential threats threaten the existence of an actor and change its national interests like political independence. See Walter, 2016. The threat to use nuclear forces in defence of vital interests, even if involving a nonnuclear threat, is inherently credible. See Forsyth et al., 2010; Lebow, 1981.

particularly as Russia shed its nuclear force and struggled to supply adequate nonnuclear forces for nonnuclear threats. In turn, despite its increasingly adequate nonnuclear forces, China broke with historic practice and modernized its nuclear force and was reluctant to pursue arms control not least until America and Russia reduced their nuclear forces. As Table 1-1 outlines, bilateral arms control was implemented more often than unilateral or multilateral efforts were despite discussions to include China.

1. Balancing

Which variables explain NWS balancing through deterrence and conflict? The explanatory model posits the adequacy of military capabilities across threats as the independent variable,[52] security- and domestic structural-based mediating variables (the state–level "transmission belt" between systemic constraints and policy (Zakaria, 1998)), and balancing as the tested dependent variable. The variables interact or not to increase or reduce balancing efficiency. The research tests an explanatory model[53] about balancing during shifts in adequacy of military capabilities in the context of the mediating variables and low to high reliance on nuclear forces and high to low adequacy of nonnuclear forces and vice versa. Reduction of reliance on nuclear forces, namely during episodic periods (or when domestic structures or external factors drive atypical policies) and security contexts dis-favouring nuclear forces, contribute to arms control and strategic stability.

Per realism, policy shaped by anarchy, relative power, strategic culture, and other states' strategies is articulated and implemented by domestic structures for the state as a unitary actor vis-à-vis threats to explain balancing upon available means (but not out-

[52] This variable changes to test the effect on the dependent variable, the variable tested.

[53] Explanatory models test causal arguments that specify how and why certain phenomena occur and alter an output—balancing—by identifying input changes—supply and demand policies.

comes) conditioned by a relationship between the state and the anarchic system because domestic structures explain security policy as a function of power with systemic effects (Waltz, 2010 and 1959; Lobell et al., 2009; Taliaferro et al., 2009; Baylis et al., 2008; Rathbun, 2008; Goldstein, 2003; Schweller, 2003; Telhami, 2003; Rose, 1998; Snyder, 1991). The regime type and individual decision-makers are not dispositive as the anarchic system creates the same incentives for all states. Power is leveraged through policies and variation explains military asymmetries with the anarchic system indirectly causal of balancing and policy directly causal, and self-reliant states better placed to balance (Waltz, 2010; Rathbun, 2008; Schweller, 2006; Taliaferro, 2006; Sterling, 1997).

Policies that drive the supply and demand of military capabilities are the proxy by which balancing is assessed. Demand policies (the mediating variables) that domestic structures articulate and implement conditioned by threats establish the quantitative and qualitative supply, and therefore the adequacy, of military capabilities across threats (the independent variable) for balancing (the dependent variable). Balancing therefore helps explain strategic stability, conflict escalation, and arms control or lack thereof.

Threats drive balancing. Real threats are likely, whereas perceived threats can drive demand and reliance on a military capability (e.g., perception of a threat may fuel reliance on nuclear forces, assuming resolve[54] to use them). Threat perception is driven by adversarial geographic proximity and offensive capabilities and strategies (or perceived as offensive) with military asymmetries from inadequate military capabilities fomenting underbalancing. More adequate military capabilities diminish the acuteness of, offset, or negate a threat. NWSs thereby balance real and perceived threats including

[54] Resolve to use military capabilities is an abstract concept subject to misperception and, therefore, not examined. Consider Mazarr, 2018.

relative power. Demand for, and reliance on, nuclear forces increases as the acuteness of threats rises and/or if nonnuclear forces are inadequate, particularly without ASMs or as NWSs perceive threats to undermine or negate their nuclear or nonnuclear deterrent.

The research examines policies to elucidate how domestic structures converge or diverge on the articulation and implementation of policies conditioned by threats and determinative of balancing but does not analyse the motivations of domestic structures or leaders (Baldwin, 1997; Waever, 1995; Reynolds, 1989). Domestic structures may pursue balancing that diminish utility to security. The research examines why but assumes states act optimally to generate forces for balancing (Glaser and Kaufmann, 1998). The research thus examines how supply and demand policies regarding military capabilities condition security, often in contradiction with prevailing threats, and seeks to examine and redress incongruities between threats and military capabilities with implications for security.

Threshold of use is the point at which, absent a military or non-military ASM, the effectiveness of a military capability vis-à-vis a threat outweighs the cost of use. The threshold varies with the effectiveness of achieving missions with the greatest success and lowest costs. The higher the effectiveness the wider the spectrum for reliance and the lower the threshold of use. If a military capability cannot achieve its use, or if the cost of use is too great without an ASM, the spectrum of use diminishes and threshold of use increases. Nuclear forces have a limited spectrum and high threshold of use. States are also concerned with threats that diminish the adequacy of capabilities or drop below the threshold of use (e.g., HDBTs and A2/AD challenges). Hence, policies that limit the use of force or make strategies and capabilities transparent, coupled with political strategies to defuse threats, help induce mutual reduction of reliance and raise the threshold of use.

1.1 Utility of Nuclear Forces

Nuclear forces remain relevant post-Cold War even though they have not been used in conflict since 1945. Since, nuclear forces have been used for direct deterrence, extended deterrence, to dissuade adversaries and partners from nuclear forces, and to defeat[55] threats if deterrence fails (Forsyth et al., 2010; DOD, 2008). Nuclear forces deter through adversarial restraint to support strategic stability (Forsyth et al., 2010). However, nuclear forces are militarily impractical in a post-Cold War dominated by nonnuclear threats, except for deterring existential threats and escalation to nuclear use. Still, nuclear forces are proliferating and relied on in novel ways. And while they have not been used in decades, it does not mean that that may not happen again, particularly with reliance on low-yield nuclear forces for coercion, deterrence, and counterforce targeting.

Buttressed by interstate peace facilitated by nuclear forces, conflict shifted from between states to within them, with nearly 90% being civil wars in failed or failing states (Tierney, 2015). There is thus a need to question the utility of—and reliance on—nuclear forces, particularly to deter and defeat nonnuclear threats. Indeed, while nuclear forces command attention and generate fear, their utility for conflict is negligible, because, apart from existential threats, the damage they inflict is too great for the threat of their use to be credible, so they support defensive but not offensive strategies (Sokov, 2014; Bergman, 2010). And while nuclear use is to be avoided, it does not render nuclear forces useless. They are useful for deterrence, which explains their proliferation (Forsyth et al., 2010).

Because of their unparalleled destructive capacity, nuclear forces cause significant damage and thus costs are "paid up front" and not through attrition as with conventional conflict (Forsyth et al., 2010). Hence, nuclear forces negate inter-NWS conflict (Forsyth

[55] Removing a threat's choice of action. See Johnson et al., 2002.

et al., 2010; Waltz, 2010). And while certain nonnuclear forces approach nuclear force destructiveness (e.g., fuel–air explosives), a certain symbolism is associated with nuclear forces that induces adversarial restraint (Forsyth et al., 2010; Tannenwald, 2007).

While conflict remains, war as battle in a field or a deciding event no longer exists (Smith, 2006). Nuclear forces contributed to that and created a *deus ex machina* that stops conflict by destroying the adversary's people and ability to make conflict (Smith, 2006). Mass industrial armies are no longer effective because they are easy targets, even though victory through nuclear forces comes at a price too high (Smith, 2006). Their utility thus lies in deterrence and not reliance for conflict except existential threats. Because first-use of nuclear forces against a NWS or its allies may result in retaliatory devastation (i.e., self-deterrence), NWSs do not—relative to nonnuclear forces—efficiently capitalize on self-help through nuclear use, nuclear counterforce targeting, or nuclear coercion.

The threat context supports reliance on nuclear forces as a general deterrent[56] of NWSs because of prevailing nonnuclear threats. Most threats fall below the threshold of nuclear use and operate at the tactical level[57] against which nuclear forces are ineffective and disproportionate while the conflict escalation effects may lead to unacceptable costs (Smith, 2006). As no contingency legitimizes nuclear reliance other than deterrence of existential threats and escalation to nuclear use, they have negligible military utility and raise the risk of nuclear threats in a proliferated world (Paul, 1995; Blechman and Fisher, 1994). Nuclear forces thus play a negligible role in deterring and defeating threats and balancing power and do not carry coercive power (Paul, 1995; McNamara, 1983).

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[56] Disincentives to attack outweigh incentives, thereby strengthening strategic stability. See Forsyth et al., 2010; Morgan, 1983.

[57] Smaller, direct engagements to achieve limited military aims, whereas the strategic level focuses on political objectives through longer-term military action.

Though nuclear forces have a restraining effect on interstate relations as between Pakistan and India[58] (Lambeth, 2012), nuclear deterrence is not a panacea, particularly against nonnuclear threats, because adversaries will adjust their balance of power, which may induce an arms race,[59] resort to HDBTs or ASMs, or revaluation of WMDs (Schulte, 2013). Still, NWSs are unlikely to eliminate nuclear forces if the adequacy of their or adversarial forces or uncertainty about adversaries compels retaining or relying on them.

Though nuclear forces have limited utility, NWSs rely on them in varied ways, such as propping up the state[60] (e.g., North Korea and Pakistan), for status or coercion, or to challenge or change the power balance (e.g., Russia and China) (Schulte, 2013; Bluth, 2012). Alarmingly, there is a shift toward reliance for limited counterforce deterrence and targeting rather than general deterrence and countervalue targeting that dominated the Cold War. This is dangerous because the counterforce use of low-yield nuclear forces is easier to accept but legitimizes the threat or use of nuclear forces in low–intensity missions with uncertain escalation effects (Sokov, 2002; Schelling, 1959).

A mixed nuclear–conventional deterrence strategy is more effective and imposes costs from the nuclear or nonnuclear retaliatory response greater than the gain sought (Smith, 2006). But nuclear deterrence rests on the certainty that nuclear strikes follow conventional deterrence failure (Smith, 2006), assuming the resolve to do so, or against an existential threat. But a threat may pre-emptively attack if motives are defensive, as the alternative is high losses. Hence the greater utility of conventional deterrence by denial (preventing objectives) rather than by punishment (imposing unacceptable costs to

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58 Nuclear forces steadied the relationship by reducing the likelihood of interstate war. See Forsyth et al., 2010; Ganguly, 2008; Kapur, 2008.

59 Competition for superiority in military capabilities.

60 Nuclear forces restrain external behaviour and facilitate internal actions. See Forsyth et al., 2010.

aggression) (Betts, 1985). Peace in a nuclear world is thus not the absence of conflict, as conflict is inevitable, but rather not choosing nuclear use (Smith, 2006). Understanding that balancing with adequate military capabilities strengthens deterrence is needed, specific to each NWS, and uncertain despite efforts to understand it (Payne, 2001).[61]

1.2 Utility of Nonnuclear Forces

Nonnuclear forces play a key role in a context dominated by nonnuclear threats. The unparalleled destructive capacity of nuclear forces, however, allows NWSs to ignore the adequacy of their nonnuclear forces insofar as NWSs assign nuclear forces missions that adequate nonnuclear forces more effectively accomplish. While nonnuclear forces deter and defeat nonnuclear threats and facilitate more efficient balancing, they are ill-suited for all nonnuclear threats. For example, America was unprepared for nonnuclear threats like terrorism (Sweetman, 2014). The issue is that domestic structures prepare for anticipated threats but not those that play to weaknesses (Smith, 2006).

Adequate military capabilities offer temporary advantage as adversaries imitate, offset, or negate them (Betts, 1985). As adequate nonnuclear forces are necessary for conventional deterrence to be credible absent the threat or use of nuclear forces, NWSs lose by dispensing nuclear forces, hindering arms control and global zero.[62] This stresses the importance of adequate nonnuclear forces to diminish nonnuclear conflict and the threat or use of nuclear forces (Larsen and Kartchner, 2014; Betts, 1985).

Reducing reliance on nuclear forces is constrained if nonnuclear forces cannot deter or defeat threats, particularly existential threats or those that undermine deterrence.

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[61] Inverting Payne (2001), understanding balancing identifies objectives, describes factors affecting policies, and assesses gaps between military capabilities needed and those available.

[62] An initiative to eliminate nuclear forces.

Adequate nonnuclear forces are needed to broaden their spectrum of use and raise the threshold of use of nuclear forces. Balancing is thereby more efficient as nuclear forces are impractical against nonnuclear threats and as the NWS diminishes reliance on nuclear forces except for existential threats and escalation. But if adversarial military capabilities undermine deterrence or are perceived to, a NWS may increase reliance on nuclear forces. Therefore, in a nonnuclear–threat context, adequate but not necessarily significant nonnuclear forces below the threshold of conventional deterrence and threatening or using nuclear forces are a necessary but insufficient condition of efficient balancing.

That threat context, the denuclearization of interstate relations, and diminished interstate conflict (Cohen, 2014) support a shift toward defensive last resort postures, whereby nuclear forces do not assume nonnuclear missions except existential threats. But adequate nonnuclear forces are not a certainty due to policy incongruities and evolving threats, so there are nuclear force–only missions (Schulte, 2013; Schelling, 1966).

Akin to the Cold War, NWSs are undeterred below the threshold of nuclear and conventional deterrence which reduces advantage and conflict management, undermines stability, and increases reliance on destabilizing capabilities while fuelling arms races and hybrid and proxy conflicts in non-NWSs (Krepon, 2003; Reynolds, 1989). NWSs must convince a threat of the costs of aggression to maintain the burden of conflict and fear of retaliation with the adversary, rather than a fear of escalation in the NWS which may, thereby, respond to even ambiguous provocation and not risk conflict (Mitchell, 2015).

Nonnuclear forces also present challenges to efficient balancing due to an arms race or the greater propensity for conflict (Acton, 2014a and 2013a; Saalman and Acton, 2013; Ria Novosti, 2012). Indeed, nonnuclear force modernization foments adversarial

reliance on nuclear forces or offsetting symmetric or asymmetric forces[63] with effects for strategic stability and escalation, as more adequate nonnuclear forces deter conflict but make conflict harder to manage (Acton, 2014a and 2013a; Payne et al., 2013). Hence, how adversaries perceive nonnuclear forces complicates efforts to reduce reliance on the threat or use of nuclear forces for more efficient balancing (Saalman and Acton, 2013).

Military modernization[64] raises the bar at which nonnuclear forces are adequate, thereby potentially increasing adversarial reliance on nuclear forces, particularly for acute threats or those perceived as undermining deterrence (e.g., Russia tempered arms control and deployed survivable nuclear forces vis-à-vis American MD and PGS) (Acton, 2014a; Ria Novosti, 2013a). Military modernization can help asymptomatically assign missions away from nuclear forces but, in a security dilemma, it can ossify or mutually increase reliance on nuclear forces because of the real or perceived threat modernization poses.

Growing diffusion of power and uneven military capabilities drive offensive and defensive strategies but incense the security dilemma. Whereas the literature tends to posit that the strategies are mutually exclusive, the research shows states may pursue both. The cases pursued defensive strategies to maintain their status quo, particularly in their sphere of influence,[65] despite adversarial counterbalancing, and offensive strategies driven by mutual uncertainty and insecurity to renew the balance of power or arrest and reverse competitors but this fuelled counterbalancing. The literature does not adequately address why underbalancing due to inadequate forces—not just geography—encourages strategies to maintain or contest systemic positions which gap the research addresses.

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63 Symmetric capabilities entail military-on-military confrontation whereas asymmetric capabilities are discrete, can couple with symmetric capabilities, leverage advantages to exploit weaknesses, and seek the initiative. See Metz and Johnson, 2001.

64 The adaptation of military capabilities to a threat context to achieve policy objectives.

65 A region characterised by the influence of one power to the exclusion of others. See Hast, 2014.

In power competition, Cold War direct conventional deterrence coupled with a flexible nuclear response is less plausible as interstate conflict among NWSs is unlikely. Therefore, general deterrence coupled with extended conventional deterrence for non-existential threats, decoupled from nuclear threats and geared to strategic long-term balancing while retaining deterrence capacity, is more credible and effective, particularly against near–peer adversaries (Haffa, 2018). Counterbalancing thus focuses on curbing extended deterrence by, for example, A2/AD challenges, but which encourages hybrid and proxy conflicts. For example, Eastern Europe and the South China Sea were the locus of power conflict. American deterrence depended on forward–deployed regional forces as in the Cold War to contain Russian and Chinese strategies. Indeed, American use of non-nuclear forces elsewhere, even if not directly threatened, demonstrated that deterrent capacity (Haffa, 2018) and power projection to also support American dominance.

Nonnuclear forces are thus more adequate to deter threats that dominate post-Cold War and more credible in conflict, and add to power through security to counterbalance military advantage, particularly in defensive strategies that deter and deny adversarial relative gains, communicate peaceful intent, and limit the security dilemma and arms races. As nonnuclear forces proffer effective self-help, they expand realizable preferences through balancing and thus relative gains in the balance of power under anarchy.

1.3 Explanatory Model

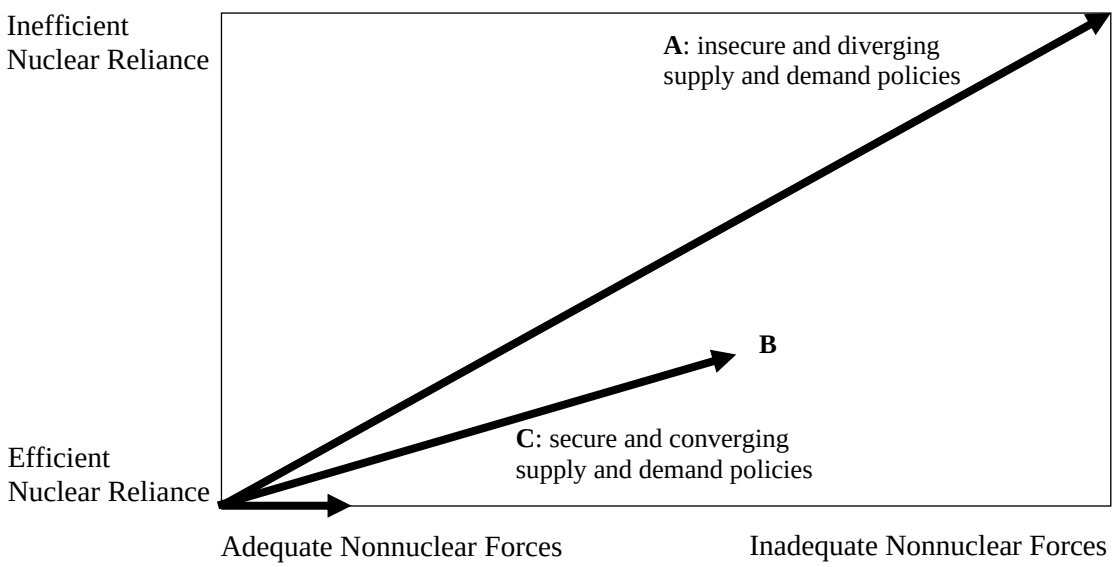
If nonnuclear forces are adequate to deter and defeat nonnuclear threats in lieu of nuclear forces, and if domestic structures converge toward policies that support adequate nonnuclear forces to deter and defeat nonnuclear threats in lieu of nuclear forces, reliance

on nuclear forces is more efficient, balancing through deterrence and conflict is more effectively capitalized through self-help, and arms control is more likely.

Figure 1-1[66] shows the efficiency of nuclear reliance and adequacy of nonnuclear forces on an X–Y axis, on the basis of the linear equation $y = (m_1 + m_2)x$, where:

- y is the degree of efficiency of NWS reliance on nuclear forces (between 0 and 1, with 0 being efficient and 1 being inefficient);
- m_1 is the degree the NWS is secure or insecure vis-à-vis real and perceived threats (between 0 and 0.5, with 0 being secure and 0.5 being insecure);
- m_2 is the degree domestic structures converge or diverge on supply and demand policies to support adequate military capabilities vis-à-vis threats (between 0 and 0.5, with 0 being convergent and 0.5 divergent); and
- x is the adequacy of nonnuclear forces across nonnuclear threats (between 0 and 1, with 0 being adequate and 1 being inadequate).

Figure 1-1: Explanatory Model Illustration



66 The explanatory model draws on Baradello, 2011.

Figure 1-1 posits hypothetical paths beginning with efficient nuclear reliance (y = 0) and adequate nonnuclear forces (x = 0).

Path A exhibits insecurity (m_1 = 0.5) and domestic structures diverging on supply and demand policies (m_2 = 0.5). Despite attempts to shift to adequate nonnuclear forces, they remain inadequate across nonnuclear threats (x = 1), reliance on nuclear forces is high and inefficient (y = 1), and arms control is unreliable or shun. Russia exemplified this path with ineffective efforts to modernize nonnuclear forces, high and inefficient reliance on nuclear forces, and unreliable arms control—particularly compared to Path C.

Path B is a middle path exhibiting relative insecurity (m_1 = 0.5) and domestic structures somewhat convergent on supply and demand policies (m_2 = 0.25). Reliance on nuclear forces decreases and is more efficient (y = 0.375) than Path A as the slope shifts to more adequate nonnuclear forces (x = 0.5) but not as Path C, and arms control may be shun. China exemplified this path with more adequate nonnuclear forces, arms control marginalization, and growing reliance on nuclear forces because of perceived insecurity.

Path C exhibits relative security (m_1 = 0) and domestic structures convergent on policies (m_2 = 0). As the slope shifts to adequate nonnuclear forces (x = 0.1), reliance on nuclear forces decreases and is more efficient (y = 0) than Path B and arms control may be pursued. America exemplified this path with relatively adequate nonnuclear forces, low reliance on nuclear forces, and arms control engagement.

As balancing is a continuation of policy, policies are a benchmark against which to assess balancing in a time period and can be compared across cases as states respond to threats in varied ways due to domestic structures. If assessed that efficiency of reliance on nuclear forces and the adequacy of nonnuclear forces vis-à-vis threats is closer to 0 in

Figure 1-1, this is sufficient explanation, prediction, and prescription (Glaser and Kaufmann, 1998). If closer to 1, self-help is not maximised because of underbalancing due to inefficient deterrence and conflict. Because net assessments[67] are primarily qualitative, readers must not overestimate the precision required for the research assessment of balancing. If, based on the concepts and the policies outlined, balancing is assessed to efficiently deter and defeat articulated threats with greater self-help, then the NWS should achieve greater power through security, and vice versa. This net assessment approach is consistent with customary applications to military capabilities, particularly nuclear forces, substantiated, as the research does, through the comparative analysis as it is more accurate to assess relative balancing capacity across cases. This matters as the argument has implications for theory and practice and, thus, the research comparatively assesses balancing to explain balancing in similar contexts (Glaser and Kaufmann, 1998).

2. Argument

The research examines why, despite a post-Cold War threat context dominated by nonnuclear threats and the impracticality of, and diminished reliance in NWS articulated policies on, nuclear forces, NWSs underbalance—particularly by increasing reliance on nuclear forces at the policy implementation stage and pursuing offensive strategies—with diminished utility to power because of reduced security with systemic implications.

As states mistrust others under anarchy, they leverage military capabilities for power through security to deter external military threats, including counterbalancing power driving insecurity and uncertainty accentuated by multipolarity, hindering states that underbalance. Despite a prevailing nonnuclear threat context and even when not

[67] Examine the capacity of military capabilities to support balancing. Tellis, 2000.

directly threatened, as anticipated by balance of power, states internally balance including upon nuclear forces and offensive strategies with greater competition and arms control marginalization. This limits external balancing and fuels hybrid and proxy conflicts. They do so to challenge the status quo, avoid relative losses, fuel adversarial uncertainty and insecurity, and delay, frustrate, and undermine adversarial power. Non-self-reliant states that underbalance suffer relative loss and perceive threats from power asymmetries vis-à-vis others compounded by inadequate military capabilities driving underbalancing and adversarial geographic proximity and offensive military capabilities and strategies.

State–level domestic structures explain threat identification and balancing policy determinative of military capabilities and strategies for power through security responsive to the anarchic system even when not threatened. Internal balancing is preferred in multi-polarity with military asymmetries. The unitary rational state leverages policy, despite polarity and hegemony, for self-help to direct the anarchic system to its realizable preferences, with self-reliant states better placed to erode adversarial military advantage and manipulate adversarial threat perception through balancing. Divergence because of the inability or unwillingness of domestic structures to articulate and implement efficient balancing policies results in diminished relative gains due to underbalancing and reduced utility to power through unrealized preferences with self-help, and vice versa.

Nuclear forces do not proffer effective self-help and reduce realizable preferences with balancing and, thus, relative gains in the balance of power. Because of such limited utility, adversaries perceive superiority with adequate nonnuclear forces and defensive strategies. This raises the risk of failure in conventional conflict without threatening or using nuclear forces, while mitigating counterbalancing and the security dilemma. But

this shifts competition to hybrid and proxy conflicts, meaning scarcity of interstate threats relates to effective conventional deterrence. NWSs thus risk military asymmetries and underbalancing with inadequate military capabilities and offensive strategies, particularly against nonnuclear threats, including due to less credible and effective deterrence.

Policies convergent on adequate nonnuclear forces support efficient balancing and afford confidence to diminish reliance on and reduce nuclear forces because nonnuclear forces are more adequate to deter and defeat threats as the threat or use of nuclear forces results in the least benefits and greatest costs. Incongruities in policy and balancing types diminish the effectiveness and credibility of balancing absent the threat or use of nuclear forces and increase adversarial gain through nonnuclear conflict due to inadequate non-nuclear forces. A NWS may thus allocate resources to nuclear forces to deter nonnuclear threats but with diminished utility to security. Hence, adequate nonnuclear forces are a necessary but insufficient condition of efficient balancing. Arguments will emerge from an analysis of the variables across cases to show which policies support balancing.

The argument is subject to the convergence of policies for adequate nonnuclear forces, and the insulation of policies that hinder the adequacy of nonnuclear forces. These constraints improve capacity for efficient balancing and thus greater self-help. Divergent policies constrain the adequacy of nonnuclear forces, ossify underbalancing, and marginalize arms control. Indeed, if domestic structures do not insulate policies that hinder the adequacy of nonnuclear forces, there is a tendency for underbalancing. Thus, during shifts to more adequate nonnuclear forces, reliance on nuclear forces for non-nuclear threats decreases and arms control is more likely—and vice versa. However, if the NWS is existentially threatened, or nonnuclear forces are inadequate, reliance on

nuclear forces and arms control marginalization may increase. As Table 1-2 outlines, convergent policies support efficient balancing and self-help. Inadequate nonnuclear forces or their devaluation due to adversarial defensive nuclear or offensive nonnuclear forces increase reliance on nuclear forces. Given the adequacy of and reliance afforded to nuclear forces, the research NWSs will not dispense with nuclear forces if others do not.

Table 1-2: Reactive and Proactive Supply and Demand Policies

Type	Policy	Description
Reactive Balancing Policies	**Budget**	Maintain defence spending to ensure adequate military capabilities for threats and at least parity with competitors.
	Threat Matrix	Post-Cold War threats demand prioritization of nonnuclear forces for nonnuclear threats.
	Security	Evolving threats demand shifts in military capabilities.
Proactive Balancing Policies	**Military Modernization**	Modernize nonnuclear forces to deter and defeat prevailing nonnuclear threats.
	Arms Control	Pursue arms control aimed at complying with international commitments, reducing nuclear deterrent–based relations, and encouraging other NWSs to follow suit.
	Doctrine and Technology	Threats compel a re-assessment of military capabilities for prevailing nonnuclear threats.

Note: such policies are examined in Sections II and III.

NWS balancing is more efficient during shifts to adequate and greater reliance on nonnuclear forces for nonnuclear threats, increasing self-help and affording assurances for arms control. But arms control may not result, particularly if the nuclear force size does not support it, or if adversarial military capabilities undermine deterrence or are perceived to. This can also help evolve interstate relations from a security–based dialogue defined by confrontation towards cooperation, but military asymmetries among NWSs due to military competition remain a hindrance.

The research shows American balancing focused on power projection even when not directly threatened to support dominance and deter challengers, including to contain

Russian and Chinese offensive strategies in Europe and Asia, respectively. Chinese and Russian balancing focused on contesting American dominance in Asia and Europe, respectively, and delaying, frustrating, and undermining her despite a context dominated by nonnuclear threats. Despite that context, their impracticality, and diminished reliance on nuclear forces in articulated policies, NWSs may underbalance by increasing reliance on nuclear forces at the policy implementation stage with reduced security to counter-balance by fomenting adversarial perceived insecurity and uncertainty.

These issues—often studied individually, but not necessarily jointly—result from the mediating variables next examined. This approach to examining balancing through the articulation and implementation of policies determinative of military capabilities across threats, including in non-Western contexts, for self-help through deterrence and conflict is operationalized herein and anchored in the realist approach.

2.1 Security-Based Mediating Variable

Balancing is conditioned by the anarchic system. States mistrust other actors in an insecure context that leverages military capabilities for security, which is a derivative of power, to deter external military threats and counterbalance relative military gain driving insecurity and uncertainty, through means available, to maintain systemic positions and erode military power. Balancing is therefore motivated by avoiding relative losses and to attain power through security vis-à-vis states, and the greater the capacity to do so, the less the relative military power of others (Schweller, 1994). Shifts in military capabilities are the principal determinants of distribution of military power and realizable preferences through balancing, conditioning balance of power and which may change an adversary's perception of one's capabilities and strategies as offensive but without leading to conflict.

Real and perceived security, as a derivative of power, depends a state's military capabilities. However, military capabilities vary, as does how states identify and respond to real and perceived threats to explain balancing. Security is not absolute but a spectrum, more or less. How states allocate resources to security, among policies, conditions how they articulate and implement policies for security by deterring and defeating real and perceived threats. Just as the deterrer's actions are dispositive, balancing depends on its effects on adversarial threat perception. NWSs balance even when not threatened, to deter and defeat real and perceived threats by balancing relative gains including out-of-region.

Multipolarity encourages balancing adversarial relative gains to arrest or reverse declining power, challenge the status quo, or thwart competitors, hindering states that underbalance and not necessarily rewarding those that overbalance.[68] Indeed, because states do not have equal means, sub-optimal policies condition the capacity to deter and defeat and foment military asymmetries. For example, inadequate nonnuclear forces undermined Russian conventional deterrence capacity and credibility, and thus its ability to deter and defeat nonnuclear threats. Assuming Russia had the resolve to use nuclear forces against nonnuclear threats, it relied on nuclear forces to deter and defeat certain nonnuclear threats (Sokov, 2002). Such reliance due to incongruent policies to explain underbalancing is impractical post-Cold War and adds little to power through security to deter and defeat prevailing nonnuclear threats and balance adversarial relative gains.

As there is no threat of conflict among established NWSs through self-deterrence, anarchy encourages internal offensive counterbalancing for relative power of adversarial military power, fuelling uncertainty and insecurity as anticipated by balance of power,

[68] Military capabilities beyond what is adequate for security vis-à-vis articulated threats resulting in diminishing returns to power through security.

including through hybrid and proxy conflicts, despite lacking deployment of significant forces. Further, as rising powers like China and Russia are counterbalanced by status–quo states like America, offensive strategies undercut security as status–quo states with defensive strategies reduce uncertainty and insecurity with deterrence by denial without fomenting the security dilemma resulting in a net gain to power through security (Glaser, 1997). However, while nuclear forces do not halt balancing, defensive strategies may be insufficient to convince adversaries to ignore the power balance (Lieber and Press, 2006).

Efficient reliance on nuclear forces requires nonnuclear forces adequate for non-nuclear threats, and thereby prevents surprise attacks, deters and defeats the range of non-nuclear threats, offsets adversarial symmetric and asymmetric military capabilities, and supports deterrence and retaliation, potentially against superior threats. Efficient reliance on nuclear forces should not necessarily result from nonnuclear forces replacing nuclear forces, but rather be the by-product of adequate nonnuclear forces being a more credible deterrent and response to nonnuclear threats, asymptomatically assuming missions otherwise assigned to nuclear forces (except targets difficult or impossible to destroy or disable) (Colby, 2010 and 2010b; Ford, 2010 and 2007; Sokolski, 2010).

2.2 Domestic Structural Mediating Variable

Balancing is conditioned by state–level domestic structures pursuing security and, thus, account for the articulation and implementation of policies by the state as a unitary rational actor through mediating domestic structures determinative of military capabilities responsive to external military threats, including system–level changes in the balance of power. Domestic structures help explain relative gains and losses through balancing with systemic effects, not necessarily outcomes or balances of power. As rational domestic

structures allocate resources to policies if the utility to security is greater,[69] the research examines supply and demand policies to increase relative power through security.

Domestic structures account for state–level shifts in capabilities and strategies vis-à-vis articulated threats in the anarchic system to explain shifts in the balance of power as power is leveraged with policies to direct the anarchic system towards state–level goals. Policy variation explains military power asymmetries and threat responses, including when adverse due to underbalancing. The articulation and implementation of policies depends on domestic structures operating in a defined regime type. The aim of examining domestic structures is to determine those that may or are unable or unwilling to determine policy. In all regime types, security policy is closed, often exempt from controls (Born, 2007; Dahl, 1985), and concentrated in the executive. NGOs can have input and are a medium by which to test policies (Tsypkin and Loukianova, 2009).

Policy is meant to focus domestic structures on power through security, but absent convergence the means may not be available to implement policy. The research examines underbalancing due to inadequate military capabilities with the implementation stage reflecting a nuanced story of relative NWS gains and losses to power through security. Domestic structures articulate or implement policies that underbalance by undermining the credibility and capacity of deterrence and increasing losses in conflict with escalation. The research does not examine the threat perceived by individual policymakers or threats to their ambitions. Rather, consistent with realism, domestic structures, for the state as a unitary rational actor, identify threats to security in policy and respond to threats through policy based on a cost-benefit analysis seeking to maximise self-help through realizable preferences and costs to threats through military capabilities and strategies (Larsen and

[69] The research assesses irrationality insofar as policies diminish utility to security, and vice versa.

Kartchner, 2014). Threats are thus perceived by states as unitary rational actors through mediating domestic structures that respond through balancing policies.

The domestic defence industry (DI) principally determines the supply of military capabilities (possibly supplemented by the import of external military capabilities), while demand policies advanced by domestic structures and conditioned by threats delineate the supply of military capabilities in articulated policy. If domestic structures converge on policies for adequate nonnuclear forces across nonnuclear threats, reliance on nuclear forces decreases, and vice versa. The research does not analyse the motivations of leaders or domestic structures as that does not answer the research question and there are important research limitations with doing so (Bueno de Mesquita, 1998; Reynolds, 1989).

Indeed, access to officials and state information is limited and subject to secrecy and censorship. The research relies on publicly available primary and secondary data to explain balancing but which may be incomplete or inexact as to variations in policies. However, this validates, as the research espouses, assessing balancing, as the research does, at the policy implementation stage where state secrecy is limited and interpretative primary and secondary data is more complete and exact. Nonetheless, the research is mindful of assumptions made regarding the aggregation of policy moreover it being the result of competing domestic structures (Bueno de Mesquita, 1998). Domestic structures acting rationally may produce policies with diminished utility to power through security.

3. Case Study Selection

The explanatory model and the research approach outlined in Chapter Three are applied to America, Russia, and China between 1991 and 2015. Identifying similarities among them is important for isolating differences that refine descriptive and prescriptive

arguments (Lipset, 1990). The NWSs were selected according to the most similar case design, meaning they share important similarities but show different outcomes on the balancing dependent variable, the variable tested (Gerring, 2007).

The cases share similarities, as examined in Section II. For example, they were NWSs party to the NPT and regional or global hegemons with nuclear and nonnuclear forces that differed in size and quality. They also engaged in efforts to modernize military capabilities with shifts in balancing through reactive and proactive balancing policies. A comparative analysis underscores three observations. First, Russia and America pursued arms control and all three cases varied modernization of military capabilities. Russia and America were the larger NWSs, embraced nuclear deterrence, and provided extended deterrence with implications for reliance on nuclear forces. While China did not pursue arms control, this was more a result of the size disparity with the nuclear forces of the other two NWSs. China maintained a nuclear deterrent of about 250 warheads despite modernizing nuclear and nonnuclear forces. Unlike Russia and America, China had a notably smaller nuclear force, only officially embraced nuclear deterrence in 1998, and never provided extended deterrence (not even to North Korea).

Second, in addition to being regional hegemons, each played global roles, namely vis-à-vis security. Despite variations in unilateral, bilateral, and multilateral engagement, they share similarities that allow comparing the mediating variables. The research thus refines its understanding of the interaction of the variables that explain balancing.

Third, notwithstanding U.S. and Soviet/Russian arms control and China's choice to not jump to strategic parity (or the possession of similar nuclear forces), their policies resulted in varying balancing apparent from the quantitative and qualitative data relevant

for comparative analysis. If balancing is assessed by changes in the supply and demand of military capabilities, then underlying policies are objective criteria to observe varying balancing over time and the proxy by which the research examines balancing.

Differences imbued the case studies, as Table 1-3 summarizes.

Table 1-3: Case Study Differences

Case	Interests	Domestic Structures	Security
U.S.	- remain a global superpower. - nonnuclear force superiority and nuclear parity. - arms control tied to Russian nuclear forces and U.S.–Russian bilateral relations.	- presidential regime type constrained by the Congress. - defence policy dominated by the executive branch. - superior DI and civilian control of military.	- adequate military to counter prevailing nonnuclear threats. - consumed by global efforts to counter terrorism. - uncertain how to engage China on nuclear issues.
Russia	- remain a global power. - achieve nonnuclear force parity with America. - arms control tied to U.S. nuclear forces and U.S.–Russian bilateral relations.	- presidential regime type. - Duma, public have little say. - security policy dominated by the Kremlin. - weak DI - influential military.	- inadequate nonnuclear forces. - consumed by internal unrest and regional instability. - high reliance on nuclear forces. - desire to engage China on arms control but needs America.
China	- become a global power. - achieve at least nonnuclear force parity with America. - likely converging arms control with America and Russia at lower force levels.	- party–dominated regime. - defence policy dominated by the Standing Committee and Politburo. - influential military. - modern DI.	- rapidly modernizing military. - primary concern is domestic unrest and regional hegemony. - likely engage U.S. and Russia on arms control if seen as an equal, namely vis-à-vis America.

4. <u>Contributions</u>

The research forms a contribution to the understanding of balancing relevant to security studies through both an argument and analytical approach anchored on the explanatory model that leverages and combines existing and new data, research methods, and theories applied in a comparative case analysis (including in understudied contexts) to produce findings. Further, it synthesizes, adds to, and tests existing works to provide new understanding and empirical data, and brings evidence to test theories of balancing while explaining the feasibility and limitations of balancing policies. Contributions also lie in empirically-based analysis of phenomena: detailed, analytical accounts of cases

informed by sources and interviews for how they articulated and implemented balancing policies in a period, providing categorizations of observed occurrences and correlating the results to show themes and reinforce the argument.

Because states are insecure under anarchy, per realism, they rely on their military capacity to deter and defeat threats with states relationally differentiated by their military capabilities undergirding the security dilemma and interstate competition that anchor the cycle of security and military capabilities. The research reinforces realism to show that the relative distribution of military capabilities through self-help conditions realizable preferences determining interstate power through security as a national interest and, thus, polarity. The research draws on realist literature to show that policies to pursue power through security with mediating domestic structures condition threat perception and distribution of military capabilities to produce balancing. Balancing has systemic effects whereby self-reliant states are better placed to balance. The research uses neoclassical realism to posit an explanatory framework to explain state behaviour and by identifying mediating domestic structures to explain balancing that imbues realism with explanatory and predictive capacity with the DI identified as the most consequential to balancing.

This realism–military power–policy approach matters because NWSs have the most leverage in the anarchic system and tend to balance despite polarity as anticipated by balance of power. Consistent with realism, policy drives military power and provides understanding to the empirical data and explains the how and why of the argument. The research posits a domestic structural explanation of balancing through military power with systemic effects by referring to variations in policies articulated and implemented through mediating domestic structures to identify and respond to threats with military

capabilities. The research thus provides an applied understanding of the empirical data to understand underbalancing by inefficiently increasing reliance on nuclear forces with diminished utility to power through reduced security with systemic implications.

Consistent with realism, the research shows states leverage military capabilities for power through security to deter external military threats, to include counterbalancing adversarial power, driving perceived insecurity and uncertainty compounded by multi-polarity, hindering states that underbalance. Despite prevailing nonnuclear threats, and even when not directly threatened, as anticipated by balance of power, the research shows NWSs internally balance upon nuclear forces and offensive strategies to challenge the status quo, avoid relative losses, fuel uncertainty and insecurity, and delay, frustrate, and undermine power. Domestic structures explain threat identification and balancing policy determinative of military capabilities and strategies for power through security responsive to the anarchic system even when not directly threatened. The unitary state leverages policy for self-help. Policy divergence resulting from the inability or unwillingness of domestic structures to articulate and implement efficient balancing policies results in diminished relative gains from underbalancing and utility to power because of unrealized preferences through self-help, and vice versa, as nuclear forces do not proffer effective self-help and reduce realizable preferences and relative gains in the balance of power.

Per neorealism, the research shows NWSs balance despite polarity and hegemony, and that internal balancing is preferred under multipolarity with military asymmetries. Multipolarity is less stable and inclined for power conflict and change, including through nuclear forces, to fuel enemy uncertainty and insecurity. Military capabilities condition realizable preferences through self-help to increase power through security and reduce

that of competitors with the erosion of military advantage and manipulation of adversarial threat perception using strategies on which policy is based. The research situates itself within neorealism and has explanatory and predictive ability in assessing how military capabilities implicate power through self-help to explain policy, assess strategies, and gauge the capacity for relative gains and limit uncertainty and insecurity. The research thereby validates the neorealist approach by helping understand which balancing posture a NWS may adopt through policies (but not necessarily power balances or outcomes).

In contrast with certain literature and in validating neorealism, as anticipated by balance of power, the research shows that, even if not directly threatened, rising powers counterbalance adversarial powers. China and Russia counterbalanced American real and perceived power through offensive military capabilities and strategies to also contest American regional power and delay, frustrate, and undermine American hegemony. In turn, America balanced, including out-of-region in support of allies through power projection, to preserve dominance and arrest and reverse competitors.

Great power balancing demands a re-assessment because of military asymmetries, limited bandwagoning and external balancing, and, pressing to the research question, revaluation of nuclear forces despite a nonnuclear threat context. The research shows that multipolarity and anarchy encourage balancing adversarial relative gains, hindering states that underbalance and not necessarily rewarding states that overbalance. Despite a non-nuclear threat context, no direct threat among established NWSs through self-deterrence, their impracticality, and diminished reliance on nuclear forces in articulated policies, the research shows NWSs may underbalance by increasing reliance on nuclear forces at the policy implementation stage to fuel adversarial perceived insecurity and uncertainty.

Validating neorealism, the research accounts for domestic structures to explain balancing, including by powers not isolated or contained by geography. The research also advances a means to distinguish defensive and offensive strategies through policies to explain for military capabilities beyond what is adequate for security vis-à-vis articulated threats and shifts in interstate military power. Further, the research provides an explanation for hegemons that do not necessarily engage in offensive strategies to maintain systemic positions (America), and how nuclear forces can foment adversarial perceived insecurity and uncertainty and constrain hegemony (Russia).

The research examination of domestic structures that neorealism takes for granted helps explain balancing and causes of suboptimal policies resulting in underbalancing, implicating relative power and responses to threats. The research thus examines domestic causes of balancing with interstate implications despite evolving polarity and nuclear proliferation and modernization, and addresses why underbalancing due to inadequate military capabilities encourages offensive and/or defensive strategies to keep or contest regional or global systemic positions. As the cases show, this matters due to balancing under multipolarity, power diffusion driven by renewing the balance of power, military asymmetries, limited bandwagoning and external balancing, and intervention by powers when not directly threatened to ensure or contest dominance and deter rivals. Further, the cases balance to delay, frustrate, and undermine dominance, and revalue nuclear forces despite prevailing nonnuclear threats to manipulate adversarial threat perception.

The research accounts for how sub-optimal policies undermine balancing and fuel asymmetries. Substantiating neoclassical realism, it advances a methodology to assess and calibrate balancing as a continuation of policy—a benchmark against which to assess

balancing and which can be compared across cases. This has systemic effects because states respond to threats in different ways due to domestic structures undergirding relative gains and losses that neorealism takes for granted to bridge theory and reality. Inadequate military capabilities encourage the perceived utility of nuclear forces to the detriment of nonnuclear forces and external balancing. As inevitably there are states that under-balance, this may encourage nuclear force revaluation for balancing even if not directly threatened, particularly through destabilizing counterforce strategies, shifting competition to tactical–level hybrid and proxy conflicts, denying freedom of operation, and curbing extended deterrence. The research uses neoclassical realism to better understand threat perception as a function of military power asymmetries driving balancing compounded by geographic proximity and offensive military capabilities and strategies.

The topic is relevant because of the primary securitizing role of NWSs in the anarchic system and the need to understand balancing in a context dominated by "less–than–vital" threats operating below nuclear and conventional deterrence. The stability-instability paradox means that NWSs are compelled to pursue interests through tactical contingencies. Arguments help understand balancing and utility to security, the efficient allocation of resources, and the limitation of hybrid warfare and proxy conflicts driven by interstate stalemates. The topic matters because, despite little chance of interstate conflict, policy articulated and implemented by domestic structures responsive to articulated threats, conditions balancing for power through security with deterrence and conflict implicating strategic stability, the security dilemma, arms control, and escalation.

Leveraging literature on realism and assessing efficiency of military capabilities like Tellis (2000) and Paret (1989) on combat analysis, Biddle (1998) on materiel, Glaser

(1997 and 1998) and Lewis (1998) on resources, and Bracken (2006) on the perception of power through forces, the research assesses policies as input measures that condition the capacity to accomplish missions (efficiency) without the need for combat or bureaucratic analysis (Glaser and Bracken) or precise measurement due to qualitative net assessments of balancing for security (pursuant to Glaser and Kaufman (1998), Katzenstein (1996), and Keohane (1993)) by examining real and perceived threats, including real power and perceived power, and the means to achieve security with capabilities in a specific period.

In contrast with Nexon (2009), Vazquez (1997), Schroeder (1994), and others and consistent with Parent and Rosato (2015), the research validates realism to explain great power balancing under anarchy, primarily through internal balancing and imitation, to counterbalance adversaries, often to the detriment of external balancing unless it proffers relative gains. The research contributes to balancing literature by providing empirical data to substantiate balancing and its prevalence as self-help irrespective of polarity and geography as capable NWSs will balance competitors and their geographically proximate forces and shun bandwagoning and buck-passing.[70] The research also contributes to neo-realism to show that allies may ignore their military's adequacy and buck-pass under multipolarity but not necessarily against regional hegemons (e.g., China and Russia).

In competition, states are constrained by the adequacy of their military for power. The research reinforces realism's premise that powers internally balance as states worry about their security and counterbalance military asymmetries with varying effectiveness. To show this, the research examines American, Chinese, and Russian balancing between 1991 and 2015 as these cases are predicted by the conceptual analysis and support realist arguments that powers internally balance adversarial military power (Lieberman, 2005).

[70] Allies let powers balance threats (i.e., great power behaviour).

The research also substantiates realism's argument that, despite diplomacy, states put little stock in external balancing as it requires reliance on others and view their own and adversarial alliances as unreliable (Parent and Rosato, 2015). As the research shows, and in contrast with literature, military asymmetries with rising powers drive inter-power competition for security through internal balancing. The research provides a means to identify and assess strategies with policies, and validates the reduced deterrent value of offensive strategies that communicate malign intent, foment arms races and the security dilemma, and have destabilizing effects. In contrast, defensive strategies produce a net gain in deterrence and reduce uncertainty, the security dilemma, and counterbalancing that undermine power. But in diverging with neorealism, the research shows balancing for power despite the security dilemma and self-defeating adversarial counterbalancing.

Leveraging a realist approach, the research shows that because direct balancing is limited, post-Cold War balancing, often below identifiable levels of punishment, focuses on regional competition near to rising adversarial powers, hybrid and proxy conflicts, A2/AD challenges to deter and deny strategies, qualitative modernization of nuclear forces not always in compliance with arms control (e.g., INF Treaty), reliance on TNWs, offensive strategies, and imitation of adversarial military capabilities and strategies. The research also shows that arms control had little moderating effect on nuclear forces nor did it strengthen nuclear non-proliferation, and, in contrast with literature and Cold War bipolarity, the post-Cold War multipolar context initially dominated by America and then multipolar is ripe with military asymmetries and balancing for power through security.

The research analyses the efficiency of balancing (which can be assessed over time by policy changes) through the convergence and divergence in the articulation and

implementation of policies identified through the inductive process that support or limit military capabilities for security as an indicator of balancing. Policies are thus the proxy by which balancing is assessed to examine convergence and divergence in a regime type and, thereby, gauge the effectiveness and credibility of balancing and incongruities between threats and military capabilities. The research contributes to literature on realism and balancing by positing a balancing typology and balancing types and postures.

The research contributes to security studies by applying an explanatory model to a unique comparative case study to advance an argument to address the research question. Building on Waltz and Morgenthau, the means a NWS pursues security may be examined through the research empirical inquiry anchored on a comparative case analysis and an inductive analytical review of policies determinative of balancing to assess balancing. The research thereby identifies which policies support and limit balancing and validate and test the argument. This approach to assessing the capacity to accomplish missions is important to security studies and answering the research question through the cases.

Through an assessment of literature, the research applies an explanatory model to validate the argument tested through an inductive analysis of policies illustrated through a comparative case analysis to posit relationships within and across the cases to validate the explanatory model and assess balancing. The explanatory model contributes to security studies through an approach incorporating process tracing[71] of policies vis-à-vis threats to assess balancing, explain inefficient nuclear reliance, and assess self-help. The research examines how three NWSs balanced in a specific period, to include understudied China, and identifies which policies help explain why Russia and China underbalanced.

[71] Analyses events to examine relationships within cases to show qualitative and quantitative links between the independent, dependent, and mediating variables. See Tansey, 2007; Gerring, 2007.

Pursuant to the explanatory model, balancing is conditioned by real and perceived security and domestic structures converging or diverging on policies that support adequate military capabilities. The variables have not been adequately examined or have been studied individually but not jointly, or not in a comparative case analysis, including in non-Western contexts, as the research does. The research finds that, no matter the regime type, the policy process is centralized despite divergences or convergences in and among domestic structures, with the DI being the most consequential for balancing.

The explanatory model is generalizable and generates findings applicable to other NWSs with differing threats, military capabilities, mediating variables, and time periods. Sokov (2002) attempts to explain the reasons for greater nuclear force reliance but does not examine policy drivers or apply a comparative case analysis to validate his argument. The research helps understand, including in non-Western contexts, nuclear reliance because of inadequate military capabilities. But differently to Sokov, the research shows that, even when nuclear force utility is low and absent an acute external threat, adequate nonnuclear forces reduce nuclear force utility. The research thus revisits nuclear force reliance, a topic somewhat neglected in post-Cold War literature, despite their use for manipulating adversarial threat perception in addition to proliferation and modernization.

The research reinforces security studies to explain balancing as great power balancing conditions deterrence and impacts strategic stability, arms control, the security dilemma, conflict escalation, and systemic positions. The argument helps understand the spectrum of use of military capabilities, efficient resource allocation, and hybrid and proxy conflicts. Examining the link among balancing, military capabilities, and security and between balancing and self-help also contributes to realist literature.

Building on the literature, the research substantiates cross–domain deterrence, strategic stability based on adequate nonnuclear forces, and the superiority of nonnuclear forces for balancing. This limits conflict escalation and supports strategic stability, arms control, and relative systemic gains. The research also codifies arguments that support the limited utility of nuclear forces, a mixed nuclear–conventional deterrence and conflict strategy, deterrence by denial, counterforce targeting, and defensive last resort postures.

5. Assumptions

The research examines a post-Cold War period to separate the analysis from the ideologically–driven Cold War context during which NWSs balanced against imminent threats. Nuclear forces deter state and non-state threats below the use of nuclear forces but not as efficiently as nonnuclear forces for nonnuclear threats. NWSs should capitalize on self-help by avoiding reliance on nuclear forces for nonnuclear threats. The research advocates for diminishing the need to threaten or impose punishment with nuclear forces with unpredictable escalation effects when conventional deterrence fails.

There are only two policy options for reducing reliance on nuclear forces. First, to remove or mitigate threats that augment their utility, but because NWSs cannot control threats they can lower their perceived[72] acuteness to make reliance excessive (Sokov, 2009). Second, increase the adequacy of nonnuclear forces to asymptomatically assign nonnuclear forces missions (Colby, 2010). This is the focus of the research. Though this option demands time, resources, and political will, it is more effective and credible. In a context dominated by nonnuclear threats, America, for example, decreased reliance on

[72] Threats do not have to be real—perception can be as powerful: e.g., Russia interpreted statements by America that no one would ever attack Russia as if America would attack Russia but for its nuclear forces. See Sokov, 2002.

nuclear forces through relatively adequate nonnuclear forces across nonnuclear threats. Nonnuclear force modernization also allowed China to limit the quantitative expansion of its nuclear force as America and Russia reduced their nuclear forces.

Adversarial symmetric or asymmetric capabilities may undercut one's forces. As competition is inevitable per the spiral model,[73] an arms race may result, and NWSs may shift reliance to nuclear forces if nonnuclear forces are inadequate—namely if threats are perceived to be existential or undermining deterrence. Balancing is efficient with more adequate nonnuclear forces, especially because nuclear forces are impractical against nonnuclear threats, irrespective if an acute threat exists and absent ASMs.

6. Road Map

Chapter Two locates the question and argument in the literature. Chapter Three operationalizes the explanatory model, advances a balancing typology, and links the adequacy of military capabilities, the mediating variables, and balancing. To refine the argument, Section II applies the explanatory model to the cases by examining reactive and proactive policies determinative of the supply and demand of military capabilities at the articulation and implementation stages and analyses shifts in balancing types over time. Section III concludes by comparatively reviewing the findings to discuss balancing relative to the explanatory model, identifying challenges and opportunities for efficient balancing, and examining descriptive and prescriptive arguments.

[73] Under anarchy, actors that seek security can fuel an arms race and undercut interestate relations. See Jervis, 1978 and 1976; Herz, 1950.

Chapter Two: Literature Review

This chapter reviews literature to derive an explanatory model to explain NWS balancing by locating assumptions underlying the research question and argument. The analysis provides concepts upon which to advance the research and explanatory model.

1. Literature Review

The research is based on two assumptions. First, inadequate nonnuclear forces can foment greater reliance on nuclear forces for nonnuclear threats. However, NWSs may not reduce reliance on nuclear forces despite having adequate nonnuclear forces. Second, adequate nonnuclear forces diminish the need to rely on nuclear forces and support efficient balancing, strengthen arms control and strategic stability, and limit conflict escalation. Pivotal to both is how a NWS defines security and identifies threats in the anarchic system and its deterrence and use of force capacity.

1.1 Realism

Realism emphasizes the state as the object of analysis that pursues interests[74] (however defined (or interests veiled as moral concerns)) as unitary actors in the anarchic system through domestic structures with policy which drives balancing and conditions the balance of power and self-help (Waltz, 2010; Rathbun, 2008; Mearsheimer, 1995; Morgenthau, 1978; Bull, 1977). The research focuses on security as a national interest.

Security is the main concern of states which compete for security and provide order by relying on military capabilities to deter and defeat external military threats and thereby manage but not eliminate threats (Waltz, 2010; Donnelly, 2004; Nye, 1998;

[74] Needs or wants that promote well-being and guide action. NWC, 2020.

Baldwin, 1997; Morgenthau, 1978; Machiavelli, 1532). Hence, shifts in relative military capabilities is the primary determinant of balance of power among states (Waltz, 2010).

But as the research examines, despite pursuing security, NWSs may articulate or implement less rational policies that underbalance and make it vulnerable to threats by undermining the capacity and credibility of deterrence and increasing the likelihood of losses in conflict through escalation. NWSs do so because they are unable or unwilling to pursue more rational policies through the policy process with more efficient balancing because their military capabilities are inadequate vis-à-vis articulated threats. Resulting incongruities increase potential adversarial gain, particularly through nonnuclear conflict, which may induce reliance on nuclear forces but with diminished utility to security.

The research adopts realism as its approach because it prioritizes the state and military capabilities as the determinant of balancing (Buzan, 2010; Morgenthau, 1978). Realism also recognizes that NWSs as states rely on their resources or those of others for security (Waltz, 2010, 2000, and 1991; Donnelly, 2004; Carr, 2001; Nye, 1988). States—or a collection of states—are, thus, the main securitizing agent at all threat levels despite diminished interstate conflict. Realism provides insight into the argument as NWSs under anarchy pursue security with policies that help explain balancing for balance of power.

The choice of cases recognizes that attention must be given to powers like Russia, America, and China that have the most leverage in the anarchic system (Mearsheimer, 2003). The research thus examines policies that define how NWSs allocate resources through policies determinative of military capabilities to balance through deterrence and conflict, which is the primary issue of security studies, the main topic of international relations (Smith, 2005; Baldwin, 1997; Derian, 1995).

While liberalism, the other main approach of international relations, prescribes that institutions ameliorate anarchy and unmitigated power politics, conflict persists (Katzenstein, 1996; Young, 1994; Oye, 1986; Axelrod, 1984). Indeed, individuals and the community have limited agency to deter and defeat threats without states. Additionally, the state–based system has not changed—it is anarchic, conflict is inevitable, states must provide for security, and competition is a common theme and, thus, realism dominates (Carr, 2001; Waltz, 2000; Waltz, 1991; Niebuhr, 1932). Other approaches also fail to explain changing international relations, namely endemic conflict (Burchill, 2001). The research thus shuns philosophical approaches, applies an explanatory model that can be empirically assessed, and adopts an approach to examining balancing through policies.

1.1.1 *Neorealism*

Realism is not the basis for science and neorealism bridges that through empirical testability and falsification (Waltz, 2010; Schroeder, 1994; Guzinni, 1988; Keohane, 1986; Morgenthau, 1978). Policy is driven by how the anarchic system conditions power through security resulting in a balance, or a context in which states increase power and decrease that of others with the distribution of capabilities among states through self-help varying with implications for the balance (Waltz, 2010; Bendel, 1989; Morgenthau, 1978; Telhami, 2003; Zakaria, 1998). Military capabilities determine realizable preferences through balancing (or actions to increase security as a derivative of power to constrain and reduce the power of others) to erode military advantage, so states are sensitive to shifts in security and relative gains as security is not absolute (Telhami, 2003; Grieco, 1988; Keohane, 1986; Waltz, 1959). It is thus the anarchic system driving insecurity and unequal power that causes states to tilt the distribution of military capabilities towards

realizable preferences to which adversaries respond, and though states seek advantage and security, balances recur and insecurity reigns (Parent and Rosato, 2015).

The anarchic system encourages balancing to maintain systemic positions and erode that of others (Waltz, 2010; Bendel, 1989; Ikenberry, 1986). As unitary actors, states use available means for power through balancing (Waltz, 2010; Rathbun, 2008). Interstate action is thus a struggle for power through, among means, military capabilities (Morgenthau, 1978), that may be perceived as threatening by states that counterbalance. A hegemon also balances to arrest or reverse declining power, and power transitions are dangerous due to miscalculation, challenges to status quo, and arresting competitors (Copeland, 2000 and 1996; Levy, 1987; Gilpin, 1981; Organski and Kugler, 1980).

Balancing is motivated by avoiding relative losses and to attain power through security vis-à-vis states, and the greater the capacity to do so, the less the relative power of others (Schweller, 1994; Bendel, 1989). States prefer internal balancing as freedom of action is superior to create military power vis-à-vis threats, particularly geographically proximate threats (Parent and Rosato, 2015; Walt, 1985). And while weaker states should externally balance even if internal balancing is better, powers do not have to as internal balancing is superior, which weaker states imitate due to costs and potential abandonment and loss of independence from external balancing and bandwagoning (Waltz, 2010; Bendel, 1989; Walt, 1987; Ikenberry, 1986; Snyder, 1984; Jervis, 1979). States are thus constrained by the ability to generate military capabilities, and external balancing, bandwagoning, and buck-passing are less desirable for powers (Parent and Rosato, 2015).

Bipolarity is more stable and less inclined for power conflict and systemic change than multipolarity is as internal balancing occurs (Waltz, 2010). Powell (2003) argues,

however, that bipolarity is less stable due to differing state desires. The research shows that, regardless of polarity, the anarchic system is unstable and inclined for competition and change when state policies differ. In contrast with Snyder (1991), the research shows that multipolarity with military asymmetries does not imply external balancing as NWSs may internally balance. Powers exhibit internal balancing as they have more to lose and greater ability to affect outcomes, while weaker states buck-pass or externally balance, particularly in multipolarity with nuclear forces (Bendel, 1989; Jervis, 1979a).

Internal balancing is also more reliable irrespective of polarity (Waltz, 2010; Bendel, 1989). Waltz's (2010) argument that internal balancing only applies in bipolarity does not preclude its utility in multipolarity (Bendel, 1989), and the research shows that despite the nature of the system not changing with polarity (Jervis, 1991). And while internal balancing is preferred in bipolarity, contrary to Waltz (2010) and Bendel (1989), the research shows it is also preferred in multipolarity with military asymmetries despite external balancing. Nuclear forces facilitate internal balancing to reduce uncertainty and insecurity (Bendel, 1989; Handel, 1981). Balancing with indirect methods (e.g., A2/AD challenges) that may be observed at the implementation stage favours states that delay, frustrate, and undermine power (Andersen, 2018; Pape, 2005).

Balancing is linked to the security dilemma, which is why internal balancing is conditioned by arms racing (Glaser 2000 and 1992). The security dilemma exists when a state increases its security and decreases that of others, increasing competition, limiting security, conditioning cooperation, and raising conflict probability (Jervis, 1978).[75] Such actions reduce the capacity to deter—even if matched or countered—and military

[75] Two variables define the security dilemma: (i) the offense–defence balance, i.e., if it is easier to take or hold territory when attacked, and (ii) offense–defence distinguishability, i.e., if military capabilities that support offensive strategies are different from those that support defensive strategies. See Jervis, 1978.

modernization changes an adversary's perception of the modernizer's capabilities and strategy as offensive (Glaser, 1997; Jervis 1978 and 1976; Herz, 1950). The security dilemma, however, does not preclude balancing, but states may choose to not balance (Waltz, 2010; Walt, 1987) or may be unable or unwilling to.

States prefer external balancing rather than bandwagoning but it may be the only option (Waltz, 2010; Walt, 1985). External balancing demands reliance on others and cooperation, and equitable contribution is challenging but easier with a common threat (Waltz, 2010; Mearsheimer, 2003; Olson, 1971). Mearsheimer (2003) minimizes external balancing due to collective action issues from buck-passing or as a constraint on ambition as Waltz (2010) posits, as there are incentives for power despite the challenges of being a global vis-à-vis a regional hegemon. Indeed, allies may buck-pass rather than internally balance and ignore their capabilities as America's allies did, undermining the durability of alliances, particularly in multipolarity (Walt, 1987). This contrasts with neorealism's focus on power short of hegemony by limiting the security dilemma and self-defeating counterbalancing undermining power (Waltz; 2010; Mearsheimer, 2003; Snyder, 2002).

Except for few states, to include the cases, most bandwagon or externally balance (Powell, 2003). The research shows that out of fear or protection, weaker states did so with America, while Russia and China primarily internally balanced America fomenting multipolarity. While others states' alliance choices influence policy, including its effect on balancing would translate the actions of a state onto another, and as alliance decisions depend on non-systemic factors, doing so is distortive and circular (Glaser and Kaufmann, 1998). Hence, the research does not do so, but helps understand exogenous effects of ASMs on domestic structures and effects of domestic policies on ASMs.

States do not have to act with balancing intent, policies to pursue power through security produce balancing (Bendel, 1989). But balancing presents challenges with costs, time, and modernization fomenting the security dilemma (Jervis, 1978; Taliaferro, 2000). Self-reliant states are better placed to balance and not all states can or are willing to (Bendel, 1989). Notably, powers provide the way to internally balance against themselves as competitors imitate, offset, or negate forces (Waltz, 2010; Betts, 1985; Gilpin, 1981).

The research examines how NWSs balance through military capabilities across threats (the dependent variable) and considers external balancing. The research supports internal balancing with adequate military capabilities for relative gains and to limit the security dilemma and adversarial counterbalancing despite hegemony and buck-passing. The concepts outlined in the research support an assessment of adequate military capabilities vis-à-vis articulated threats. Variation determines threat perception and distribution of military capabilities and, thus, balancing for security as an extension of power but which may not lead to conflict (Schmidt, 2007; Waltz, 1989; Korpi, 1974).

Balancing analysis explains balancing conditioned by the anarchic system and domestic structures. Despite Waltz's (1979 and 1996) conceptual barrier that the anarchic system and state policy are separate, balancing, which neorealists seek to explain, is policy or a result of it, with systemic effects, despite Waltz's (2010) systemic placement based on military power, a relational property of policy (Fearon, 1998; Elman, 1996). Hence, the subject of neorealism is policies and their effects, despite neorealism being unable to explain all policy aspects (Fearon, 1998). Indeed, if neorealism explains balancing with policies, the research validates theory and is a baseline for further inquiry, to include of policies conditioning realizable preferences with balancing under anarchy.

Neorealism frames policy analysis as balancing driven by power and constrained by anarchy and polarity. Balancing conditions deterrence and conflict and indicates self-help with relative loss to power from the inability to balance for self-help (Posen, 2003). The research has explanatory capacity in assessing how military capabilities implicate power through self-help. It also contributes to realism by helping explain policy, assess strategies, limit the security dilemma, and, to address neorealism's critics, gauge capacity to support relative gains by limiting uncertainty and insecurity despite anarchy, polarity, and hegemony (Waltz, 2010 and 1996; Toft, 2005; Mearsheimer, 2003; Walt, 2002).

Neorealism does not help understand which strategy a NWS will adopt and cannot foresee systemic changes without an analysis of policies (Katzenstein, 1996; Keohane, 1993). The research examines policies to assess strategies and understand balancing but not necessarily power balances or outcomes (Ruggie, 1986). And as uncertainty limits cooperation, as the research shows, states signal and interpret strategy—on which policy is based—at the policy implementation stage (Rynning, 2020; Kydd, 1997). In the final analysis, adequate military capabilities support efficient balancing (Pequet, 1757). Given the means, internal balancing is preferred, particularly for powers and despite extended deterrence, as America pursued, dejecting external balancing, as Russia and China did, and moreover multipolarity, military asymmetries, and diffusion of power.

Contrary to Waltz (2010), the research shows that balancing also applies in multi-polarity and, thus, revisits balancing in post-Cold War multipolarity which is important as NWSs have the most leverage in the anarchic system (Mearsheimer, 2013; Layne, 1993). While recognizing competition driven by anarchy, the research focuses on state–level domestic structures to explain balancing through policy and does not examine other

balancing sources (Lobell et al., 2009; Snyder, 1991). NWS policies are driven by domestic structures in a defined regime type strategizing in the anarchic system which limits rather than causes balancing (Ikenberry, 1986; Gourevitch, 1978; Rosenau, 1967).

The post-Cold War context initially dominated by America and then becoming multipolar is ripe with military asymmetries and pursuit of power in contrast with Cold War bipolarity. Power prompted others to balance America (Waltz, 2010). The research contributes to neorealism by advancing an explanation of how NWSs respond to systemic change by examining the articulation and implementation of policies determinative of capabilities to help explain relative gains and losses through balancing. The research shows that while in the first post-Cold War years powers did not balance America despite being the superpower, post-millennium, and in contrast with Craig (2009), Lieber and Alexander (2005), Walt (2004), Schweller (2004), Ikenberry (2004), Pape (2005), Paul (2005), Levy (2003), and Lake (1999), and consistent with Layne (2006 and 1993) and as anticipated by balance of power, even when not directly threatened, powers balanced relative American military power through military capabilities and strategies.

In response, a hegemon may, in addition to actions in support of allies, intervene when not directly threatened as America did (Pape, 2005). This contradicts realism insofar as the NWS acts when its interests are not directly at stake. Neorealism accounts for that to ensure dominance and deter and defeat threats which are in its interest (Pape, 2005). Indeed, in that case, states are motivated by security to balance challengers, to include out-of-region, by undermining their real and perceived military power.

The U.S.–dominated post-Cold War underwent structural change from unipolarity to multipolarity and saw balancing as powers renewed the balance of power or arrested

competitors. Such change demands a re-assessment of balancing which applies despite polarity and hegemony and, thus, the research revisits balancing somewhat neglected in recent literature. This matters due to balancing associated with increasing multipolarity, power diffusion driven by renewing the balance of power, eroding American power, and military asymmetries. NWSs engaged in limited bandwagoning and external balancing, out-of-region balancing when not directly threatened to maintain or contest dominance, and balancing with indirect methods to delay and undermine powers. Further, internal balancing was associated with a revaluation of nuclear forces despite a context dominated by nonnuclear threats to manipulate adversarial threat perceptions to avoid relative losses.

1.1.2 *Defensive and Offensive Neorealism*

The means to achieve power through security under anarchy driving insecurity is military capabilities. But they vary and condition power and the security dilemma (Waltz, 1989; Gilpin, 1981). Defensive neorealists support defensive strategies to stabilize the power balance and reduce uncertainty, insecurity, systemic change, and expansionism despite incentives to do so. NWSs enhance security and signal benign intent with defensive strategies to not undermine adversarial security (Montgomery, 2006; Glaser, 1994). States are security maximising but counterbalancing undermines security, and defensive strategies temper counterbalancing (Glaser, 2000; Van Evera, 1999). Internal balancing prefers defensive strategies whereas bandwagoning favours offensive strategies (Glaser and Kaufmann, 1998). Defensive strategies reduce adversarial benefits and costs to the defender, leaving no incentives for aggression by limiting enemy offensive capabilities not by pre-emption—as Russia, North Korea, and Pakistan espoused—but by reducing relative gains by denying goals and limiting penetrating force and degrading

defences (Bunn and Sokolsky, 2001; Glaser, 1992; Nguyen, 1989; Steinbruner, 1987; Levy, 1984; Jervis, 1978; Quester, 1977; Osgood, 1967).

Deterrence by denial underpins defensive strategies and is based on the ability to retaliate, reversing a defender's need to attack or react (Steinbruner, 1987; Swingle and MacLean, 1971). Defensive strategies are based on a conditional threat but depend on a cost–benefit calculus linked to expected results based on shared rationality (but not morality) (Reynolds, 1989). Reinforcing is the deterrent relationship—a retaliatory force capable of unacceptable damage, and an understanding against nuclear use though nuclear forces may be used in certain contexts (Reynolds, 1989). But defensive strategies require restraint on military capabilities (Steinbruner, 1987). Political strategies are thus key to reducing offensive military capabilities to what is needed for retaliation, thereby diminishing pre-emptive use (Nguyen, 1989; Steinbruner, 1987).

Offensive neorealism differs in that the status quo is inadequate and revisionist states maximise power through security with offensive military capabilities and strategies as others balance (Andersen, 2018; Mearsheimer, 2003 and 1994; Labs, 1997; Schweller, 1996; Waltz, 2010 and 1991). Nuclear forces have not halted balancing, and defensive strategies may be insufficient to convince adversaries to ignore the power balance (Lieber and Press, 2006). States are thus in constant competition, but given limits on projection like geography, states should pursue regional hegemony (Mearsheimer, 2003 and 1994).

Offensive neorealism helps explain interstate competition because of revisionist offensive balancing strategies (Toft, 2005; Mearsheimer, 2003; Snyder, 2002). However, offensive strategies of rising powers like Russia undercut security as status–quo states like America counterbalance and can be secure with defensive strategies and attenuate the

security dilemma (Waltz, 2010; Van Evera, 1998; Snyder, 1991; Jervis, 1978; Herz, 1951). The research shows Russia and China pursued offensive strategies to increase pre-emptive capacity against America. Also, America and China pursued defensive strategies to include increasing the mobility, dispersion, survivability, and accuracy of offensive forces. As mutual insecurity results in a net reduction of security, political strategies that reduce offensive military capabilities and strategies are crucial: e.g., arms control limiting offensive forces, unilateral defensive strategies (but which require significant defence spending) despite adversarial offensive strategies, and restraint to induce reciprocal restraint (but without showing lack of capacity) (Glaser, 1997 and 1994; Osgood, 1962).

In addition to defensive neorealism's distribution of power, offensive neorealism adds geography as a condition to balance or buck-pass. States prefer buck-passing under multipolarity but not against a regional hegemon secured by geography, constrained by power projection restrictions, and defensive strategies to avoid rivals (Mearsheimer, 2003). But offensive neorealists' inclusion of the non-structural geographic variable unpersuasively shifts the analysis to regional dynamics, fails to clarify what a region is or account for regions without rivals, and does not explain out-of-region balancing or regional powers like Russia and China balancing hegemons (Toft, 2005; Layne, 2002).

Further, not all states are revisionists, but rather, the security dilemma based on mutual uncertainty drives counterbalancing offensive strategies, and regional hegemons are likely to seek global hegemony (Mearsheimer, 2003; Snyder, 2002; Layne, 2002). Additionally, offensive neorealism fails to address powers that seek cooperation, status quo powers that pursue hegemony, or states in similar structural positions that behave dissimilarly (Toft, 2005; Rose, 1998). Offensive neorealism also does not account for

domestic structures rather than geography to explain balancing including underbalancing, which the research addresses, but does not examine non-security interests, other means to relative gains, or the reduction of power due to continuous conflict (Toft, 2005; Snyder, 2002). Offensive neorealism also fails to account for powers like China and Russia that are not isolated or contained by geography, which cases the research examines.

Offensive strategies limit adversarial offensive capabilities—e.g., the threat of pre-emption or counterretaliation, increasing costs with unacceptable punishment like nuclear use (Bunn and Sokolsky, 2001; Swingle and MacLean, 1971; Steinbruner, 1987). Offensive strategies strike first and raise costs by allowing a threat to strike first. Offensive strategies are competitive, while defensive strategies cooperative, which may diminish if threats do not perceive defensive strategies as offensive (Glaser, 1992; Levy, 1984; Jervis, 1978; Quester, 1977; Osgood, 1967). For NWSs, MAD underpins offensive strategies but which erode interstate relations (Nguyen, 1989).

Offensive strategies may not deter defensive capabilities, decreasing security by communicating malign intent, fuelling counterbalancing, and have destabilizing effects, whereas defensive strategies are unlikely to have those effects and do not require that adversaries equalize capabilities (Glaser, 1992; Levy, 1984; Jervis, 1978; Quester, 1977; Osgood, 1967). Counterforce targeting is necessary for an offensive strategy but may threaten adversarial deterrence (Friedman, 2011; Seidman, 1990; Glaser, 1990). As offensive forces foment the security dilemma, arms races and conflict become acute if adversaries pursue offensive strategies, and vice versa with defensive strategies (Glaser and Kaufmann, 1998; Glaser, 1997; Jervis, 1978; Hoag, 1961. But see Trachtenberg, 1991). Offensive strategies therefore result in a net loss in deterrence whereas defensive

strategies result in a gain (Glaser, 1997). But defenders that pursue offensive strategies can be insecure, and in that case an adversary may pursue military modernization and dismiss the defender's insecurities (Glaser, 1997; Jervis, 1993. But see Schweller, 1996).

The research assumes NWSs pursue balancing strategies and assesses the capacity to support offensive or defensive strategies. The research validates neorealism by positing an approach to distinguishing strategies through policies (Kitchen, 2010; Dueck, 2006; Glaser 1997; Jervis 1970). One must not overestimate the specificity of differentiating strategies.[76] The research shows shifts with military capabilities at the implementation stage to indicate strategy (Glaser and Kaufmann, 1998; Glaser, 1997). Changes are driven by policy responsive to the distribution of interstate power, and the research examines shifts in that balance of power vis-à-vis articulated threats and military capabilities (Goldman, 2001; Rosecrance and Stein, 1993). Ambiguous policies prevent clear strategies, and as the only option to signal benign intent is inadequate forces, that is more dangerous than adequate forces but which do not reduce uncertainty (Glaser, 1997).

Military asymmetries fuel the security dilemma whereby defensive forces—as America had—encourage adversarial offensive forces, as Russia and China did. Domestic structures (particularly those that benefit) may also exaggerate the offensive capacity of adversarial capabilities even when their purpose is ambiguous (Van Evera, 1998; Glaser, 1997). The state with superior forces typically does better with offensive and defensive strategies (Glaser and Kaufmann, 1998). But superiority offers only temporary advantage as adversaries imitate, offset, or negate forces. Also, a state should not always modernize as it is uncertain that it increases or decreases security, and it may (deceptively) condition modernization to ameliorate concerns (Glaser, 1997; Kydd, 1997).

[76] Even with defensive strategies, a NWS may still procure offensive forces. See Jervis, 1978.

The research adds to neorealism by examining a hegemon that does not engage in offensive strategies to maintain systemic positions (America), and how NWSs counter-balance with nuclear forces to fuel uncertainty and insecurity and constrain hegemony regardless of adversarial strategies (Jervis, 1978). For NWSs like Russia, America, and China, restraint on threat pre-emption with defensive strategies diminishes uncertainty, and deterrence is thus more stable with defensive strategies while attenuating the security dilemma (Glaser, 1992; Steinbruner, 1987; Levy, 1984; Jervis, 1978; Quester, 1977; Osgood, 1967). However, as states do not have equal means, sub-optimal policies foment military asymmetries. The goal is not winning but preventing conflict, but which induce hybrid and proxy conflicts, namely in non-NWSs (Reynolds, 1989; Steinbruner, 1987).

1.1.3 *Neoclassical Realism*

Realists posit that states in perpetual competition under anarchy face a security dilemma and leverage power for self-help to maintain order by balancing power because the anarchic system compels states to pursue power, with the distribution of interstate military power conditioning policy and the balance of power. Neorealists treat the state as a "black box." The regime type and individual decision makers are not dispositive as the anarchic system creates the same incentives for all states. For more accuracy, neoclassical realism incorporates domestic-level factors to explain international politics and opens the "black box" with interstate power distribution subject to domestic constraints determinative of policy (Baylis et al., 2008). Among neoclassical realist contributions, the research focuses on the articulation and implementation of policies concerning threats to explain state behaviour conditioned by a relationship between the anarchic system and domestic factors (Lobell et al., 2009; Baylis et al., 2008; Rose, 1998).

While neorealism is not comprehensive, it is helpful for analysing policy shaped by power (Telhami, 2003). That is, while the system, the third image of international relations, frames interstate relations and conditions balancing regardless of strategy, state policy, the second image, drives competition and infers behaviour by analysing how and what is balancing (Waltz, 2010 and 1959; Martin, 2003; Telhami, 2003; Gilpin, 1981; Gourevitch, 1978).[77] Despite the systemic constraints of anarchy and polarity, neorealism does not explain balancing absent an analysis of causes, and, among causes, the research focuses on policies articulated and implemented by domestic structures vis-à-vis threats to explain balancing but not outcomes (Waltz, 2010, 1959; Goldstein, 2003). As security is a state concern, states balance and policies are ineradicable (Parent and Rosato, 2015).

Neoclassical realism incorporates external and internal variables to explain policy conditioned by the anarchic system and military capabilities translated through mediating variables (Taliaferro et al., 2009; Rose, 1998). Neoclassical realism helps understand power by leveraging strategic culture and domestic structures to explain self-help driven or hindered by offensive and defensive strategies (Rathbun, 2008; Taliaferro, 2000). The approach thus examines systemic effects on balancing, refines neorealism's conception of power as policy determined by domestic structures, and links systemic constraints and policies, because while the anarchic system pushes toward outcomes, mediating domestic structures conditioned by strategic culture explain security policy with systemic effects (Rathbun, 2008; Schweller, 2003; Rose, 1998; Snyder, 1991). To account for the impact of domestic structures on realizable deterrence and conflict choices under the anarchic system, the research focuses on those most consequential policies to balancing.

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[77] Theory abstractly depicts an aspect of reality but has limited application. See Goldstein, 2003. As Waltz wrote, "a theory is never finished."

Neoclassical realism is an extension of neorealism by positing that power changes due to shifts in capabilities and strategies, with the balance of the system resulting from a balance of power, and, therefore, accounts for military capabilities that are more or less adequate vis-à-vis threats (Kitchen, 2010; Rathbun, 2008; Zakaria, 1998; Wohlforth, 1995). Through domestic structures, neoclassical realism accounts for shifts in military capabilities and strategies for predictive capacity and explanation as states react to the anarchic system in different ways because of domestic structures. Neoclassical realism thus connects the anarchic system to balancing through mediating domestic structures that identify and respond to threats through policy. To counter constructivism and liberalism that structure is unimportant, neoclassical realism shows that when the system is ignored, it punishes with underbalancing and counterbalancing (Rathbun, 2008).

Neoclassical realism draws upon the rigor and theoretical insights of neorealism without sacrificing realism's insights about foreign policy and the state (Taliaferro et al., 2009). Policies conditioning military capabilities are the intervening factor influencing the anarchic system and mediating systemic pressures at the state-level, advancing a relationship among relative power in the anarchic system, domestic structures that mediate systemic pressures, and policies (Schweller, 2004; Taliaferro, 2000; Rose, 1998; Wohlforth, 1993). Though the state is unitary, while dispositive, the research does not examine domestic politics, party politics, public opinion, pressure groups, or leaders or their perceptions (Zakaria, 1998; Wohlforth, 1993). Balancing policy is conditioned by domestic structures pursuing security that mediate threats (Lobell et al., 2009; Krasner, 1978; Taliaferro, 2006; Schweller, 2004; Rose, 1998). That is, as the research examines, similarly placed states balance threats in different ways because of domestic structures.

Power can only be leveraged through policies, and variation explains systemic imbalances as power is not constant and the anarchic system offers incentives but does not determine policy as self-help to attain power and respond to threats is implemented through policy (Waltz, 2010; Rathbun, 2008; Schweller, 2006). The anarchic system is thus indirectly causal of balancing while the policy process is directly causal, and theory is strengthened by recognizing that domestic structures and strategic culture condition balancing (Rathbun, 2008; Sterling, 1997). States thus use power to direct the anarchic system towards their goals with policies determining how (Rose, 1998). Self-reliant states are better placed to balance, but this is not equal because of varying domestic structures (Taliaferro, 2006). Policy is thus not predictable but assessed, as the research does, vis-à-vis security as a derivative of power (Lobell et al., 2009, Rose, 1998).

And because the most important states remain those that have the greatest means to balance, it is military power that principally determines the anarchic system (Kitchen, 2010). This matters when considering the policies of NWSs that leverage capabilities and strategies and, thus, may have more power than is required for security (Kitchen, 2010). As the research does, examining policies articulated and implemented by domestic structures helps explain the anarchic system, unexpected policies, and underbalancing. NWSs may also avoid balancing with bandwagoning or buck-passing or because they are unable or unwilling to balance. While the dependent variable is assumed by the research, neoclassical realism stresses the research independent and mediating variables to explain balancing. The research contributes to neoclassical realism by advancing an explanatory model and identifying mediating domestic structures to explain and assess balancing and imbue realism with explanatory and predictive capacity (Smith, 2018; Kitchen, 2010;

Rathbun, 2008; Schweller, 2003; Walt, 2002). By mixing precision and predictive power, the research garners generality, policy relevance, and descriptive accuracy (Walt, 2002).

Domestic structures and strategic culture help understand responses to threats and power change in the anarchic system driven by military asymmetries to assess balancing and, thus, are added to make neorealism more determinate (Waltz, 2010; Kitchen, 2010; Lobell et al., 2009; Sterling, 1997; Elman, 1996; Morgenthau, 1978). States therefore define security and articulate and implement policy through domestic structures based on relative power and other states' strategies (Lobell et al., 2009). States thus choose how to address threats upon available means (Kitchen, 2010). Policy convergence results in more efficient policies, whereas divergence due to the inability or unwillingness of domestic structures embedded in a strategic culture to articulate and implement efficient policies results in underbalancing and utility to security as a function of power (Schweller, 2003; Rathbun, 2008). Non-optimal policies are not anomalous to neorealism as it does not have policy expectations but indicate the intervention of domestic structures and strategic culture which must be examined to have empirical and predictive value (Rathbun, 2008).

How a NWS defines security, articulates threats, and implements policies is conditioned by strategic culture, or a distinctive body of beliefs, attitudes, and practices regarding the use of force, strategy, and articulation and implementation of policy arising over time through a unique, protracted process from experiences and aspirations (Schulte, 2013; Longhurst, 2004 and 2000; Gray, 1986 and 1981). Strategic culture thus explains policies that seem irrational as rationality differs by state (Gray, 1999; Katzenstein, 1996; Johnston, 1995). Though strategic culture produces tendencies, it is not a definitive analytical tool as there is no exact method for identifying strategic culture (Margaras,

2004; Gray, 1988). However, a comparative analysis of strategic cultures is informative (Kupchan, 1994; Wilson, 1992; Klein, 1991). For neoclassical realism, strategic culture constraints are real even if not determinate (Rathbun, 2008).

While constructivism and realism recognize that security is what an actor makes of it, they differ in how it does so. While constructivism posits that security—as informed by strategic culture and identified threats—is socially constructed, for realism, security is defined by the state relative to interests, its main motivation (Waltz, 2010; Baldwin, 1997). Hence, what states make of security informed by strategic culture imbues policy. Leveraging strategic culture in analyses anchored on realism is not contradictory, as all paradigms may leverage strategic culture and domestic structures in a way that serves and reflects its logic, as a focus on strategic culture to guide policy emerges from its logic not by theoretical fiat (Rathbun, 2008). Just as constructivism does not own strategic culture, liberalism does not own domestic structures (Rathbun, 2008). As anarchy under realism conditions but does not determine policy, nothing in neorealism excludes domestic structures and strategic culture to explain balancing (Rathbun, 2008; Rose, 1998).

Balancing is incumbent on domestic structures embedded in strategic cultures (Schulte, 2013; Delpech, 2012; Moravcsik, 1997; Wendt, 1992). Thus the attainment of power through security cannot be analysed without examining strategic culture (Aron, 2017). As it conditions how a NWS defines security, identifies threats, and articulates and implements security policy, examining strategic culture contextualizes why a NWS pursues policies that underbalance with diminished utility to security. In doing so, the research develops a framework to assess balancing notwithstanding strategic culture even if balancing policy is irrational because of diminished utility to security.

1.1.4 *Domestic Sources of Balancing*

The anarchic system is a cause and consequence of domestic structures and thus balancing (Gourevitch, 1978). Domestic structures are thus linked to the anarchic system. Adding to structural realism, the regime type, as the research shows, is not decisive for balancing as the international system creates the same incentives for all states for power. Domestic structures conditioned by the system determine balancing (Gourevitch, 1978). Balancing analysis thus accounts for domestic and systemic levels as domestic structures generate policies responsive to threats and changes in relative power (Walt, 2002).

While varied factors drive balancing, the reasoning of the domestic structure to system to explain balancing in the literature can be incomplete and neglected. Arguments examine factors individually but not jointly, as the research does, or focus on politics (Gourevitch, 1978). Also, literature offers no complete indication of balancing as policy is not traceable to a specific process or domestic structure (Gourevitch, 1978). While indication requires some examination of politics, politics is not dispositive if the state is unable or unwilling to articulate and implement policies that support balancing, and there are limitations to ascribing policies to specific leaders, motivations, or politics, nor does that answer the research question (Bueno de Mesquita, 1998; Reynolds, 1989).

While such factors are consequential, they are policy modifiers, particularly for regimes associated with the military, to inflate threats or pursue strategies that undermine the power balance due to inadequate military capabilities or restrictions on recognizing, remedying, and rectifying declining power, and are deficient absent an assessment of the convergence of domestic structures on policies and their utility for relative gains through balancing as divergence supports underbalancing (Schweller, 2006 and 2004; Kupchan,

1994). In doing so, the research, in addressing critics of realism, is subject to falsifiability and bridges the gap between theory and reality (Gilpin, 1996; Schroeder, 1995).

And as the literature discounts the link between the anarchic system and domestic structure, it incorrectly reasons that policy and government are mutually exclusive rather than cooperative (Gourevitch, 1978). The rational unitary state pursues policy for relative gain responsive to external threats despite conflict among domestic structures, which is consistent with neorealism (Waltz, 2010 and 1959; Gourevitch, 1978). Balancing analysis is thus not reduced to the system, a regime type, or a policy (Gourevitch, 1978). Indeed, domestic structures articulate and implement policy but their impact on balancing is not an inherent quality but rather how policies prevail or not (Gourevitch, 1978). Balancing is thus a continuation of policy the state articulates and implements as a unitary actor even when adverse because of inadequate self-help. The research identifies which domestic structures help explain balancing regardless of regime type (see Table 3-3).

To validate the approach, the research examines similarly placed cases that pursue balancing with differing domestic structures resulting in dissimilar policies suggesting their domestic structures explain balancing (Gourevitch, 1978). The research shows that irrespective of regime type, closed processes centred in the executive often exempt from controls drive balancing (Born, 2007; Dahl, 1985). As policy is formulated in the state, a *prima facie* case is made for domestic structures even if not exclusively part of the state like the DI (e.g., America) (Gourevitch, 1978). Domestic structures matter because they condition balancing through policies implicating power through security (Fearon, 1998). As the research shows, domestic structures may make the state vulnerable due to policy divergence resulting in underbalancing with greater vulnerability (Schweller, 2006). As

balancing conditions relative gains, the research, consistent with neoclassical realism, examines domestic structures that neorealism takes for granted (Schweller, 2006).

Even partial convergence (low reliance on nuclear forces in articulated policies) is not a sufficient condition of efficient balancing as states may still rely on nuclear forces at the implementation stage with diminished utility, as the research question examines, as domestic structures are unable or unwilling to converge on efficient balancing resulting in underbalancing (Schweller, 2006; Fearon, 1998). The research thus posits a domestic structural explanation of balancing with systemic effects by referring to variations in state unit–level supply and demand policies which require a focus on the policy effects of domestic structures (Fearon, 1998; Rogowski, 1998; Katzenstein, 1978).

1.1.5 *Balancing Policy*

Balancing results from policy that determines how a state signals to friends and foes offensive and/or defensive strategies and articulates, materializes, and communicates strategies with the greatest gains and lowest cost, capitalizing on self-help, or realizable preferences. While there are other means (e.g., economic) to balance and varied aspects of the policy process (e.g., oversight), the research focuses on security policy, articulated threats, and assesses the means and convergence of domestic structures (Stolberg, 2012). Articulated policy, as expressed by postures, describes how states provide for security by identifying threats and guiding strategy and domestic structures as a unifying document for convergence on security (Lukasik, 2010; Sagan, 2009; Perry and Schlesinger, 2009; Reilly, 2004). Absent convergence, the means may not be available to implement policy.

Policy depends on domestic structures conditioned by threats, per Gourevitch's (1978) analysis of international sources of domestic policy. Policy is articulated and

implemented by the unitary state (DCAF, 2015). The unitary state identifies real and perceived threats in a time period and the military capabilities for security (NWC, 2020; DCAF, 2015). The research focuses on threats articulated in policy and the means for security conditioned by domestic structures that identify threats and the means to manage them (Stolberg, 2012; Baldwin, 1997). Security is conceptualized vis-à-vis threats and military capabilities assessed vis-à-vis threats. While implementation may be classified, articulated policy is a benchmark to assess balancing. With policy, the state responds to threats through military capabilities (Stolberg, 2012; Deibel, 2007). Policy thus guides domestic structures through a process in a relationship among threats, means, security, and power that enhances or inhibits balancing. And while there are varied domestic structures to examine, the research identifies those that help answer the research question (see Table 3-3) focusing on inadequate means and policy incongruence (Stolberg, 2012; Posen, 2009; Tellis, 2000; Rosen, 1991; Gaddis, 1987).

The research does not examine individual–level psycho-dynamic attachments with military capabilities, human nature, or policymaker subjective motivations or threat perception. This includes policy driven by policymakers' fear, ambition, ego, or survival which are not dispositive to this analysis of state–level domestic structural policy and which ignore the state as a unitary actor that identifies threats and the means vis-à-vis relative gains and losses to indicate self-help through balancing despite regime type (Schulte, 2013; Rathbun, 2008; Zakaria, 1998; Gaubatz, 1991; Bueno de Mesquita and Riker, 1982; Morgenthau, 1978; Hobbes, 1651). Indeed, leaders and human nature have little to do with state policy and why states want power (Dunne et al., 2013).

While articulated policy guides implementation, domestic structures may not converge with articulated policy, constraining balancing and reducing security and power (DCAF, 2015).[78] Policy should be dealt with on its merits to build convergence but that is difficult as priorities are determined by domestic structures. There are two constraints on balancing: politics and means (Stolberg, 2012). The research centres on means, and while articulated policy may reflect unconstrained means, implementation reflects a nuanced balancing story conditioned by capacity and relative gains and losses to power through security (Waltz, 2010; Bendel, 1989; Morgenthau, 1978; Telhami, 2003; Zakaria, 1998).

While a more visible type of balancing that receives greater scrutiny, examining only articulated policies or quantitative balancing (the number of military capabilities) is an incomplete form of analysis. If strategy is not articulated in policy to allow freedom of action, it may be deduced at the implementation stage (supply policies) because secrecy may conceal strategy as Section 7.6 discusses. And while the military is a visible aspect of policy, it is just one, not the, domestic structure consequential to articulated policy (demand policies). Per realism, the military is not autonomous but a domestic structure of the unitary state. Issue linkage, or cooperation on issues for mutual benefit domestically or externally, helps maximise the gains of domestic structures and can be used for *quid pro quos* (Haas, 1980). Hence, it is incumbent on domestic structures to link balancing with a strategy, defence spending, the DI, and military capabilities across threats.

Authoritarian regimes tend to value nuclear forces more because they have fewer balancing tools and rely on them more because their domestic structures are more likely to be tied to the military and focused on regime survival rather than removing the threat of nuclear conflict (Schulte, 2013; Way and Weeks, 2013). Indeed, authoritarian Russia

[78] The research focuses on learning from failing policies. See George, 1993.

and China tended to value nuclear forces more than America did, and their domestic structures were more tied to the military. Authoritarian regimes like Russia and China preferred offensive strategies that reward domestic structures that favour offensive strategies as they enhance military autonomy (Posen, 2009). Also, expansionist powers prefer offensive strategies, particularly if they have few allies like Russia and China, and as occurred with China as of the millennium and Russia as of 2008, such regimes tend to intervene in their military organizations, particularly after military failures (Posen, 2009).

1.1.6 *Assessing Balancing*

It is useful to security studies to comparatively examine, as the research does, the policies of NWSs to assess by which means NWSs balance. The choice of cases provides relevance and analytical rigour to apply realism as balancing was prominent in the gradually multipolar period examined and characterized by increasing uncertainty, power diffusion, military asymmetries, stalemates, and hybrid and proxy conflicts despite ASMs (America) or not (Russia and China). Limiting the research period to 1991-2015 makes it feasible and adds to the analysis because of the lack of NWS conflict and use of nuclear forces despite policies indicating preparation for interstate contingencies.

Not discounting others, among the instruments of power, the research focuses on military capabilities as the means for state power. Adequate military capabilities vis-à-vis articulated threats may be available or not, and supply and demand policies implicate security that if diminished reduce relative power (NWC, 2020). Military capabilities are the most dangerous power instrument and demand an assessment, as the research does, of capacity and limits (NWC, 2020). Absent a definition for military power, deterrence and conflict provide an adequate research framework for balancing.

The anarchic system is defined by the distribution of power through military capabilities that support security, the principal national interest (Lebow, 1994; Weber, 1990; Waltz, 2010 and 1989). Because military capabilities allow states to pursue security, balancing is subject to their capacity for offensive and defensive strategies vis-à-vis threats in articulated policy, a benchmark to assess balancing in a time period (Tellis, 2000; Glaser and Kaufmann, 1998; Paret, 1989). For methodological reasons and because the goal is to assess military capabilities as a resource and not an outcome, the research focuses on input measures (policies) for balancing which can be compared across cases (Tellis, 2000; Biddle, 1988).[79] This net–assessment approach identifies policies that determine the conversion of resources into military capabilities (Tellis, 2000).

While balancing should occur for neorealism, it does not advance a means to assess balancing as the research does, including, in contrast with Bendel (1989), with evolving polarity and nuclear proliferation and modernization. Assessing balancing includes defence spending to identify the prioritization of military capabilities vis-à-vis threats (or the research resource balancing type) (Tellis, 2000; Lewis, 1994). A NWS weighs funding from current and future resources, actual and anticipated military capabilities, and current and future costs, with the inflexion being where security is cheapest to achieve (Smith, 2006). But nuclear and nonnuclear forces are separate due to their varied features, regardless of how states rely on them (Gartzke and Lindsay, 2016). The research thus examines input measures most relevant to balancing in the simplifying analytical distinction of nuclear and nonnuclear forces as outputs. The most consequential domestic structure to balancing the research identifies is the DI not due to its performance but its impact on balancing (Glaser and Kaufmann, 1998).

[79] The challenge mirrors that of national power, no one metric captures all. See Tellis, 2000.

The task is not to assess the combat proficiency of military capabilities but rather outline a methodology that accommodates deterrence and conflict and gauges capacity to support strategies which may be compared across time and comparable NWSs (Tellis, 2000). The research thus examines security through means in that military capabilities advance security through self-help, which is a matter of degree (NWC, 2020). The research, as a matter of degree, assesses military capabilities vis-à-vis articulated threats with self-help balancing through deterrence and conflict.

This approach is useful as self-help links military capabilities and power and are assessed assuming self-help maximization, i.e., policies that support nuclear and non-nuclear deterrence and conflict strategies vis-à-vis threats. The research requires this assumption because it focuses on policies determinative of military capabilities and demands an approach to identifying policies vis-à-vis military capabilities and threats to support balancing through the inductive case analysis (Glaser and Kaufmann, 1998). The concepts in this Chapter while complex, outline the assumptions guiding that analysis.

The research thus shifts the focus of concepts from power to military capabilities and the capacity to balance through deterrence and conflict (Glaser, 1997). That approach is preferable as security, as a derivative of power, depends on the capacity to use military capabilities efficiently—that is, to accomplish military missions (moreover non-military objectives) (Glaser, 1997). It is the capacity to efficiently use military capabilities that conditions balancing and, therefore, power through security (Glaser, 1997; Jervis, 1978).

Efficient balancing results when military capabilities deter and defeat threats with self-help through conventional deterrence and adequate nonnuclear forces (particularly in defensive strategies) as nuclear forces are impractical (particularly in offensive strategies)

for nonnuclear threats, resulting in a loss to security from sub-optimal policies. Adequate nonnuclear forces support balancing with conventional deterrence by denial, and raise the risk of failure in conventional conflict without the need to threaten or use nuclear forces. Efficiency is assessed vis-à-vis adequate nonnuclear forces and reduced nuclear force reliance through asymptomatic assumption of missions with lower conflict escalation effects and higher use threshold. Balancing that capitalizes on self-help asymptomatically assigns nonnuclear missions to nonnuclear forces and nuclear forces to existential missions resulting in relative gain to power through security.

Underbalancing results from incongruent policies and balancing types causing less credible deterrence due to adversarial gain absent the threat or use of nuclear forces, with greater escalation effects after a nuclear attack or conventional deterrence failure. It combines conventional deterrence by punishment and threats of nuclear use if conventional deterrence fails. Nuclear force reliance increases with capacity gaps between nonnuclear forces and threats, namely if their perceived utility at an acceptable cost is higher or if the DI cannot supply adequate nonnuclear forces. Self-help is thereby inferior in a nonnuclear–threat dominated post-Cold War due to reduced advantage and conflict–escalation management, the security dilemma and arms races, reduced ability to respond to ambiguous provocation without risking conflict and retaliation, hybrid and proxy conflicts, and counterbalancing resulting in relative loss to power through security.

The distinguishability or specification of military capabilities or structures of the armed forces is not dispositive other than examining how they support efficient balancing as the research assumes NWSs rely on the means available for balancing. A reader must thus not overestimate the specificity required which main research approach is qualitative

(which suits the case ambiguity). The research thus posits an argument based on relative efficiency, and when efficiency cannot be shown quantitatively, the research shows the direction efficiency shifts with military capabilities and policies to indicate balancing.

Understanding balancing is complex but operationalizable through the research with explanatory implications. The research identifies policies for military capabilities for security—which can be compared across cases—but without assuming outcomes (Glaser and Kaufmann, 1998). Even if deterrence and conflict could not be assessed because outcome is not incorporated, then most international relations theories related to security would not hold water (Glaser and Kaufmann, 1998). As net assessments are feasible, the research is valuable because of the research question. The research finds that NWSs tend to act alone despite extended deterrence and that internal balancing is the most effective way to balance including with nuclear forces even without an existential threat. Indeed, nuclear forces restore bipolarity dynamics (Bendel, 1989; Waltz 1993 and 1981) by manipulating adversarial uncertainty and insecurity regardless of polarity and counter-balancing. And as reliance on nuclear forces is internal, NWSs and states that desire nuclear forces favour internal balancing and may achieve security disproportionate to means (Waltz, 1993 and 1981; Bendel, 1989; Gourevitch, 1978). Actually, nuclear forces are an exception to the security dilemma by supporting deterrence with retaliatory punishment even absent military capabilities to strike threats (Jervis, 1989 and 1978).

As the research finds, and in contrast with Keohane (1986), the perceived utility and cost-effective security through nuclear forces allow NWSs to ignore the adequacy of nonnuclear forces, as Russia did, particularly if NWSs are unable or unwilling to generate adequate forces through internal balancing. Such NWSs are less successful while other

states will imitate NWSs to include acquiring nuclear forces (Bendel, 1989). The research also finds that nuclear forces can inhibit external balancing as Russia and China did, as external forces do not significantly alter the balance of power that affords relative gains once a retaliatory capacity is achieved (Waltz, 2010; Bendel, 1989).

While under Cold War bipolarity nuclear forces were less necessary because of extended deterrence, post-Cold War multipolarity compels their re-assessment due to the devaluation or absence of extended deterrence (Jervis, 1991) even without direct threats. Indeed, as inevitably there are states that underbalance irrespective of preference, they may over rely on nuclear forces (Bendel, 1989) for counterbalancing with reduced utility due to their impracticality. Despite military asymmetries, nuclear forces allow NWSs that underbalance to contest dominance, deter challengers, and ignore external balancing to maintain systemic positions, renew power balances, and avoid losses by manipulating adversarial threat perception. Of concern is nuclear force revaluation in certain scenarios even without an acute threat. NWSs thereby restore bipolarity dynamics, achieve relative gain inconsistent to means (Bendel, 1989; Waltz, 1993 and 1981), manipulate adversarial uncertainty and insecurity, and reduce hegemony and counterbalancing. These effects help explain post-Cold War power diffusion and nuclear proliferation and modernization.

This allows NWSs to ignore the adequacy of their nonnuclear forces, particularly if domestic structures are unable or unwilling to articulate and implement efficient balancing which, without nuclear forces, reduces relative power. This is inevitable for NWSs that underbalance regardless of balancing preference and, thus, acquire or over rely on nuclear forces, albeit the disadvantage being temporal due to the cyclical process by which adversaries imitate, offset, or negate military capabilities. This is acute for

NWSs that cannot or do not rely on external balancing or band-wagoning due to buck-passing or inadequate ASMs. The research shows that, per offensive neorealism, internal balancing reduces external balancing and encourages limitation of buck-passing due to collective action issues, but not necessarily against a regional hegemon.

The research posits that in a multipolar post-Cold War dominated by nonnuclear threats, NWSs that can internally balance with military capabilities will do so, to include inefficiently relying on nuclear forces due to their perceived high utility or cost-effective security even absent an acute external threat and despite external balancing as Russia did with NATO and China in Asia, which fuels nuclear modernization and proliferation. Revaluation of nuclear forces for security and power shifts competition to the tactical level, limits the utility of nonnuclear forces, and reduces relative gains and escalation dominance[80] (Waltz, 2009). Hence, relative gains are achieved through nonnuclear force modernization but counterbalanced by tactical deterrence, including TNWs, with lower thresholds of nuclear use, resulting in destabilizing counterforce reliance even absent an acute threat: e.g., Russian TNW reliance for tactical conventional deterrence increased due to inadequate nonnuclear forces, and China relied on first–strike ballistic missiles for escalatory counterforce strategies not previously envisioned in response to America.

Nuclear force revaluation upon defensive strategies to retain systemic positions, and offensive strategies to renew the power balance or limit competitors, namely through power projection, encouraged buck-passing characteristic of the Cold War and allowed allies to ignore the adequacy of their forces, raising the bar for patron powers through extended deterrence and projection near aggressors. But unlike the Cold War, extended deterrence devaluation due to adversarial balancing fuelled revaluation of nuclear forces

[80] Controlling escalation to nuclear use. See Morgan et al., 2008.

to replicate balancing disproportionate to means, even without an acute threat, to preserve the status quo, reduce insecurity and uncertainty, and limit adversarial counterbalancing.

1.2 Security

Balancing is conditioned by the anarchic system, with the main goal being power through security with military capabilities (Waltz, 2010). How states define security and identify and respond to threats varies and explains balancing (Waltz, 2010; Sheehan, 2005; Brauch, 2003; Baldwin, 1997; Katzenstein, 1996; Wolfers, 1952). Differences matter. States may balance, bandwagon, buck-pass, or ignore threats and, hence, compete or cooperate (Glaser, 1997; Schweller, 1996; Schroeder, 1994). Defining security helps states advance policies for security (Baldwin, 1997). Consistent with realism, the research adopts the state as the object of analysis and a conventional conception of security within state interests as deterring external military threats including balancing military power (Terriff, 1999; Katzenstein, 1996; Walt, 1991; Nye, 1988; Wolfers, 1952; Machiavelli, 1532). The research adopts this conception versus that of other approaches as no state sacrifices national interests for the individual or community (Frankel, 1996).

Anarchy affects security as states mistrust other actors in an insecure context and leverage military capabilities to attain power through security (Stolberg, 2012a; Waltz, 1989 and 1959; Morgenthau, 1978). This was so post-Cold War with anarchic uncertainty increasing with the withdrawal of the Soviet Union and America (Buzan and Segal, 1994). Such power transitions are fraught with states reacting to shifts in the balance of power (Waltz, 2010; Buzan et al., 1993; Organski and Kugler, 1980). Under anarchy, states leverage military capabilities for security—other sources of power are secondary—to deter external military threats and counterbalance adversarial military power driving

insecurity and uncertainty (Glaser, 2013; Rose, 1998; Schroeder, 1994; Wohlforth, 1993). The research does not examine non-military factors undergirding power.

Multipolarity foments balancing, hindering states that underbalance (Walt, 2002; Gilpin, 1986). Systemic competition demands that states balance to mitigate adversarial relative gains. Despite system–level conditionalities of balancing, state–level factors explain insecurity and balancing (Waltz, 2010; Schweller, 1996; Mearsheimer, 2009 and 2003; Lobell, 2002). Consistent with realism, security is not absolute but a spectrum—more or less external military threats to security including adversarial relative military power (Wolfers, 1952). While a spectrum may cause conceptual challenges, the research adopts a spectrum as absolute security is impossible, and allocating resources to security drives how states conceive and pursue security through policies (Buzan, 2016; Baldwin, 1997; Knorr and Trager, 1977; Dahl and Lindblom, 1953). Consistent with realism, this approach is based on real and perceived adversarial military power, including adversarial relative military power gain. Pursuant to realism, such threats can be addressed by varied types and levels of military capabilities, and encompass adversarial non-military interests to maintain or renew the power balance, contest dominance, or deter challengers.

Proponents of unconventional conceptions of security focus on insecurities that threaten the person or community (see, e.g., Buzan, 2016; Tadjbakhsh and Chenoy, 2007; Newman, 2004 and 2001; Brown, 2003; Owen, 2003; Mclean, 2000; Lebow, 1995). Even new security threats buttress the state to address them. Unconventional security advocates also posit the same, as states deter and defeat threats of different types and levels as it advances state interests. Defence spending growth, among factors, buttresses the state as the main actor (Caballero-Anthony, 2004). A broader conception to, for example, all

threats, is not practical (Moller, 2000), nor answers the research question. Strong states are primarily threatened by external threats, while weak states may be challenged from within and out (Brauch, 2011; Buzan, 1983). The research privileges the state and external threats, a military conception of security, and military capabilities to reduce external military threats and adversarial relative gains that may be underestimated (i.e., unconfirmed perceived security) or overestimated (i.e., unjustifiable fear) (Buzan and Hansen, 2009; Sheehan, 2005; Baldwin, 1997; Wolfers, 1962 and 1952). As absolute security is impossible, the research focuses on preventative and neutralizing concepts whereby threats are contained (deterrence) or defeated (conflict) (Krahmann, 2008).

A useful approach to security is examining real and perceived threats, the means, and the time period through security policies (Baldwin, 1997). While varied policies may be adopted, the research focuses on nuclear and nonnuclear forces as the means. If this approach illustrated by the research develops plausible arguments, then the argument is applicable to other security approaches. Security is not an inherent quality but a result of policies. The less security a NWS perceives, the more it values security, and vice versa. Pursuant to realism, this is consistent with security as a spectrum of more or less external military threats (Baldwin, 1997; Wolfers, 1952). However, there is diminishing utility to security, as with any policy. A certain amount is necessary, and more depends on the context and how much security a state has. Domestic structures will allocate resources if utility is greater than for other uses (Baldwin, 1997; Schelling and Palmatier, 1971).

Pursuant to realism as an empirical[81] rather than a normative[82] approach, security as a policy objective and the means may be examined through empirical inquiry, which

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[81] Logical and fact-based and concerned with what is and their application.

[82] Hypothetical, abstract, and utopian and cannot be fully applied.

examines qualitative and/or quantitative data to answer a research question (Waltz, 2010; Morgenthau, 1978. But consider Buzan, 2016). The research examines empirical data concerning policies determinative of balancing rather than non-empirical theories to support or reject the argument through a comparative analysis and an inductive review to identify which policies support balancing through greater self-help.

But certain NWSs pursue policies—particularly by increasing reliance on nuclear forces—for which the utility is not greater because nuclear forces are impractical and add little to security to deter and defeat external military threats or reduce adversarial gains. Through the comparative analysis, the research studies less rational policies to understand its causes and effects to security. Policy incongruities constrain the efficient allocation of resources and explain underbalancing that diminishes power through security.

The cases do not threaten each other except through nuclear forces as there are no direct threat of direct conventional armed conflict with one another. This is not the case with NWSs like India, Pakistan, and Israel, to which the explanatory model is applicable. Nonetheless, the cases engaged in balancing to challenge military advantage and contain perceived threats, including with offensive capabilities and strategies. Even absent direct threats, the cases perceived one another as threats because of relative gains driving balancing and counterbalancing. For those NWSs, military capabilities therefore relate to external military threats including real and perceived adversarial military power.

The research shows American balancing focused on power projection, even when not directly threatened, to deter challengers, including Russian and Chinese offensive strategies in Europe and Asia, respectively, to contest American regional power and delay, frustrate, and undermine America despite prevailing nonnuclear threats. The locus

of potential contact between the cases was the South China Sea and Eastern Europe—which for China and Russia, respectively, formed part of their core interests, whereas for America these regions were a matter of military power asymmetries vis-à-vis allies.

1.3 Threats

Security is assessed vis-à-vis threats. A threat is a situation in which an actor or group has the capacity to inflict a negative effect (Davis, 2000). Policy is explained by the balance of power and domestic structural identification of, and responses to, external military threats (Ripsman et al., 2016; Rathbun, 2008; Baylis et al., 2008; Rosseau, 2007; Schweller, 2004; Rose, 1998; Zakaria, 1998; Katzenstein, 1996; Buzan, Waever, and de Wilde, 1998; Wohlforth, 1993; Walt, 1991; Wolfers, 1952). Per realism, threats are identified in policies articulated by the unitary state to balance through capabilities and strategies, with the former, for NWSs, being robust vis-à-vis nuclear forces but varying vis-à-vis nonnuclear forces, and the latter conditioned by strategic culture and domestic structures (Kitchen, 2010). Capabilities are irrelevant without strategy, and strategies can be identified at the policy implementation stage (Lukasik, 2010; Sagan, 2009).

Strategic culture and domestic structures condition threat identification, which is a policy choice and a subjective evaluation, and specificity facilitates policy (Mazarr, 2018; Sulovic, 2010; Baldwin, 1997; Wolfers, 1962). State values, which may not be physical (e.g., regional hegemony), informed by strategic culture, relate to domestic structural identification of real and perceived threats to security articulated in policy. Just as the deterrer's actions are dispositive, balancing depends on its effects on adversarial values, and deterrence must account for that to shape adversarial threat perception (Mueller, 2020). During the Cold War, threats were by force or by ideas (ideology), and threat may

also refer to the conditional commitment to punish (Baldwin, 2016, 1997, and 1989). Consistent with realism, domestic structures, on behalf of the state as a unitary actor, identify threats to security in policy and respond to threats through policy. Policy choices are based on a cost-benefit analysis with domestic structures seeking to maximise self-help through realizable preferences and costs to threats through military capabilities and strategies (Larsen and Kartchner, 2014). Defensive strategies reduce costs and adversarial benefits, and nuclear use results in the least benefits and greatest costs.

The post-Cold War saw a broadening of threat types and levels despite reduced prospects of nuclear war and interstate conventional conflict (Buzan, 2016; Brown, 2003; Katzenstein, 1996; Ayoob, 1995). Hence, threat agency—states, non-state groups, and individuals—and scope—inter-state and intrastate—evolved (Hough, 2004; Brown, 2003; Cha, 2000). The research does not analyse the causes of threats, but rather the military capabilities articulated and implemented for security (Brauch, 2011; Buzan, 1983). Probability of damage grows when the state is exposed to a threat, is not aware of it, or does not have the means to deter or defeat threats (the research focus). Consistent with realism, this approach accords with security as a spectrum of more or less external military threats to security and a result of policies (Baldwin, 1997; Wolfers, 1952).

Consistent with realism of balancing determined by real and perceived threats and as an extension of balance of power, perception of threats is a function of capabilities and strategies (Walt, 1987 and 1985). Power, a relative concept, can be used to threaten and is assessed zero-sum (gain (or loss) for a party entails a loss (or gain) for another) (Waltz, 2010; Rosseau, 2007). The best measure is military power, and threat perception is a function of power asymmetry. If a state has more power, risk is perceived under anarchy

and states rely on self-help to balance military asymmetries driving threat perception, competition, and limited arms control (Arbatov, 2020; Garcia-Retamaro, 2012; Waltz, 2010; Rousseau, 2007; Kumar, 2007; Zagare and Kilgour, 2000; Doyle 1997; Grieco, 1988; Zagare, 1987). Relative power is thus perceived by states as unitary rational actors through mediating domestic structures that respond through balancing (James, 1989).

The research advances a hierarchy of threats. Real are likely whereas perceived—which can drive balancing—may not. Threats link power and policy through security as it causes balancing unforeseen by neorealists (Rose, 1998). Neoclassical realism adds unit–level factors (e.g., policies) to explain balancing with threat perception and relative power conditioning how states identify and respond to threats (Edwards, 2014; Schweller, 2003; Rose, 1998; Walt, 1996). Systemic imbalance may result from overbalancing or under-balancing from misperceptions—driven by uncertainty and insecurity—of adversarial strategies as offensive or benign because of inadequate military capabilities. The research posits a methodology to assess and calibrate balancing.

States identify external military threats by military power, geographic proximity, and offensive capabilities and strategies (Walt, 1987). Geographically proximate threats pose a greater threat, though states may be unable to balance despite offensive strategies, as Russia and China pursued, driving adversarial balancing (Walt, 1985). States may perceive as less threatening superior military power but with less offensive capabilities and strategies and/or proximity, and vice versa with inferior military power but offensive strategies and capabilities and/or proximity. All factors are dispositive and the higher their value the more likely that military power will lead to threat perception. And while military power is a necessary condition to be perceived as threatening through the

mediating variables, it is not a sufficient condition (Schreeder, 2012; Walt, 1991). Indeed, military power may be perceived as threatening even if not the strategy (Stein, 2013).

The research does not examine the subjective motivations and threat perceptions of policymakers, as the unitary state through domestic structures identifies threats and responses (Lobell, 2009; Schweller, 2006; Zakaria, 1998; Reynolds, 1989). Because policymakers misrepresent intentions, their motivations and perceptions are not objective criteria and subject to poor signalling and interpretation, and reflect what they expect to see even if not there (Tuchman, 2014; Stein, 2013; Powell, 2006; Fearon, 1995).

Threat perception undergirds adversarial post-Cold War nuclear forces. Despite their impracticality except for deterring existential threats and escalation to nuclear use, consistent with neorealism, NWSs leverage them through offensive strategies to balance power and, thereby, be perceived as threatening to support deterrence. This was acute with military asymmetries, meaning NWSs balance military threats and relative power. Consistent with neorealism, even absent direct threats, powers pursue shifts in the power balance through offensive and defensive capabilities and strategies (Stein, 2013; Kitchen, 2010; Dueck, 2006; Mearsheimer, 2003). As the research shows, in contrast with Craig (2009), Walt (2004), Schweller (2004), Ikenberry (2004), Pape (2005), Paul (2005), Levy (2003), and Lake (1999), and consistent with Layne (2006 and 1993), Russia and China, albeit not proximate or posing direct threats, and while not always coalescing, balanced America with offensive capabilities and strategies as anticipated by balance of power.

Focusing on shifts in military power, the research finds that polarity is immaterial to conflict probability among NWSs due to the stability-instability paradox of nuclear forces despite military asymmetries, shifting competition for relative power to internal

balancing and hybrid and proxy conflicts. Adequate military capabilities diminish the acuteness of, offset, or negate a threat, thereby helping control the escalation ladder. The research recognizes that post-Cold War conflict is mainly nonnuclear and intrastate, and that interstate conflict has diminished but not altogether. Indeed, conflict in the anarchic system is inevitable, states provide for their security, and understanding how remains pressing because interstate conflict may not escalate to high-intensity, all-out conflict due to military capabilities below the threshold of nuclear and nonnuclear deterrence (Carr, 2001; Waltz, 1991). Hence the utility of a range of nonnuclear forces to limit escalation and deter and defeat threats below those deterrence thresholds.

Indeed, NWSs test deterrence and conflict with uncertain implications, including the weaponization of elusive nonnuclear forces like cyber warfare (e.g., Russia), disputed territorial claims supported by offensive nonnuclear force deployments (e.g., China), innovative nonnuclear forces like PGS (e.g., America), and reliance on low-yield nuclear forces (e.g., Russia). Nuclear proliferation and novel reliance on nuclear forces indicates contingencies for deterrence, defeating existential threats, and, alarmingly, low-yield counterforce targeting and coercion against nonnuclear threats and non-NWSs. But like the Cold War, interstate stalemates contribute to hybrid and proxy conflicts.

The threat context is compounded by hybrid threats between war and peace, with no identifiable causal actor and which require innovative military capabilities to deter and defeat. Hybrid threats blur the lines between different types of warfare and the military capabilities relied on (Hoffman, 2009). In addition to deterring China and Russia in, respectively, Eastern Europe and the South China Sea, there is “grey zone” interstate belligerence below conflict (Mazarr, 2018). Further, new NWSs, rogue states, and non-

state actors (often abetted by states) threaten states albeit not existentially (Gray, 2002). As a state cannot predict or control threats or conflict, upon a mixed capabilities– and threat–based strategy,[83] it must develop a spectrum of forces to adaptably deter and defeat and prepare and not risk disadvantage (Christianson, 2016; Freedman, 2013).

While a NWS patron may seek to convince threats that it will defend protégés—possibly with nuclear forces, which are useful for deterrence but not coercion, NWSs are unlikely to deploy or employ them in conflict absent an existential threat. Rather, NWSs deploy nonnuclear forces unlikely to be attacked (Fuhrmann and Sechser, 2014 and 2013; Jervis, 1989; Waltz, 1990). Policies also help explain lack of state action based on state interests because of limited relative gains due to underbalancing (e.g., non-intervention near a competitor) (Miller, 2003). Even when security is not directly at risk, as was the case with America, security remains an interest and is not absolute, and as the threat context evolves, security is re-assessed. The research outlines inefficiencies associated with relying on nuclear forces to deter or defeat non-existential threats that dominate the post-Cold War context resulting in underbalancing with diminished self-help.

1.5 Deterrence and Use of Force[84]

Deterrence is the threat of force—whether explicit or not—intended to convince a threat not to act because costs would be unacceptable or success low (Gerson, 2009). Deterrence has always been the basis to prevent conflict, dissuade (defensive strategy), or coerce or compel (offensive strategy) (Arbatov, 2020; Cheng, 2020; Gerson, 2009; Lebow, 2007; Mearsheimer, 1983; Schelling, 1966; Snyder, 1961). Deterrence is based

[83] Capabilities–based strategies focus on how a threat damages. Threat–based strategies identify threats and where conflict may occur. See Christianson, 2016; Pietrucha, 2015; DOD, 2011.

[84] See also Schelling, 2008 and 1980; Freedman, 2004; Rhodes, 2000; Zagare and Kilgour, 2000; Reynolds, 1989; Huth, 1988; Morgan, 1983; Beaufre, 1965.

on the capacity and credibility to raise adversarial costs and threat perception which depends on available military capabilities to execute a threat (Freedman, 2020; Mazarr, 2020; Haffa, 2018; Wirtz, 2018). Unlike nuclear deterrence which enjoys some certainty, there is doubt that nonnuclear forces have the capacity and credibility to deter, and policies that enhance deterrence increase capacity and credibility (Wirtz, 2018).

The capacity to exact costs with military capabilities is the basis for deterrence and can be assessed through policies that raise costs so that a threat perceives a defender has the capabilities and resolve (Mazarr, 2018; Paul, 2009; Knopf, 2009; Morgan, 2003; Lebow and Stein, 1989; Jervis, Lebow and Stein, 1985; Morgan, 1983; Schelling, 1980). Credible capabilities convince a threat of capacity, whereas resolve is an abstract concept subject to misperception and interests and, therefore, not examined (Mazarr, 2020).

Consistent with realism, deterrence works, when it does, by creating a perception in the threat from military asymmetries with adequate military capabilities (Mazarr, 2018; Garcia-Retamaro et al., 2012; Waltz, 2010; Paul, 2009; Knopf, 2009; Rousseau, 2007; Schelling, 1980 and 1966). Threat perception, which is based on threat military power, geographic proximity, and offensive capabilities and strategies, conditions deterrence, and NWSs balance through threat perception even without direct threats (Mazarr, 2020; Stein, 2013; Kitchen, 2010; Dueck, 2006; Mearsheimer, 2003; Walt, 1987).

Deterrence does not work in general, but rather in tailored ways against specific threats (Mazaar, 2020 and 2018; DOD, 2018). Narrow deterrence involves actions solely based on military capabilities, whereas broad deterrence involves non-military actions (Mazarr, 2018; Freedman, 2004; Huth, 1999; Morgan, 1983). The research focuses on narrow deterrence and recognizes that threat–based deterrence may cause conflict that is

avoided (Mazarr, 2018; Jervis, 1989a and 1983). Deterrence is employed through direct deterrence (preventing aggression against oneself) or extended deterrence (preventing aggression against allies with the patron defending) (Mazarr, 2018). Either is employed in general deterrence (or deterrence in non-crisis situations), which reduces immediate deterrence (or deterring imminent aggression) (Mazarr, 2018; Huth and Russett, 1988; Freedman, 2004; Huth, 1999; Lebow and Stein, 1990; Levy, 1988; Morgan, 1983). Extended deterrence is harder, not least because it is difficult to deny aggression through the projection of forces often near the aggressor, and because there is no automaticity in extended deterrence causing adversarial doubt (Mazarr, 2018).

Deterrence by denial reduces the value of defiance and prevents adversarial objectives, thereby denying confidence and demonstrating capacity, whereas deterrence by punishment imposes unacceptable costs to aggression such as with nuclear escalation (Mazarr, 2018; Forsyth et al., 2010; Morgan 1983). Deterrence by denial is more reliable as a threat may doubt a defender's resolve to impose punishment or assume risks, and it allows conflict escalation control[85] rather than continued action, permitting a threat to choose how much to take, which is removed with denial (Mazarr, 2018; Gerson, 2009; Freedman, 2004; Mueller, 1998; Huth and Russett, 1988; Schelling, 1980; Snyder, 1959).

In the post-Cold War, it is difficult to rely on punishment—namely for extended deterrence—as threats evade deterrence (Grygiel and Mitchell, 2014; Schelling 1980; Snyder, 1961). This reduces military advantage, dominance in conflict, conflict escalation control, and strategic stability, increasing reliance on nuclear forces for even limited contingencies. This also encourages threats under identifiable levels of punishable

[85] Graduated vertical and/or horizontal escalation to show resolve below MAD despite no set manner, divergences among actors, and misunderstandings. See Krepon, 2004; Posen, 1991; Jervis, 1984; Osgood, 1979; Azar, 1972; Schelling and Halperin, 1964; Halperin, 1963; Snyder, 1961.

aggressions (e.g., limited conflict like Russia's "jab and grab" incursion in Crimea and China's creeping militarization in the South and East China Seas) (Mitchell, 2015). The burden of conflict shifts from a fear of retaliation in the aggressor to a fear of escalation in the defender, who must under-respond to ambiguous provocations—losing control of vital spaces—or over-respond and risk conflict (Mitchell, 2015).

Adequate nonnuclear forces support balancing through conventional deterrence by denial and raise adversarial risk of failure in conventional conflict without the need to impose punishment. Denial also strengthens deterrence by keeping a threat from acting rather than making it do something (compellance) (Mitchell, 2015). Denial is therefore a necessary but insufficient condition of conventional deterrence, including contingencies, absent the threat to use nuclear forces, involving an adversary that may attack rather than suffer losses, particularly if its motives are defensive.

That defensive strategy strengthens deterrence as it maintains military advantage and dominance in conflict, limits nuclear force reliance, and responds to threats below the threshold of nuclear use by retaining the burden of conflict based on a fear of retaliation in the threat. States thereby counter threats without losing control of strategically vital spaces or risk conflict. As deterrence by denial prevents adversarial objectives, relies on a perception that the defender has resolve to do so while assuming risks, and allows for conflict escalation control, that strategy does not necessarily require an imbalance of forces but rather those adequate to deny objectives or confidence in achieving them. The research thus examines diminished utility with conventional deterrence by punishment—which increases adversarial gain with nonnuclear conflict—and threats of nuclear use as punishment if conventional deterrence fails.

When deterrence fails, use of force is the use of military capabilities by one or more actors. Though considered illegitimate, the use of force by non-state actors has direct and indirect effects for state security. In the anarchic system, states threaten or use force to influence state threat perception and deter and defeat threats as the ultimate instrument of international relations (Art, 2009; Slocombe, 2003). The more often threat to use force may be less decisive than the use of force but it is not insignificant (Art, 2009). The research is not concerned with when to use force but rather the means. Using military capabilities efficiently does not ensure the advancement of interests, but using them inefficiently makes achievement of objectives unlikely (Art, 2009).

Deterring and defeating threats depends on the targeting strategy, or how NWSs channel confrontation (Lukasik, 2010; Wilkening, 1995). A NWS can employ both, but counterforce targeting implies a countervalue capacity but not vice versa (Lackey, 1984). Exclusive counterforce requires a renunciation of urban centres as targets, while counter-value requires restraint against counterforce targets but which limitation may yield in crisis; with counterforce, one retains countervalue targets to dissuade retaliation while limiting escalation (Lackey, 1984). As counterforce requires a modern offense which can incite adversarial defensive measures, the strategy may fuel an arms race upon reciprocal counterforce capabilities that may subject countervalue targets to nuclear blackmail[86] (Lackey, 1984). As countervalue increases the possibility of unacceptable damage, it strengthens strategic stability because NWSs are less tempted to employ counterforce targeting out of fear of losing forces (Friedman, 2011). Notably, countervalue imposes high costs from conflict escalation, and does not have the damage–limiting advantages of counterforce, though a NWS can destroy targets valued by the adversary (Lackey, 1984).

[86] The threat of nuclear use to compel adversarial concessions or actions.

Countervalue maintains the threshold of nuclear use high, but if conventional deterrence fails nuclear use is likely, whereas counterforce nuclear use is unlikely even if conventional deterrence fails (Lackey, 1984). Countervalue is more attractive if a NWS reduces or maintains a small nuclear force because fewer warheads are available to strike counterforce targets (Friedman, 2011). A blended targeting strategy raises the threshold of nuclear use, contains escalation because of conventional deterrence and counterforce targeting, and affords the assurances nuclear force deterrence and countervalue targeting provide. A NWS thereby capitalizes on self-help by supporting strategic stability and arms control as the need to strike additional targets with nuclear forces diminishes.

1.5.1 *Nuclear Deterrence and Conflict*

NWSs rely on nuclear forces (Barkenbus, 1989) for direct or extended deterrence, furthering foreign policy (but not effectively with non-NWSs) (Halperin, 1987), conflict (though their utility is limited) (McNamara and Bethe, 1985), and prestige or political will. The research focuses on deterrence and conflict. Nuclear deterrence maintains peace through unacceptable punishment,[87] though not necessarily in regional settings,[88] as nuclear war is suicidal but disarmament is risky (Kumar, 2007; Sagan, 1994; Dunn, 1991; Reynolds, 1989; Quester, 1983; Khalilzad, 1983; Waltz, 1981).

Nuclear deterrence supports strategic stability with MAD but requires adversarial threat perception of the capacity to cause unacceptable punishment even though nuclear forces do not enhance coercion or deter nonnuclear conflict, non-NWS aggression, non-nuclear threats, or sub-conventional threats despite NWS involvement in conventional

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87 Actors are conditioned by the military capabilities of others. See Forsyth et al., 2010.

88 Regional NWSs often have smaller nuclear forces and deter external intervention in a regional conflict, intimidate regional states, and/or seek survival. Effective deterrence against regional NWSs differs than against other NWSs. See Wilkening and Watman, 1995.

conflicts and, therefore, are impractical except for certain deterrence missions (Brown, 2020; Barash, 2018; Joeck, 1997). Power and the uncertain costs of conflict support strategic stability and render NWSs prudent, and thus conflict among NWSs is unlikely (Kumar, 2007; Waltz, 1993 and 1988). Even if nuclear deterrence fails, through self-deterrence it may be irrational for the deterrer to respond with nuclear forces owing to the destructive consequence it may suffer (Nitze, 1976). But while strong NWSs can deter one another, it is unclear if weak NWSs can deter them or one another (Kumar, 2007).

States that accept the costs, low benefits, and conflict escalation consider nuclear use a means of conflict with diminished cooperation (Kumar, 2007; Ellsberg, 1975). States escalate conflict with forces (Morgan et al., 2008). Horizontal escalation widens conflict by threatening or prosecuting actions that spread adversarial capabilities (instrumental reason), deny it access, or deter or compel action—including by threatening or attacking a third party (coercive reason) (Larsen and Kartchner, 2014). Vertical escalation grows conflict intensity to increase the probability of winning (instrumental reason) or compel the adversary to modify objectives, negotiate, or quit (coercive reason) (Larsen and Kartchner, 2014; Kahn, 1965). Peace between NWSs results from possible vertical escalation from nonnuclear to nuclear conflict, counterforce to countervalue targeting, or limited to general nuclear war (Larsen and Kartchner, 2014; Kahn, 1965).

Escalation dominance exploits military asymmetries and avoids vertical escalation possibly to nuclear use by containing conflict and controlling escalation by remaining dominant at each step of escalation to nuclear use, thereby escalating conflict (which is easier than de-escalation) in ways that are disadvantageous to a threat, which cannot respond because it has no escalation option or those available would not help (Morgan et

al., 2008; Wilkening, 1995). Though a strategy to which Russia ascribed, it is rarely attainable in conflict (Morgan et al., 2008; Byman et al., 1999). Nuclear forces, which favour defensive strategies to keep the status quo, help explain the absence of interstate conflict and manipulation of adversarial insecurity and uncertainty for balancing.

While escalation concepts help assess utility and understand features of conflict management, they describe conflict that is complex, ambiguous, and uncertain, as are the possibilities for—and problems with—controlling it (Morgan et al., 2008; Jones, 1974). Related decisions assume rational choices by unitary states despite irrational policy-making, miscalculation, and error being inherent to conflict. Despite vertical escalation possibly to nuclear use (resulting in the least benefits and greatest costs), certain reliance by NWSs on nuclear forces upon the idea that conflict can be brought to a quick end is questionable. This is particularly so to deter, threaten, or use against nonnuclear threats or for destabilizing offensive strategies, limited counterforce targeting, or coercion.

States require the capacity to inflict damage for deterrence to be perceived as a threat and achieve stability with the minimum capabilities necessary instead of attaining domination or parity (Kumar, 2007; Zagare and Kilgour, 2000). Nuclear forces eliminate the need for conflict and remove the possibility of defending as only sufficient nuclear forces to retaliate are needed (Forsyth et al. 2010; Waltz, 2009; Gallois, 1961). But this assumes countervalue deterrence by punishment as espoused by China. But if a NWS can destroy or defend against nearly all warheads under offensive strategies, nuclear forces lose their absolute quality, and differ from nonnuclear forces which are relative forces (Waltz, 2009). Also, offensive nuclear deterrence like MD foments arms races, interstate nuclear stalemates, and pre-emptive conflict and arrests arms control (Reynolds, 1989).

Nuclear forces keep the peace between NWSs but do not enhance deterrence, shift competition to the tactical level, do not prevent lower levels of force, and reduce gains without risking devastation (Waltz, 2009; Reynolds, 1989; Jervis, 1978). Nuclear forces may exact punishment and make nonnuclear forces obsolete, as escalation to nuclear use has no useful purpose because they are too destructive except for existential threats but which require a limited number to survive a counterforce strike (Waltz, 2009; van Hooft, 2020). Lacking nuclear use post-WWII further reduces their utility and, therefore, nuclear deterrence is ill-suited, prioritizing conventional deterrence for nonnuclear threats and a spectrum of adequate forces throughout the escalation ladder with not the ability to "win" but to raise costs, make escalation inevitable, and deny a low-risk *fait accompli* (Mueller, 2020; Waltz, 2009; Gerson, 2009; Tannenwald, 2007 and 2005; Kahn, 1956).

If nuclear deterrence is credible only against existential threats and discouraging escalation to nuclear use, nuclear deterrence absent such threats is dubious due to nuclear forces' tragic consequences and, thus, NWSs must balance but avoid nuclear disaster (van Hooft, 2020; Jervis et al., 1985). Is nuclear deterrence thus irrelevant? Largely so as the types of conflict they would be useful for are rare and do not require significant nuclear forces. Also, conflict among NWSs is unlikely because of the stability-instability paradox and self-deterrence, and use against prevailing 21st century nonnuclear threats is not credible. Nuclear forces are impractical for balancing upon MAD–based strategies as they do not deter nonnuclear threats and lack credibility except for nuclear deterrence through retaliation and deterring escalation to nuclear use. Nuclear forces thus add little to power to counterbalance military power, particularly in offensive strategies that do not deter, communicate malign intent, and fuel arms races. As nuclear forces do not offer

effective self-help except for limited contingencies, they reduce realizable preferences through balancing and relative gains in the balance of power, namely through offensive strategies that foment the security dilemma and encourage counterbalancing.

But the proliferation of, and reliance on, nuclear forces for destabilizing offensive strategies, limited counterforce targeting, and coercion highlights their relevance despite a context dominated by low–intensity nonnuclear threats. And while nuclear use has not occurred since 1945, it does not mean it may not occur again. Even when articulated policy does not reflect such missions, they may be identified at the policy implementation stage. Diminished nuclear force reliance occurs if NWSs forsake missions or pursue ASMs (Barkenbus, 1989). Reliance increases if a NWS cannot balance with nonnuclear forces. As Section II examines, reliance can increase due to the factors in Table 2-1.

Table 2-1: Factors Driving Reliance on Nuclear Forces
Real and perceived external military threats.
Absence of domestic and/or foreign ASMs.
Nuclear forces achieve missions at an acceptable cost.
Nuclear forces assigned nonnuclear threat missions for cost-effective security (Ford, 2010; Colby, 2010).

See Sokov, 2002.

Consistent with realism, NWSs rely on nuclear forces to balance adversarial power through insecurity and uncertainty with the threat perception of the capacity to punish, namely at the tactical level, leveraging offensive strategies to renew the balance of power, contest dominance, deter adversaries, and challenge military advantage. But in the absence of direct threats, except for existential threats and discouraging escalation to nuclear use, nuclear forces are impractical for prevailing intrastate, conventional, and sub-conventional threats and, therefore, add little to power through security. The research examines policies undergirding these factors as there is no absolute security, and focuses

on reliance for balancing in the anarchic system with or instead of ASMs (Keck, 2014a; Sokov, 2002). Nuclear forces may reduce the need for conventional deterrence, and while Israel, India, North Korea, and Pakistan exhibit nuclear forces to deter, established NWSs may not use nuclear forces in extended deterrence (Mueller, 2020; Joeck, 1997). The research shows that adequate nonnuclear forces are a necessary but insufficient condition of reducing nuclear force balancing with or without ASMs.

The research finds balancing with nuclear forces even without direct threats and despite inadequate nonnuclear forces for counterforce targeting, deterrence, and coercion for power disproportionate to means by manipulating adversarial perceived insecurity and uncertainty to disrupt the power balance. NWSs thereby react to power asymmetries and risk disadvantage as such offensive strategies are futile against nonnuclear threats and NWSs through self-deterrence, shifting competition to hybrid and proxy conflicts. Such balancing is motivated by perceptions of states as unitary actors of threats in that, even without direct threats, NWSs with inadequate military capabilities perceive insecurity, uncertainty, and relative loss under anarchy—and therefore risk and power asymmetry—from, in particular, geographically proximate adversarial capabilities and strategies perceived as offensive even if not offensive, driving counterbalancing and arms control marginalization. Per realism, NWSs thereby balance adversarial relative military power as anticipated by balance of power, despite inter-NWS polarity due to self-deterrence.

The research looks beyond the Cold War approach that often imbues the analysis of related issues, minimizing the MAD–based approach that drives such analysis. MAD–based strategies are limited as nuclear forces have limited utility and adequate nonnuclear forces reduce nuclear reliance and support efficient balancing. From a military–value

approach,[89] adequate nonnuclear forces absent the threat or use of nuclear forces reduce nuclear reliance, support arms control, strengthen strategic stability, and limit escalation (Detinov, 2014; Dvorkin, 2014; Savelyev, 2014; Yesin, 2014). Adequate nonnuclear forces that maintain the fear of conflict and escalation with threats is effective deterrence across domains, responds to threats operating below nuclear and conventional deterrence, and supports efficient balancing—particularly when nuclear forces have little utility.

In a period with a rising China and belligerent Russia, the scenarios for aggression in Eastern Europe and the South China Sea in particular, while not imminent, would have been enormously costly and, thus, better not to fight, even assuming they did not escalate to nuclear forces (Mueller, 2020). Except for those scenarios and existential threats, it was unlikely the cases would have engaged in conflict together. As their security was not directly threatened as powers are not tempted by large–scale aggression, they did not face existential threats and the force utility changed, requiring a re-assessment of capabilities for non-existential threats despite pursuit of security interests (Goodpaster et al., 1997).

Russian deterrence involved coercion–based threats, possibly with limited use of force, to compel, prevent escalation, and de-escalate (Adamsky, 2020). During the 1990s, Russian nonnuclear force inferiority encouraged nuclear forces for limited conflict and deterrence through escalation to de-escalate (Adamsky, 2020). Later, modernization but continued inferiority fuelled hybrid tactics and nuclear forces to manipulate adversarial threat perception to deter, prevent escalation, and for de-escalation (Adamsky, 2020).

America focused on direct and extended deterrence through nuclear and forward–deployed nonnuclear forces in Europe, Asia, and the Middle East (van Hooft, 2020; Gavin, 2015; Mazarr et al., 2018). Allied military inferiority fomented extended nuclear

[89] The capacity to fulfill missions. See National Commission on the Future of the Army, 2016.

deterrence in Asia and Europe, but which demanded a willingness to initiate a nuclear attack and be threatened with a second–strike capability (Snyder, 2007; Betts, 1987; Freedman, 1983). U.S.-NATO deterrence of Russia was wedded to punishment strategies based on Russian doctrine of early introduction of nuclear forces whereas denial was only possible for non-kinetic conflict (Rynning, 2020; Binnendijk and Gompert, 2019). That deterrence may have been limited because of the potential for nuclear escalation risking America's survival, explaining forward–deployed nonnuclear forces for deterrence as a tripwire if American forces were killed but which encouraged Russian TNW reliance to offset non-nuclear inferiority and deter foreign involvement.

American nonnuclear force advantage eroded and adversarial modernization and A2/AD challenges balanced its deterrent by denying freedom of operations in Eastern Europe and the South China Sea, through hybrid and proxy conflicts, and with threats of TNW first–use to terminate conflicts upon aggressive escalation–based strategies (van Hooft, 2020; DOD, 2018). America faced powers with significant forces combined with both its declining military superiority and adversarial balancing which compelled a re-assessment of the U.S. nuclear force (van Hooft, 2020; DOD, 2018).

For China, land-based nuclear forces deterred conflict, compelled adversaries, and permitted retaliation, implying a dissuasive defensive strategy allowing an offensive coercive strategy, while conventional deterrence focused on compellance and dissuasion upon denial or punishment (Cheng, 2020; PRC, 2013a).

Sokov (2002) posits that reliance is irrelevant if the utility of nuclear forces is low regardless if whether nonnuclear forces are adequate as a NWS will turn to ASMs. The research shows that if nonnuclear forces are inadequate, reliance on nuclear forces

increases despite ASMs. Indeed, even when nuclear force utility is low (e.g., America), adequate nonnuclear forces reduce utility and preclude ASMs. Sokov also posits that without an acute external threat, reliance on nuclear forces should be low despite non-nuclear force adequacy. The research shows that while this was so with America, this was not so with Russia and partly so with China.

McDermott (2011a) discusses how nuclear forces compensate for inadequate non-nuclear forces, while others (e.g., Moisseyev et al., 2010) assert that nuclear deterrence is ineffective against nonnuclear threats and irrelevant for power, status, and leverage. The research substantiates this, and helps understand how reliance and the capacity of military capabilities evolve because of the policies examined. If military capabilities are viewed as consistent with constant roles, it is impossible to assess evolving balancing and effects for deterrence, conflict escalation, strategic stability, and arms control.

Dvorkin (2009) argues that a transformation in reliance on nuclear forces in the 21st century will only occur if leading democratic NWSs reduce their nuclear forces and reject nuclear deterrence. How this applies to authoritarian NWSs like Russia and China or others is questionable. Dvorkin also discusses the possibility of a nuclear free world, or global zero. Global zero is unlikely but the research shows how shifts in reliance can help reduce nuclear forces and phase out confrontational MAD–based policies.

Experts call for reducing nuclear reliance to curb nuclear proliferation and as MAD is obsolete (Schultz, Perry, Kissinger and Nunn, 2007; Richter, 2002). Others recognize the link between nuclear reliance, arms control, and strategic stability without adequate inquiry (e.g., Dvorkin, 2009 and 2009c; Pifer, 2011; Sokov, 2009; SF, 2009). Arms control reinforces predictability with equality in forces, reducing nuclear forces or

strengthening strategic stability by imposing limits on forces (Savelyev, 2014). Arms control succeeds if it increases security through threat reduction by limiting the capacity to strike first (Savelyev, 2014; Yesin, 2014). But efficient nuclear reliance does not result in arms control, and an understanding of drivers is needed. Also, when strategic stability focuses on preserving attack or retaliation under MAD, NWSs increase nuclear reliance and constrain arms control (Savelyev, 2014; Dvorkin, 2014; Zagorsky, 2014).

1.5.2 *Conventional Deterrence and Conflict*[90]

NWSs rely on nonnuclear forces for direct or extended deterrence, conflict, or furthering foreign policy. The research focuses on deterrence and conflict. Like nuclear deterrence, conventional deterrence implies deterring threats and containing conflict, not escalating it (Mueller, 2020; Mearsheimer, 1983). The destructiveness of nuclear forces during the Cold War outshone conventional deterrence, but post-Cold War nonnuclear threats increased its potential (Mueller, 2020). Further, power competition perdured, particularly in Eastern Europe and the South China Sea, undermining extended deterrence and presenting greater threat of regional nonnuclear conflict (Freedman, 2020).

Conventional deterrence is based on three arguments. First, threats seek quick and inexpensive victories to leave the defender with no option, denying it advantage, and achieve objectives with little to no engagement (CEIP, 2010). The threat may switch to a defensive strategy to deter or repel counterattacks, reverse gains, or restore the status quo ante (CEIP, 2010). Second, it deters by denying and/or by punishing[91] (Gerson, 2009; Freedman, 2004; Rhodes, 2000; Van Evera, 1999; Mueller, 1998; Wilkening and

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[90] See Rhodes, 2000; Van Evera, 1999; Wilkening and Watman, 1995; Huth, 1988; Mearsheimer, 1983; George and Smoke, 1974.

[91] On this distinction see Mazarr, 2018 and Snyder, 1961. Mearsheimer (1985: 64) posits that "[t]he threat of a war of attrition is the bedrock of conventional deterrence." See also Huth, 1988.

Watman, 1995; Mearsheimer, 1983; Lebow, 1981). Third, the local balance of military power[92] matters because deterrence may fail if the threat thinks it has local advantage (Gerson, 2009. But see Mazarr, 2018). Notably, conventional deterrence must overcome challenges, including deterring surprise attacks and supplying adequate nonnuclear forces (CEIP, 2010). Also, nonnuclear forces may not be able to deter and defeat the range of nonnuclear threats (e.g., HDBTs, PGS, and dispersed threats) (CEIP, 2010). In that case, nuclear forces may be the stopgap—but nearly unusable—military capability.

Conventional deterrence depends on what NWSs can do, not what they say (i.e., policy implementation versus articulation). Unlike nuclear forces, the effectiveness of conventional deterrence is broad, even though nonnuclear threats and conflict persist. But nonnuclear forces must deter non-existential threats including sub-conventional threats. Effective conventional deterrence and conflict strategies are, therefore, based on a range of nonnuclear forces to produce costs higher than an aggressor's gain, and thereby permit a spectrum of use throughout the escalation ladder. Doing so increases utility to security, limits escalation, diminishes reliance on and raises the threshold of use of nuclear forces, efficiently allocates scarce resources, and limits interstate stalemates.

But unlike nuclear forces, nonnuclear forces are conditioned by what other actors do and, thus, are a relative capability (Waltz, 2009). As nonnuclear forces do not have the same effect as nuclear forces, it is useful for a NWS to threaten to use adequate force if deterrence fails (Waltz, 2009). The capacity of nonnuclear forces conditions the ability to execute strategies. The research recognizes that the utility of nonnuclear forces is broad, and adequate nonnuclear forces reduces reliance on nuclear forces and supports efficient balancing. Threats in the "grey zone" between war and peace (like cyberwarfare) that do

[92] See Rhodes, 2004 and 2000; Wilkening and Watman, 1995; Huth, 1988; Russett, 1984.

not rely on significant forces or operate below identifiable punishable aggression and with no identifiable causal actor demand ongoing threat re-assessment.

Because nonnuclear threats are contestable, they raise doubts in deterred states about the ability to deter, while nuclear threats are uncontestable by eliminating positive conflict outcomes (Wintz, 2018). Conventional deterrence demands an effective deterrent and is more credible post-Cold War than nuclear deterrence is (Haffa, 2018). Balancing is efficient with reliance on nonnuclear forces to deter nonnuclear threats by maintaining the fear of conflict and escalation with threats with adequate nonnuclear forces. Doing so proffers greater self-help to security, and vice versa, because nuclear forces have little utility against nonnuclear threats even if acute external threats exist and in the absence of ASMs. That strengthens deterrence as it maintains advantage in conflict, responds to threats below the threshold of nuclear and conventional deterrence, and diminishes the need to threaten or use nuclear forces to reduce adversarial gain.

A NWS thereby increases power through deterrence and limits conflict escalation to nuclear forces with assurances provided by nonnuclear forces. Deterrence thereby works when threats perceive military asymmetry, balancing power through security with nonnuclear forces and defensive strategies and dissuading and coercing enemy action, meaning that the scarcity of interstate threats relates to deterrence effectiveness (Mueller, 2020). Indeed, interstate aggression requiring nuclear deterrence is rare though disarming carries risks, and while NWSs continue to deter conventional aggression and coercion, novel sub-conventional threats require new forms of deterrence[93] across domains[94] that focuses on the means and implicate capacity (Mueller, 2020; Gartzke and Lindsay, 2016).

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93 For example, see DOD 2019; Gartzke and Lindsay, 2016; Mitchell, 2015; Mullen, 2008.

94 The five domains are land, sea, air, space, and cyberspace. See Gartzke and Lindsay, 2016.

1.6 Asymptomatic Substitution of Nuclear Forces[95]

A mixed nuclear–conventional deterrence and use of force strategy anchored on adequate nonnuclear forces offers efficient balancing as it strengthens deterrence through military advantage across threats. This increases utility to security, limits escalation, reduces reliance on—and raising the threshold of—nuclear use, more efficiently allocates resources, and limits the interstate stalemate that foments hybrid and proxy conflicts.

Ford (2010b) insists on limiting arguments that nonnuclear forces can replace—and reduce reliance on—nuclear forces, as the Pentagon first put forth in the 1970s. Ford (2010 and 2007) cautions that reducing reliance and replacing them with nonnuclear forces are different concepts. The goal should be to achieve missions without nuclear forces that can only be achieved with nonnuclear forces (Ford, 2010). But Ford (2010) questions if nonnuclear forces can assume nuclear force missions—namely second strike and countervalue missions. The New Triad[96] represents a belief that nonnuclear forces can replace certain missions. Colby (2010) agrees but cautions that substitution should be asymptomatic and nonlinear due to targets difficult to deter or defeat with confidence and because nonnuclear forces cannot equal the threat and destruction of nuclear forces.

Conventional deterrence puts a premium on nonnuclear forces for deterrence, but symmetric and asymmetric adversarial forces can undermine deterrence. Substitution also undermines strategic stability as nonnuclear forces substitute for counterforce nuclear targeting but not second–strike retaliation undergirding strategic stability as nonnuclear forces lack the destructiveness of nuclear forces, and substitution demands military modernization due to competition and non-MAD-based strategic stability (Colby, 2010).

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95 See Zarate and Sokolski, 2009; Krepinevich and Kosiak, 1998; Nitze, 1994; Blair, 1993.

96 See DOD, 2002; Ford, 2010; Sokolski, 2010; Gerson, 2009; Oelrich, 2005; Nitze, 1994; Allan, 1994; Guertner, 1993; Cropsey, 1994; Perry, 1991; Quester, 1985.

While nuclear deterrence credibility depends on resolve to use nuclear forces, nonnuclear deterrence credibility depends on their adequacy and, thus, greater self-help (Gerson, 2009; Byman and Waxman, 2002; Harknett, 1994; Haffa, 1992; Freedman, 1983; Kaufmann, 1956). As the research examines military capabilities as a resource and not an outcome, state policies are input measures to understand how domestic structures generate forces for deterrence and conflict for balancing which can be compared without the need for military–balance analysis or predicting results of force-on-force encounters.

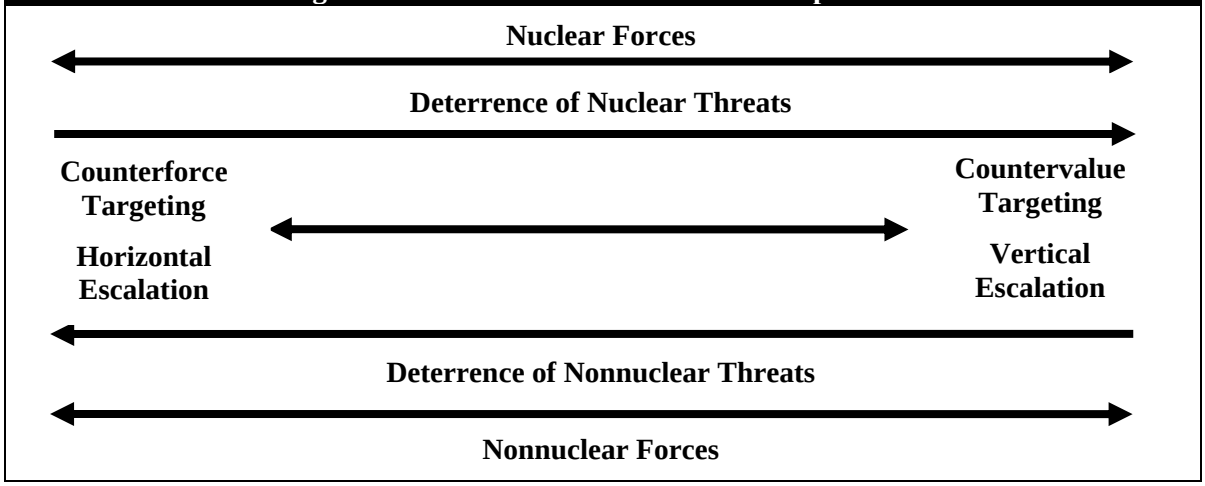
Chapter Three: Research Approach

This chapter derives a research approach to examine balancing upon a typology of policy articulation and implementation, and outlines a structured approach to advance the research and enhance the explanatory model. The explanatory model does not sacrifice specificity for breadth or generality, and with data from primary and secondary sources the research provides insight into a relevant security issue.

1. Deterrence and Use of Force Spectrum

A NWS articulates and implements supply and demand policies determinative of reliance on military capabilities for balancing through deterrence and conflict against identified threats anchored on offensive and defensive deterrence and targeting strategies with effects for its security and that of others. Figure 3-1 illustrates how.[97]

Figure 3-1: Deterrence and Use of Force Spectrum



Reliance on nuclear forces increases if a NWS cannot accomplish deterrence or conflict missions through nonnuclear forces. A mixed nuclear–conventional deterrence and conflict strategy anchored on adequate nonnuclear forces, deterrence by denial, and

[97] A posture reflects the forces in a military structure, when they might be used, the targets they may be used against, and deterrent strategy. See Narang, 2009.

counterforce targeting is a more efficient balancing strategy, with greater utility to power through security in the nonnuclear–threat–dominated post-Cold War. Inadequate non-nuclear forces due to incongruities in the policy process condition the effectiveness and credibility of balancing and increase reliance on nuclear forces—with diminished utility to power through security—and adversarial gain through nonnuclear conflict.

Though NWSs can rely on nuclear forces to deter and defeat nuclear and/or non-nuclear threats through counterforce and/or countervalue targeting with horizontal and/or vertical escalation effects, deterrence of nuclear threats increases with nuclear forces for countervalue targeting with vertical escalation. Deterrence of nonnuclear threats increases with nonnuclear forces for counterforce targeting with horizontal escalation. While nuclear deterrence credibility depends on the resolve to use nuclear forces, conventional deterrence credibility depends on the adequacy of nonnuclear forces (Gerson, 2009; Byman and Waxman, 2002; Harknett, 1994; Haffa, 1992). Because of the destructiveness and conflict escalation of nuclear use, NWSs should rely on nonnuclear forces for counterforce targeting for nonnuclear threats.

Since urban centres are valued targets and likely to result in vertical escalation from countervalue targeting, costs to conflict parties and the threshold of use of nuclear forces increases (diminishing the probability of use) as reliance shifts to nuclear forces for countervalue targeting. Deterring adversarial action or reducing its success depends on the adequacy of military capabilities vis-à-vis threats, and counterforce targeting has greater damage–limiting effects that reduce conflict escalation probability.

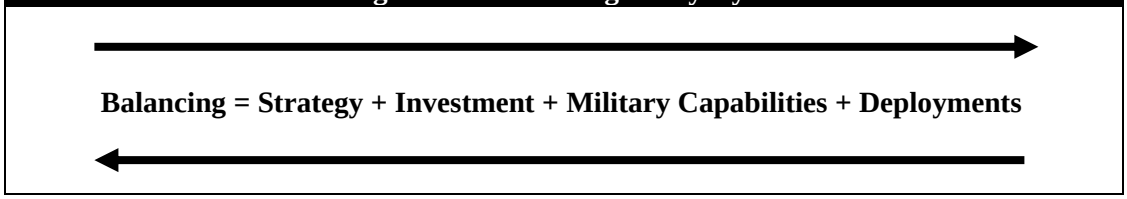
Because of the destructive and escalatory nature and higher threshold of use of nuclear forces, deterrence of nonnuclear threats increases as balancing shifts toward non-

nuclear forces for counterforce targeting. Deterrence is more credible and effective when a NWS does not have to rely on nuclear forces for nonnuclear threats because nonnuclear forces are more effective at achieving—and at an acceptable cost—nonnuclear missions (even absent ASMs or with a small nuclear force), capitalizing on greater self-help. The threshold of use of nuclear forces in that case rises with adequate nonnuclear forces for countervalue or counterforce targeting. But this assumes that nonnuclear conflict does not escalate to nuclear use, particularly from countervalue targeting with nuclear forces.

2. Policy Cycle

To operationalize the analysis of balancing across threats, the research identifies policies articulated and implemented by domestic structures for deterrence and conflict as Figure 3-2 illustrates, which can be compared.

Figure 3-2: Balancing Policy Cycle



Note: the cycle does not consider external factors like social priming.

Each policy stage symbiotically drives and informs the other. The way the policy cycle relies on military capabilities validates supply and demand policies as the analytical proxy for balancing through deterrence and conflict. This chapter provides a rationale for the policy–based proxy and a typology for efficient balancing across threats.

The articulation and implementation of policies determine all stages in Figure 3-2. A NWS can control each stage, but disconnect among stages due to incongruent policies can result in inadequate military capabilities and underbalancing across threats. While threats cannot be controlled, they condition each stage: e.g., after its questionable display

against Georgia in 2008, Russia modernized its military vis-à-vis regional threats. Likewise, the 9/11 attacks underscored America's need to prioritize nonnuclear forces to counter terrorism, reduce nuclear reliance, and curb nuclear proliferation and terrorism.

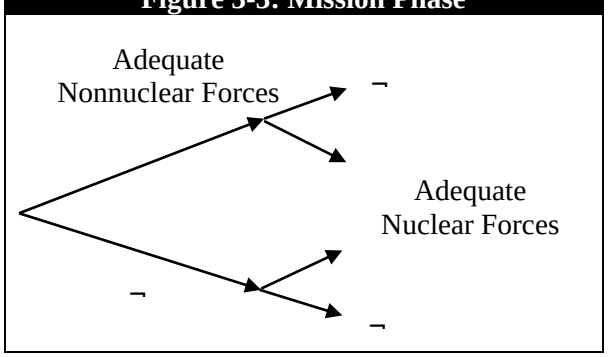
2.1 Reactive and Proactive Supply and Demand Policies

By examining reactive and proactive policies determinative of the supply and demand of nuclear and nonnuclear forces, the research examines how balancing across threats through deterrence and conflict evolves. Balancing results from a policy process of the unitary rational state driven by domestic structures responsive to external threats. Consistent with realism, domestic structures, for the state as a unitary rational actor, identify threats to security in policy and respond to threats through policy. Policy choices are based on a cost-benefit analysis with domestic structures seeking to maximise self-help through realizable preferences and costs to threats through military capabilities and strategies (Larsen and Kartchner, 2014). Defensive strategies reduce costs and adversarial benefits and nuclear use results in the least benefits and greatest costs.

2.2 Policy Process

The research assumes domestic structures maximise self-help. The policy process begins with whether or not (¬) forces are adequate as Figure 3-3 shows.

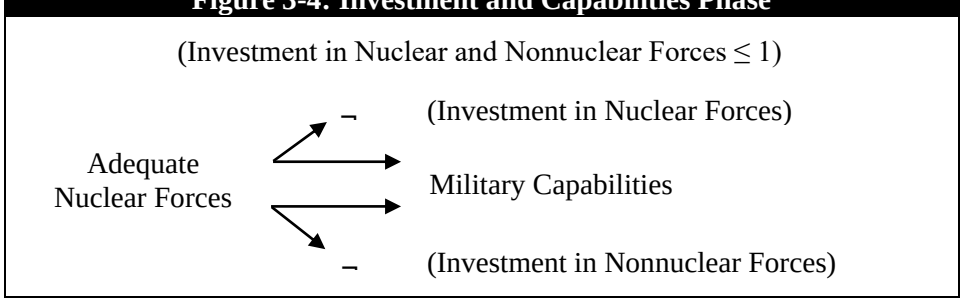
Figure 3-3: Mission Phase



Defence spending and the DI determine the production function (investment) of the policy process, and therefore the supply and import of military capabilities. Assuming adequate nuclear and nonnuclear forces equals 1, investment (I) in nuclear (INC) and nonnuclear (INNC) forces is less than or equal to 1. Figure 3-4 illustrates this.

If nonnuclear forces are inadequate, a NWS may increase nuclear reliance for threats, import external military capabilities, or pursue ASMs. Investment in nonnuclear forces supports efficient balancing. Inadequate nuclear forces drive investment in nuclear forces as a deterrent. Assuming adequate military capabilities, deterrence upon defensive and/or offensive strategies prevents conflict. ASMs reinforce deterrence, but as Figure 3-5 shows, even if nonnuclear forces are adequate, a NWS may still rely on nuclear forces, particularly against an acute threat. In that case, the absence or unreliability of ASMs—or the perceived utility of nuclear forces—comes at an acceptable cost.

Figure 3-4: Investment and Capabilities Phase



A NWS may condition its nuclear posture such as with a no-first-use policy or negative assurances, which is a commitment to only use nuclear forces in retaliation to a nuclear attack. Because of their incomparable destruction, a pre-emptive nuclear attack against NWSs or their allies is unlikely. But adequate nonnuclear forces may embolden a NWS to pursue coercive or military action, particularly because of the less destructive and escalatory nature of nonnuclear forces. The adequacy of forces may also foment the

security dilemma, undermine strategic stability and deterrence, constrain arms control, and exacerbate conflict escalation. If a NWS or an ally attacks or is attacked, as Figure 3-5 and Figure 3-6 show, the NWS may not respond (¬), rely on ASMs, negotiate peace, or retaliate with nonnuclear forces and/or nuclear forces (e.g., positive assurances, which are commitments to defend a nonnuclear state victim) with defensive or offensive counter-value (CVT) and/or counterforce (CFT) targeting strategies, with vertical (VE) and/or horizontal (HE) conflict escalation effects resulting in varied self-help (P/Q).

Figure 3-5:
Deterrence and Conflict Phase

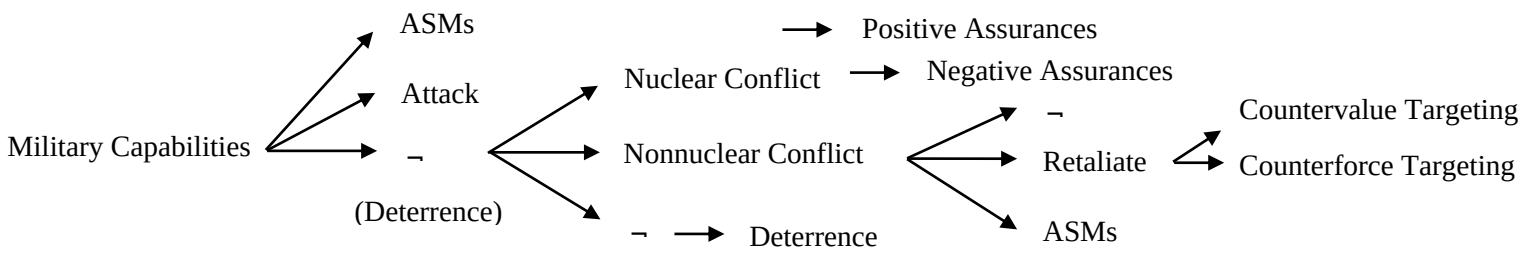


Figure 3-6: Escalation Phase

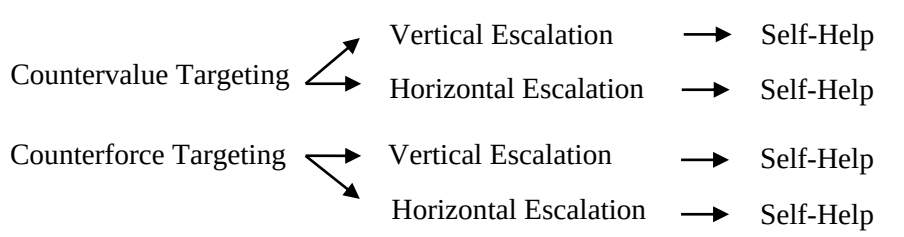
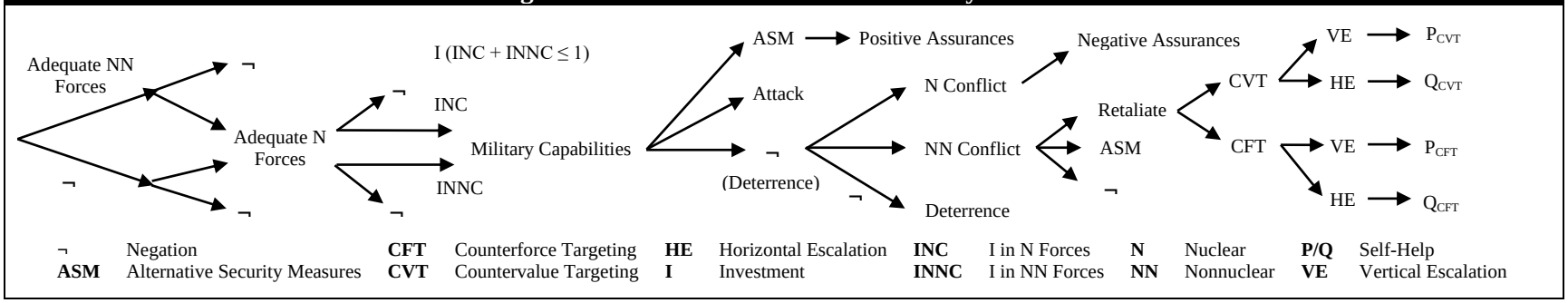


Figure 3-7 combines the preceding phases. As domestic structures seek to maximise self-help and costs to adversaries (Larsen and Kartchner, 2014), in case of a nuclear attack against a NWS or an ally, vertical escalation to nuclear forces is likely, resulting in the least self-help and highest costs. Hence, in nonnuclear conflict, minimizing escalation to nuclear forces from possible vertical escalation, nonnuclear to nuclear conflict, counterforce to countervalue targeting, or limited to general nuclear use (Larsen and Kartchner, 2014) increases self-help and reduces costs.

Increasing self-help through deterrence and conflict that diminishes escalation to nuclear forces depends on the adequacy of nonnuclear forces and the targeting strategy, as Figure 3-7 shows, with resulting self-help in Table 3-1. Adequate nonnuclear forces anchored on counterforce strategies diminish escalation to nuclear forces but, in the absence of political strategies to defuse threats, may catalyse adversarial reliance on offensive strategies and destabilizing forces, foment the security dilemma, undermine strategic stability and deterrence, constrain arms control, and exacerbate conflict escalation.

Figure 3-7: Deterrence and Conflict Policy Process



There is a self-interested incentive to avoid nuclear conflict and countervalue targeting by deterring nuclear threats with adequate nuclear forces and nonnuclear threats with adequate nonnuclear forces, particularly with counterforce targeting. Thus

in a post-Cold War nonnuclear-dominated threat context, efficient balancing across threats that increases self-help in conflict—or by preventing it—depends on credible conventional deterrence and the adequacy of nonnuclear forces. As nuclear forces are less effective and credible (particularly in offensive strategies) for deterring and defeating nonnuclear threats, adequate non-nuclear forces for nonnuclear threats are a necessary but insufficient condition of efficient balancing. An adversarial NWS may still resort to the threat or use of nuclear forces to increase its chances of winning or compel adversarial goal modification, surrender, or negotiated peace (Larsen and Kartchner, 2014). Nuclear use may increase (and lower the threshold of use) when the military power or perceived military power of NWSs undermine strategic stability or their deterrent.

Table 3-1: Simplified Self-Help Explanation	
$P_{CVT} < P_{CFT}$	Vertical escalation from countervalue targeting has a higher probability of escalation to nuclear use than vertical escalation from counterforce targeting.
$P_{CVT} < Q_{CVT}$	Vertical escalation from countervalue targeting has a higher probability of escalation to nuclear use than horizontal escalation from countervalue targeting.
$P_{CFT} < Q_{CFT}$	Vertical escalation from counterforce targeting has a higher probability of escalation to nuclear use than horizontal escalation from counterforce targeting.
$P_{CVT} < Q_{CFT}$	Vertical escalation from countervalue targeting has a higher probability of escalation to nuclear use than horizontal escalation from counterforce targeting.

3. Balancing Types

Policies produce the balancing types outlined in Table 3-2. The research does not assume that any type is dominant. Declaratory balancing—as expressed by postures and doctrines—is the signal to friends and foes of deterrent strategy by outlining intentions, options, and proclivities in conflict (Perry and Schlesinger, 2009; Sagan, 2009). Strategic balancing channels strategies, from general deterrence with countervalue targeting to limited deterrence with counterforce targeting (Lukasik, 2010). Resource balancing, as expressed by defence spending and the DI, is how domestic structures articulate strategy.

Table 3-2: Balancing Types

Type	Metric	More Efficient Balancing	Underbalancing
Declaratory	Posture	Prioritization of nonnuclear forces for nonnuclear threats.	Prioritization of nuclear forces for non-nuclear threats as well.
Strategic	Strategy	Prioritization of reliance on nuclear forces for general deterrence.	Reliance on nuclear forces for counter-force targeting or nonnuclear threats.
Resource	Budget, DI	Adequate investment in nonnuclear forces for nonnuclear threats.	Investment in nuclear forces for non-nuclear threats as well.
Quantitative	Force Size	Adequate supply of nuclear and nonnuclear forces for balancing.	Inadequate supply or oversupply of military capabilities for balancing.
Qualitative	Force Type	Adequate nuclear and nonnuclear forces to balance threats.	Modernization of nuclear forces for nuclear and nonnuclear threats.
Deployment	Deployment	Configuration of capabilities is commensurate with threats.	Configuration of military capabilities is not commensurate with threats.

Quantitative, qualitative, and deployment balancing, expressed by the size, type, and deployment of capabilities, are how deterrence and conflict are materialized and communicated. The six types form balancing. While declaratory and quantitative reliance are the more visible types, they are not the most determinative. Incongruities among types due to policy divergences result in underbalancing and un-capitalized self-help.

4. Policy Articulation and Implementation

Policies that drive the supply and demand of military capabilities are the proxy by which balancing is assessed. Demand policies (the mediating variables) that domestic structures articulate and implement conditioned by threats establish the quantitative and qualitative supply, and therefore the adequacy, of military capabilities across threats (the independent variable) for balancing through deterrence and conflict.

As Table 3-3 shows, balancing depends more on what NWSs do (implementation) with military capabilities than NWSs say about them (articulation). Through the inductive process, the research identified these policies as determinative of balancing. Change makes balancing more or less feasible and the research identifies which support efficient balancing and, therefore, self-help, while recognizing that policies vary by NWS.

Table 3-3: Supply and Demand Policies

Stage	Articulation		Implementation			
Phase	Strategy		Investment	Military Capabilities		Deployments
Type	Declaratory	Strategic	Resource	Quantitative	Qualitative	Deployment
Policies	Reactive and Proactive Supply and Demand Policies					
Demand	Security					
	Domestic Structures					
Supply	Nuclear Posture		Defence Spending	Nuclear Forces		
			Defence Industry	Nonnuclear Forces		
				ASMs		

The research examines policies to elucidate if and how domestic structures—in a regime type seeking to maximise self-help—converge or diverge on the articulation and implementation of policies conditioned by threats and determinative of balancing. The research thus examines how supply and demand policies regarding military capabilities condition security, often in contradiction with threats, and seeks to examine and redress incongruities between threats and military capabilities with implications for security.

4.1 Demand: Security

Consistent with realism, security is not absolute but a spectrum—more or less external military threats including adversarial military power, which can be addressed by varied types and levels of military capabilities, and encompass adversarial non-military objectives to maintain or renew the power balance, contest dominance, or deter others. A useful approach to security is examining real and perceived threats, the means, and the time period through security policies. The cases do not threaten each other except through nuclear forces as there is no direct threats of conventional military threat to their security. Still, the cases engaged in balancing of real and perceived threats including military advantage. States identify threats in articulated policy by military power and perceived military power, geographic proximity, and offensive military capabilities and strategies. Perceived threats are a function of power asymmetry, for if a state has more power, risk is perceived under anarchy as states as unitary actors rely on self-help to balance external military threats including military asymmetries driving threat perception.

Military power can be leveraged through policies, and variation explains systemic imbalances, with the anarchic system indirectly causal of balancing and policy directly causal, with self-reliant states better placed to balance. Threats drive balancing motivated by avoiding relative losses and to attain power through security, and the greater the capacity to do so the less the relative power of others (Schweller, 1994). Threats a NWS identifies are conditioned by adversarial military power, geographic proximity, and offensive military capabilities and strategies, with asymmetries from inadequate forces undermining balancing. Articulated threats condition security, and adequate military capabilities diminish the acuteness of, offset, or negate a threat and increase realizable

preferences through self-help. Reliance on nuclear forces increases as the acuteness of threats rises or if nonnuclear forces are inadequate, particularly absent ASMs or as NWSs perceive (particularly offensive) threats undermining deterrents. For a deterrent to be credible, a NWS must act in ways that may be costly, including nuclear use. In a context dominated by nonnuclear threats, NWSs should efficiently rely on nuclear forces as they are an ineffective against nonnuclear threats and impose unacceptable costs.

4.2 Demand: Domestic Structures

Balancing depends on domestic structures determinative of military capabilities embedded in strategic cultures pursuing security vis-à-vis threats for the state as a unitary rational actor in the anarchic system (Schulte, 2013; Delpech, 2012; Moravcsik, 1997; Wendt, 1992). Domestic structures account for the articulation and implementation of state–level policies vis-à-vis threats as a unitary rational actor for military capabilities and strategies. This explains shifts in the balance of power leveraged with policies to direct the anarchic system towards realizable preferences. Self-reliant states are better placed to erode adversarial military advantage and manipulate adversarial threat perception through balancing. But divergence because of the inability or unwillingness of domestic structures to articulate or implement efficient balancing policies results in diminished relative gains due to under-balancing through realizable preferences with self-help, and vice versa.

This helps explains relative gains and losses through balancing with systemic effects, not necessarily outcomes or balances of power. Through policies, domestic structures identify threats and articulate and implement balancing policy for security responsive to the anarchic system even when not directly threatened. Policy variation explains real and perceived threat responses conditioning relative gains and losses but not

necessarily outcomes or balances of power. Policy is meant to focus domestic structures on power through security, with the simplifying assumption domestic structures articulate and implement policies to maximise self-help, but absent convergence the means may not be available to implement policy (Schulte, 2013; Bueno de Mesquita and Riker, 1982). Internal balancing is preferred under multipolarity with military asymmetries.

4.3 Supply: Nuclear Posture

A nuclear posture outlines the nuclear forces within a military structure, deterrent strategy, and when they might be used and against whom (Narang, 2009). If not used for disinformation, they reflect threats, military strength, weaknesses, goals, and strategy but have limited reliability for how they correspond to actuality (Colby, 2016; Shoumikhin, 2011). Postures require defence spending and a DI to be materialized through forces with or in lieu of the import of external military capabilities (Colby, 2016).

4.4 Supply: Defence Spending

Defence spending is a means to evaluate military capabilities and reflects power and capacity (Walker, 2014; Fordham, 2004). Military capabilities are a function of past and present spending, not just spending at one point (Kugler, Organski, and Fox, 1980; Fordham, 2004; Ward 1984; McCubbins, 1983; Lambelet, 1973). Seeking to maintain parity, NWSs align capacity through defence spending to supply adequate military capabilities vis-à-vis respective threats. Despite the risk of over-simplification, the research does not examine the minutiae of spending but rather how trends correlate with balancing. While defence spending has elements of secrecy, military capabilities reflect and are as a proxy for spending trends and the supply and prioritization of forces.

4.5 Supply: DI

The DI[98] helps understand the capacity to supply military capabilities, which are a function of past and present capacity, not just at one point. The DI conditions internal balancing, self-sufficiency, and vulnerability (Fordham, 2004; Tellis, 2000). NWSs may import military capabilities to address inadequacies to accomplish missions.

4.6 Supply: Military Capabilities

Though military capabilities are an intelligible concept, they are difficult to assess (Fordham, 2004). While no absolute measure, they should be assessed vis-à-vis threats based on means, budget indicators, the way a state uses them, and their end (which can be assessed but not measured) (Smith, 2006. But see Fordham, 2004 and Tellis, 2000). Balancing is assessed vis-à-vis threats for which forces are relied on, be it for manpower (e.g., China), firepower (e.g., America), both, or neither (e.g., Russia except nuclear forces). While modernization helps achieve military objectives, it is difficult to estimate the extent it can or does (Betts, 1985). As military capabilities condition what NWSs can and cannot do under anarchy, except for direct deterrence of existential threats and limiting conflict escalation, NWSs do not capitalize on self-help through nuclear forces. General deterrence coupled with extended conventional deterrence for non-existential threats decoupled from nuclear threats and geared to strategic long-term balancing while retaining immediate deterrence capacity is more effective (Goodpaster et al., 1997).

4.7 Supply: ASMs

If military capabilities are inadequate, NWSs may pursue ASMs (e.g., security commitments). A NWS patron may seek to convince threats that it will defend protégés

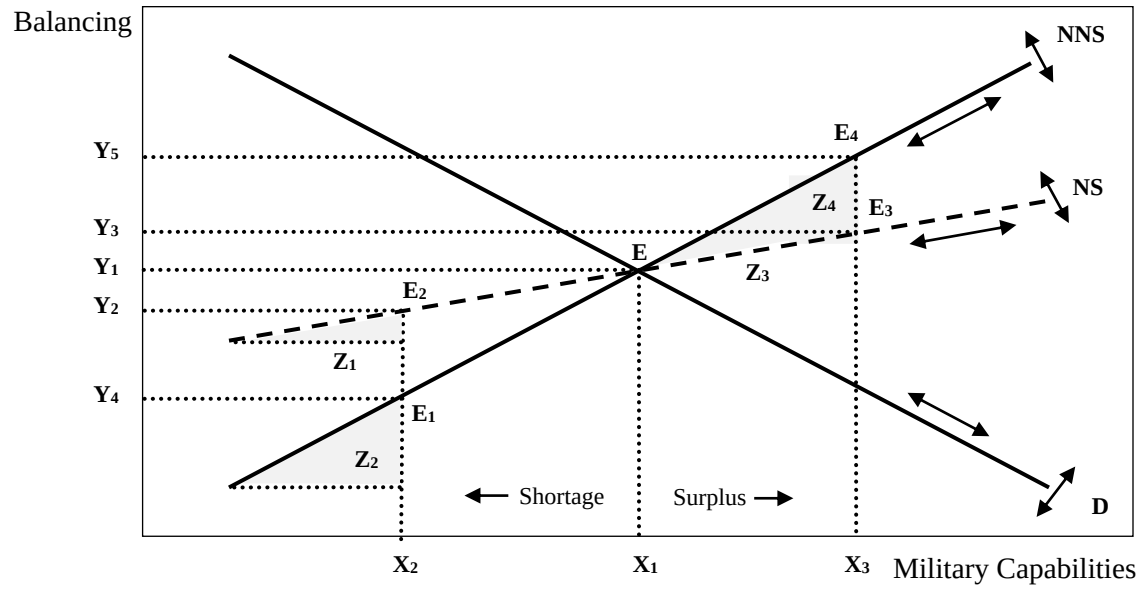
[98] DI encapsulates private and/or public entities that supply forces. See Gholz and Sapolsky, 1999.

and raise costs, possibly through nuclear forces (Fuhrmann and Sechser, 2014 and 2013; Jervis, 1989; Waltz, 1990. But see Sechser, 2011). ASMs can have deterrent effects even without deploying forces, but pose challenges with consensus or when threats undermine ASMs (Fuhrmann and Sechser, 2014; Schulte, 2013; Leeds, Long, and Mitchell, 2000; Fearon, 1994; Morrow, 1994; Huth, 1988; Jervis, 1970; Schelling, 1980 and 1966). NWSs are unlikely to deploy or employ nuclear forces in conflict absent an existential threat but rather nonnuclear forces unlikely to be attacked (Fuhrmann and Sechser, 2014).

5. Efficient Balancing

Based on the foregoing policies, NWSs rely on military capabilities across threats. Efficient balancing that capitalizes on self-help with deterrence and conflict is contingent on the credibility of conventional deterrence and conflict, which depends on the adequacy of nonnuclear forces across nonnuclear threats. Balancing is inefficient when self-help is not maximised because of inadequate military capabilities. Figure 3-8 illustrates this.

Figure 3-8: Efficient Balancing



Efficient balancing (E) results when military capabilities deter and defeat threats, capitalizing on self-help. Reactive and proactive demand (D) policies, or the mediating variables, determine the nuclear (NS) and nonnuclear (NNS) military capabilities, or the independent variable. The slope of supply curves NS and NNS shift due to the production function (investment) and as the demand curve shifts. Movement along the curves results from changes in balancing and the supply of military capabilities. Shifts of the curves results from changes from factors other than policies external to the model such as the import of military capabilities or changes in threats, but not necessarily how NWS perceive them. Underbalancing results from incongruent policies (see, e.g., Table 3-3) and thus types of balancing, resulting in policy gaps.[99] When supply of forces is below efficiency (E) shortages occur (e.g., X_1 to X_2) and balancing is inefficient on nuclear (X_2-E_2-Y_2) and nonnuclear (X_2-E_1-Y_4) forces and nuclear reliance increases despite ASMs.

As shaded area Z_1 shows, balancing through self-help from nuclear forces can be smaller than from nonnuclear forces (Z_2). When supply exceeds efficient balancing (E), surpluses occur (e.g., X_1 to X_3) and reliance on nuclear (X_3-E_3-Y_3) and nonnuclear (X_3-E_4-Y_5) forces is inefficient. As shaded area Z_3 shows, balancing through self-help from nuclear forces can be smaller than from nonnuclear forces (Z_4). Reliance on nuclear or nonnuclear forces above (Y_3 and Y_5) or below (Y_2 and Y_4) efficient balancing (E) may result in overbalancing or underbalancing, respectively. As this model contemplates two supply curves, reliance on nuclear and/or nonnuclear forces can be inefficient. But this explanatory model does not respond to market forces but rather to governmental supply and demand policies as those outlined in Table 3-3.

[99] Gaps between objectives (demand policies) and results (supply policies). Balancing represents the articulation and implementation policy stages, while results are the quantiative and qualitative results of the policy cycle. Consider Deleon, 2007; Jann and Wegrich, 2007; Easton, 1965.

6. Balancing Typology

Table 3-4 posits a balancing typology across threats across policy stages.

Table 3-4: Balancing Typology			
Stage	**Typology**	**Underbalancing**	**Efficient Balancing**
Articulation and Implementation	Balancing types reinforce efficient balancing across threats.	Policies are unable to—or do not—support efficient balancing across nuclear and/or nonnuclear threats with diminished self-help through deterrence and conflict.	Policies support efficient balancing across nuclear and/or nonnuclear threats with increased self-help through deterrence and conflict.

7. Research Approach

The research examines the supply and demand policies of the cases and applies a methodological approach to maximise the argument. The method to address the research question is primarily qualitative, and applies an inductive analytical approach and the comparative case method by analysing data, as this permits comparative analysis of the articulation and implementation of policies to identify trends within and across cases (1991–2015). The research identifies policies that support efficient balancing. This section conducts a policy framing, variable concreteness, and process tracing validity analysis to substantiate the research approach and the relevancy and examination of data collected for proving or disproving the argument. This section also explains the steps taken to preserve data quality and outlines the analytical approach.

7.1 Sources and Data Analysis

The NWS cases provide analytical rigour to applying realism and relevance as balancing was prominent in the gradually multipolar period examined. The comparative approach, whereby it is more accurate to assess relative balancing capacity across cases, is important to validate the argument by comparing the articulation and implementation

of policies to identify trends within and across cases examined, including in non-Western contexts, to understand balancing policies, causes of underbalancing, and implications for power through security. Informed by sources and interviews, the research thereby provides categorizations of occurrences and correlates results for balancing trends.

The comparative approach analyses of the articulation and implementation of policies grasps peculiarities of each case and identifies similarities, differences, and patterns across cases that balance to explain variation and to generalize policies through mediating domestic structures to support balancing through self-help conditioning realizable preferences determining power through security. The comparative approach is important to validate the argument by comparing policy articulation and implementation across cases to understand balancing policies and implications.

This realism–military power–policy approach was chosen as a domestic structural explanation of balancing with systemic effects, as anticipated by balance of power, by referring to variations in policies to identify and respond to threats. This conditions threat perception and distribution of military capabilities with self-reliant states better placed to balance. The research thereby reinforces realism's explanatory and predictive capacity, including by accounting for how sub-optimal policies undermine balancing and foment asymmetries. The research also advances a methodology to assess and calibrate balancing as a continuation of policy as states respond to threats in different ways because of varied policies, including due to inadequate military capabilities driving perceived utility of nuclear forces, even if not threatened, with diminished security. This approach validates great power balancing under anarchy, primarily through internal balancing and imitation.

Data to comparatively analyse American, Russian, and Chinese articulation and implementation of policies was drawn from publicly available official state sources and secondary sources and interviews with practitioners and subject–matter experts to create methodological triangulation, which draws on several methods and sources to widen and deepen the study of phenomena (Bryman, 2001). To help understand balancing, the interviews enabled the researcher to better "read" and provide perspective on sources rather than impose *a priori* assumptions (Snetov, 2015). The interviews followed a semi–structured technique (Bryman, 2001), not to compare responses but to refine the research approach by maximizing collection of contextual information (Snetov, 2015). The data and interviews help capture balancing policies and implications for power through security to indicate trends by grasping peculiarities and explain variation in balancing efficiency. This reinforces the argument as a domestic structural explanation of balancing through variation in policies articulated and implemented by domestic structures to identify and respond to threats as states respond in different ways due to varied policies.

The data and interviews help provide the context for balancing across cases. Per the inductive analytical approach, the argument is derived from the data to avoid *a priori* assumptions, and the research examines the data individually and across the cases and identifies themes, trends, and contexts to provide a nuanced argument (Snetov, 2015; Pouliot, 2007; Hansen, 2006; Hopf, 2002; Bryman, 2001).

7.2 Policy Framing and Variable Concreteness

The research leverages the reactive and proactive policies outlined in Table 3-3 as the proxy for balancing. To understand their role, policy framing narrows alternatives and selects aspects of reality to enhance their importance and promote a problem definition,

recommendations, or interpretation (Semetko and Valkenburg, 2000; Tuchman, 1978). Articulation and implementation of policies determinative of military capabilities provide policy framing[100] and variable concreteness[101] by maximizing the balancing dependent variable to enhance evaluation (King et al., 1994).

7.3 Process Tracing Validity Analysis

Process tracing analyses events that facilitate the examination of relationships within each case (Tansey, 2007). The research uses process tracing to show a qualitative and quantitative link between the independent (adequacy of military capabilities across threats) and dependent (balancing) variables, in the context of the mediating variables, across cases (Gerring, 2007).

7.3.1 *Process Tracing via the Policy Cycle*

The policy cycle distinguishes between the stages where policies are articulated and implemented (Van Dijk, 1997 and 2001; Luhmann, 1990; Foucault, 1981). There is no clear division as domestic structures are unable to or do not typically neatly implement articulated policies. Policies are key indicators for three reasons. First, internal and external constraints influence policy, which complicates balancing. A useful approach recognizes that domestic structures implement and articulate policies (Lipsky, 1980). Second, domestic structures may be unable or unwilling to implement policies due to such constraints. Third, balancing may not or cannot be as efficient with diminished self-help during the implementation stage due to incongruent policies and balancing types.

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[100] A research design that explains reality—policies—to produce inferences. See King et al., 1994.

[101] To reinforce falsifiability, consistency, and variation in the dependent variable, choosing definite rather than abstract concepts maximises variable concreteness and strengthens the evaluation of arguments relative to phenomena explained. See King et al., 1994.

7.3.2 *Validity Analysis*

Robert Yin (2014) posits an approach to construct and validate case research that considers construct, internal, and external validity and reliability. Construct validity puts forth measures for the concepts examined to ensure objective analysis across cases (Yin, 2014). The changes examined are specific and relate to the objectives, and the measures of change reflect types of change (Yin, 2014). Table 3-5 responds to both.

Table 3-5: Construct Validity Analysis

Objective	Research Question and Argument	Variation Examined	Measures of Change
Identify variables to explain balancing.	Which variables help explain balancing?	Contextual interplay of the independent, mediating, and dependent variables.	Supply and demand policies.
Examine the impact of the variables on balancing.	The independent (adequacy of military capabilities across threats) and dependent (balancing) variables are linked, in the context of the mediating variables.		
Develop a generalizable model to explain balancing.	Adequate nonnuclear forces for deterring and defeating nonnuclear threats support more efficient balancing across threats.		

Internal validity establishes causal rather than spurious relationships (Yin, 2014). The research thus posits an explanatory model to study variations in supply and demand policies. Judd and Kenny (1981) and Baron and Kenny (1986) set forth a sequence for an explanatory model to show, as the research does, that the independent and dependent variables are linked in the context of the mediating variables.

External validity generalizes findings across time and space. As Section III posits, the explanatory model can be applied to NWSs in different periods to examine balancing across nuclear and nonnuclear threats and identify policies that help explain balancing. However, because the explanatory model cannot anticipate changes to the variables, it is flexible and can function in contexts destined to undergo unpredictable change. Hence,

the explanatory model attempts to explain reality without oversimplifying it. Reliability ensures that the operationalization of the explanatory model can be replicated. The research cites its sources, explains its methodology, and collects data to analyse observable implications and, therefore, endeavours for data and analysis—as possible—to be valid as to its reliability and replicability.

7.4 Data Quality and Confirmability

The research gathers data relevant to the cases' articulation and implementation stages at the macro level (including structural conditions that shape balancing) and micro level (or policies that determine balancing). The research is not so focused that it over-looks macro–level data (Sabatier and Mazmanian, 1980). This method favours qualitative research—the main research approach—and is suited to the cases' ambiguity.

Confirmability tests data quality in an inductive analysis, or where a researcher looking at the same material would come to roughly the same conclusion (Snetov, 2015; Ritchie and Lewis, 2003). The research posits how the analysis was conducted to provide confirmability. To account for the evolution of balancing in the cases over a post-Cold War period, the analysis is generally divided into two periods (1991–2001 and 2002–2015) to enhance clarity and comparison.

7.5 Systematic Case Study Analysis

The research uses a multiple case study design to comparatively examine policies. The research examines balancing vis-à-vis military capabilities, so it is not concerned with other aspects of power—particularly regarding nuclear forces (see, e.g., Shamai, 2015; Finnis, Boyle, and Grisez, 1987).

1. Introduction: introduce the case study.
2. Supply and Demand Policies: examine reactive and proactive policies that drive the supply and demand of military capabilities over time.
3. Reliance: summarize balancing across threats, identify and discuss trends, and link the variables.
4. Conclusion: identify and discuss arguments and prescriptive lessons.

The research applies this process tracing approach to the cases in Section II to comparatively posit descriptive and prescriptive arguments in Section III. The research ventures away from MAD-based Cold War approaches that often imbue related analysis. The research expands and deepens related analysis by also examining the neglected non-Western context of China. Comparable NWSs like France and the United Kingdom were not examined as their balancing was conditioned by U.S.-NATO extended deterrence, nor were ISOs like NATO because they do not have independent policy processes.

7.6 Research Challenges

Many factors complicate the research. Most important is the unclear reliability of publicly available data, particularly from closed governments like Russia's and China's, which may be to intentionally deceive. This is compounded by secrecy and differences in methodology within and between governments and across sources. For example, Russia's inventory of TNWs was never officially published, and this makes an objective analysis a guessing game (Felgenhauer, 2011). Other closed NWSs pose similar challenges. Sources also differ as to the quantitative data collected.

Access to officials and governmental information was limited. This underscores the main challenge—secrecy and censorship. Where possible, the research identifies gaps

and accounts for them when applying the data. Given the imperfect nature of social science research, the research recognizes the challenges of its data and analysis. But these challenges should not deter the examination of a topical subject with relevant descriptive and prescriptive arguments, on the contrary.

The research relies on publicly available primary and secondary data to explain balancing but which may be incomplete or inexact with respect to variations in policies articulated and implemented by mediating domestic structures undergirding the argument and explanatory model. However, this validates the importance of assessing balancing, as the research does, at the policy implementation stage where state secrecy and censorship are limited, and interpretative primary and secondary data is more complete and exact. This, therefore, strengthens the validity of the research approach.

To address but not necessarily negate related challenges, the research employs methodological triangulation anchored on primary and secondary sources and interviews with practitioners and subject–matter experts (Snetov, 2015; Bryman, 2001) to validate and compare sources and limit the implications of secrecy, varying data, and deception. Further, insofar as data is limited or lacking, the research assesses the capacity of military capabilities to support efficient balancing vis-à-vis threats and prioritizes a qualitative approach, which suits the cases' ambiguity and limits the precision required. The research thereby shows the direction of efficiency as an indicator of balancing.

The research also leverages supply policies at the implementation stage, which outline the resources allocated to the policy process conditioning balancing, as a proxy for extrapolating and understanding demand policies articulated by domestic structures and conditioned by threats. Such demand policies are the mediating variables that explain

implications of the independent variable on the dependent variable, the variable tested. The research thus works backwards to identify trends and draw observations regarding demand policies as the mediating variables to understand balancing: i.e., capabilities are a proxy for understanding trends in defence spending and the prioritization of forces as a function of balancing. As balancing is assessed by quantitative and qualitative changes in policies, policies are objective criteria and a proxy to assess balancing.

This realism–military power–policy approach was chosen because policy drives military power and provides understanding to the empirical data. It explains the how and why of the argument to posit a domestic structural explanation of balancing through military power with systemic effects by referring to variations in policies articulated and implemented through mediating domestic structures to identify and respond to threats with military capabilities. The research thus provides an applied understanding of the empirical data to understand why NWSs underbalance by inefficiently increasing reliance on nuclear forces with diminished utility to power through security. The research thereby validates realism's explanatory and predictive capacity, including by accounting for how sub-optimal policies undermine balancing, and advances a methodology to assess and calibrate balancing as a continuation of policy. This is because states respond to threats in different ways due to policies, including due to inadequate military capabilities driving reliance on nuclear forces, even if not threatened, with diminished utility to security.

This approach was chosen because assessing policies articulated and implemented by domestic structures to explain balancing accords with realism. Policies to pursue power through security with mediating domestic structures condition threat perception and the distribution of military capabilities to produce balancing with systemic effects,

whereby self-reliant states are better placed to balance. The research reinforces realism to show that the relative distribution of military capabilities through self-help conditions realizable preferences determining interstate power through security to explain balancing through variation and identifies which policies support and limit efficient balancing. The research supports realism to show that policies to pursue power through security with mediating domestic structures condition threat perception and distribution of capabilities.

The argument tested and validated through the research is based on a comparison and contrasting of cases to widen and deepen the analysis. The inductive analysis posits causal relationships within and across the cases to validate the explanatory model to show the direction of efficiency of balancing using a historical process tracing approach to examine links within and across the cases to validate the model. Graphs and tables thus illustrate qualitative and/or quantitative data and explain arguments. The comparative research and inductive analysis suit the cases' ambiguity by capturing phenomena by combining data collection methods to comparatively study the cases and refine and confirm the explanatory model and argument (Yin, 2014; Tacq, 2007). The approach addresses the research questions by assessing how the cases relied on forces, to include less efficiently relying on nuclear forces with greater escalation effects and diminished self-help. The research advances the argument by assessing balancing efficiency and adversarial gain due to policy incongruities with diminished utility to security.

7.7 Implications

An improved appreciation of the link between balancing and military capabilities contributes to security studies but the research makes no assumptions about what will occur or how NWSs will rely on or employ military capabilities in conflict. Despite

changes since the Cold War, commentators continue to see related issues through a Cold War–era or Western context. The research supports the premise that policies to efficiently balance support cooperative approaches with broad implications. Efficient balancing is not unique to our times, but an evolved understanding of the nuclear–nonnuclear forces link across threats and its implications is needed.

Section II: Examining Balancing

The research next examines American, Russian, and Chinese balancing between 1991 and 2015 through reactive and proactive supply and demand policies determinative of military capabilities for balancing. This comparative analysis finds that their balancing varied significantly, whereby varying policies implicated balancing across threats and the predisposition for use of force, conflict escalation, strategic stability, and arms control.

Chapter Four shows that Russia underbalanced across threats which fomented unpredictable arms control. Russian balancing had less to do with the size of its nuclear force or America's, but rather nonnuclear force inadequacies across threats and, thus, insecurities regarding Russian and adversarial military capabilities.

Chapter Five examines how America more efficiently balanced across threats, marked by a reduction in reliance on nuclear forces, particularly because of superior non-nuclear forces. U.S. balancing and arms control similarly had little to do with the size of its nuclear force or Russia's. Both NWSs, however, valued arms control, particularly for political reasons for Russia and for transparency and verification objectives for America.

Chapter Six shows evolving Chinese balancing based on a threat matrix shaken by China's rise and evolving regional context driven by America yet lifted by the growing adequacy of Chinese military capabilities. China could have engaged in arms control if, like Russia, arms control supported interests, America and Russia further reduced their nuclear forces, and China no longer viewed Russian TNWs and American actions in Asia as nuclear–deterrable threats.

This section examines the cases to comparatively apply the explanatory model. This section therefore examines during the research time period (1991-2015) real and

perceived threats and the articulation and implementation of supply and demand policies for security through military capabilities (Baldwin, 1997) to assess utility to military power. The research examines the causes and effects of more- and less-rational policies and thus more and less self-help. As Section II shows, underbalancing results from policy incongruities and balancing types. Salient questions addressed include:

- Which reactive and proactive supply and demand policies were determinative of balancing across threats?
- How did supply and demand policies—and consequently, balancing types—evolve over time?
- How did trends in balancing over time condition self-help through deterrence and conflict?
- How did balancing condition arms control, conflict predisposition, escalation, and strategic stability?

While the research could make additional inquiries, it focuses on reactive and proactive supply and demand policies deemed most relevant and invites further research.

Chapter Four:
Russian Balancing

1. Introduction

Russian quantitative reduction in reliance on nuclear forces was not accompanied by adjustments in other balancing types that would have resulted in efficient balancing. Rather, Russia qualitatively modernized its nuclear force while linking offensive and defensive military capabilities to arms control. This chapter shows how underbalancing resulted from incongruent supply and demand policies and, consequently, divergences in the articulation and implementation of balancing policy.

2. Russian Strategic Culture

National interests informed by strategic culture relate to the domestic structure's identification of threats in articulated policy and, therefore, balancing power through security. Prevailing in Russian strategic culture was a conception of security that valued political and territorial independence, and reliance on offensive military capabilities and deterrence and targeting strategies anchored on nuclear forces for power in the anarchic system. Socialization and institutionalization of the priority afforded to nuclear forces imbued Russian strategic culture during Soviet times and resulted in a semi–permanent state of culture (Booth, 1981; Snyder, 1977). Concurrently, a Soviet preference for pre-emptive offensive strategies was rooted in a history of insecurity and authoritarian control and endured after the Cold War, but which differed from the more predictable utility of nuclear forces in Western calculations (Cimbala, 2013; Schulte, 2013; Podvig, 2011; Snyder, 1977). Indeed, Russia saw the global context as insecure and anarchic with a diminishing role for international organizations (Source 4, 2015).

Russia saw nuclear forces as pivotal to ensuring its global role, independence, and sovereignty and security (though it had few allies and none were NWSs). Nuclear forces were the trump card against threats that could attack or subjugate Russia, where reliance on the military has deep roots (Podvig, 2015; Source 4, 2015; Weir, 2015; Sokov, 2011; McConnell, 1985). Undergirding was a historic perception of encirclement and threats—a condition exacerbated by Russia's tumultuous history as conquered and conqueror and, following the Cold War, as encircled by America, Islamic terrorism, China, the European Union, and NATO to its north, south, east, and west (Thicknesse, 2015).

Steeped in xenophobia and paranoia that characterized the Soviet Union, Russia espoused a worldview in which Russia was besieged by threats, which helped drive the modernization of—and reliance on—nuclear forces to compensate for inadequate non-nuclear forces (Brooks, 2015; Sutyagin, 2015). Indeed, Russia suffered from ontological insecurity and an insatiable drive for security due to internal weaknesses and geography that encouraged Russia to keep a strong nuclear force (Podvig, 2015; Source 7, 2015). Consequently, Russia opposed unipolarity and refused to abide by an anarchic system that relegated her even though her nuclear forces were the only capability that maintained equality with other powers (Shoumihin, 2011). Russia saw NATO as an extension of America though it did not concern itself with the nuclear forces of other NATO members (Gorenburg, 2015; Source 3, 2015; Brooks, 2015). Arms control was seen as a means to equalize adversarial military capabilities and link strategic and defensive capabilities to mutual vulnerability and preventing adversarial advantage (Shoumikhin, 2011).

Because Russia valued independence, prioritized nuclear forces, perceived varied threats, and opposed American hegemony, she was sensitive to adversarial relative gains

diminishing her security and systemic position due to the erosion of military capabilities. Despite a nonnuclear threat context and even when not directly threatened, Russia relied on offensive nuclear forces and strategies through internal balancing to drive uncertainty and insecurity, challenge the status quo, avoid relative losses, attain power under multi-polarity, and delay, frustrate, and contest power and dominance, as anticipated by balance of power, moreover limited external balancing and hybrid and proxy conflicts. However, as Russia was not self-reliant, she could not effectively balance military asymmetries for self-help and suffered relative loss to power through security with systemic implications despite its revisionist, power maximizing offensive policies based on regional hegemony.

3. Demand Policies

Russia's strategic culture conditioned how it defined security, identified threats, and articulated and implemented policies for security. Demand policies (or policy goals) delineate the supply of military capabilities in articulated policy, within which threats condition demand for military capabilities as determined by domestic structures.

3.1 Demand: Threat Matrix

As states mistrust others under anarchy, they leverage military capabilities to attain power through security to deter external military threats and counterbalance adversarial relative power driving insecurity and uncertainty accentuated by multipolarity, hindering states that underbalance. For Russia, this was a vicious cycle as she sought multipolarity (but could not efficiently balance) by delaying, frustrating, and undermining America and balancing her dominance in Europe with the locus of potential contact being Eastern Europe—part of Russia's sphere of influence, moreover a context

dominated by nonnuclear threats. As Table 4-1 outlines, most articulated threats to Russia were perceived vis-à-vis adversarial military capabilities and strategies as an extension of balance of power, explaining policies conditioned by what interests Russia valued protecting: independence, regional hegemony, and power under multipolarity.

Russian threat perception was driven by power asymmetries vis-à-vis other states compounded by both inadequate military capabilities undergirding underbalancing and adversarial geographic proximity, superior military power, and strategies perceived as offensive. Russia, therefore, perceived risk under anarchy and relied on self-help through mediating domestic structures to balance asymmetries primarily through nuclear forces even absent a direct threat but with greater competition and arms control marginalization.

In pursuing interests, security as a policy objective is conceptualized vis-à-vis the capacity to deter and defeat real and perceived threats that condition balance of power. In identifying threats through a policy process, specificity improves capacity to deter and defeat threats but which may be underestimated or overestimated (Mazarr, 2018; Sulovic, 2010; Sheehan, 2005; Baldwin, 1997). Publicly available Russian policies offer insight into Russian balancing, including plans and the military's role and interests. Russia viewed with concern efforts to undermine her influence, particularly with neighbouring states (RFSC, 2000). Consistent with her strategic culture, Russia saw her sovereignty and influence under multipolarity as pivotal, viewed terrorism and separatism within and near her borders as threats, and prioritized the protection of her territory and prevention of aggression (RFSC, 2000 and 2010).

These priorities endured as she rose from her post-Cold War slump and expanded her threat matrix to include nuclear proliferation and nuclear terrorism, cyber-war, U.S.–

NATO MD, and NATO expansion, reflecting a continued anti-Western threat paradigm (RFSC, 2014; RFSC, 2010; McDermott, 2011c). Russia prioritized perceived over real threats to support military reform (Barabanov, 2012). Even so, Russia sought an equitable partnership with America anchored by arms control, confidence–building measures, and engagement with China (Podvig, 2015; RFSC, 2010). Russia also saw the weakening of her DI with concern which increased her dependence on foreign military technology and undermined her defence and ambitions (RFSC, 2010 and 2000). While Russia could not control threats, Russia could determine how threats were perceived and the forces relied on. As Table 4-1 shows, prevailing threats were nonnuclear. This questions inefficient Russian reliance on nuclear forces other than for deterrence of existential threats.

Table 4-1: Russian Threat Matrix	
Real Threats	Terrorism; MD; regional and border instability; nuclear and cyber threats.
Perceived Threats	U.S.–NATO; China; superior adversarial military capabilities; challenges to Russian power, status, and regional hegemony.

See generally RFSC 1993, 1997, 2000, 2009, 2010, 2014, and 2015.

The foregoing underscores the complexity of hybrid threats, adversarial military capabilities, and deploying adequate forces to deter threats above the threshold of nuclear use and below conventional deterrence, including non-existential contingencies. As Russia could not predict which threat would damage, a mixed threat- and capabilities-based strategy anchored on a spectrum of military capabilities would have allowed her to prepare for threats rather than detrimentally react to them (Christianson, 2016).

3.2 Demand: Domestic Structures

State–level domestic structures explain threat identification and balancing policy determinative of military capabilities and strategies for power through security responsive to the anarchic system even when not threatened. Consistent with realism, domestic

structures, for the state as a unitary rational actor, identify threats to security in policy and respond to threats through policy. Policy choices are based on a cost-benefit analysis with domestic structures seeking to maximise self-help through realizable preferences and costs to threats through military capabilities and strategies (Larsen and Kartchner, 2014). The unitary rational state leverages policy for self-help, with self-reliant states better placed to balance. The research provides explanatory and predictive capacity to realism and makes it determinate by identifying domestic structures to explain balancing as a continuation of policy by referring to variations in policies for relative gain and, thereby, garner generality, policy relevance, and descriptive accuracy.

Adequacy of military capabilities is conditioned by the extent to which domestic structures operating in a defined regime type converge or diverge on the articulation and implementation of policies upon means available. Divergence due to the unwillingness or inability of domestic structures in a strategic culture to articulate and implement policies results in diminished relative gains due to underbalancing and utility to power through security. Policy is a benchmark to assess balancing with policy implementation reflecting a nuanced balancing story conditioned by capacity to accomplish missions. By examining policies, the research recognizes the assumption of aggregating policy preferences that are the product of domestic structures that, as this chapter examines, generated policies that diminished security and, therefore, military power (Bueno de Mesquita, 1998).

Russian policymaking was closed, exempt from controls (Born, 2007) and concentrated in the Kremlin. Top-heavy leadership characterized policymaking (Savelyev and Detinov, 1995; Source 7, 2015; Brooks, 2015). During the Cold War, this centred on the MFA, MOD, Military Industrial Commission, KGB, and Communist Party Central

Committee (Source 1, 2015; Savelyev and Detinov, 1995). Post-Cold War Russia was similar—particularly under President Putin—with domestic structures implementing policies articulated by the Kremlin in a closed process, meaning there was little distinction among domestic structures (Source 2, 2015; Source 6, 2015; Savelyev, 2011; Tsypkin and Loukianova, 2009). The RFSC held fluctuating influence as did the Military Industrial Commission (Source 1, 2015; Source 6, 2015; Tsypkin and Loukianova, 2009). The ability of the DI principally conditioned supply which was augmented by the import of foreign military capabilities and pursuit of military and non-military ASMs.

The MFA and MOD were influential under President Yeltsin and pursued cuts in the nuclear force and SNF production, a reduced role of nuclear forces, the stockpiling of TNWs, and arms control, while recognizing the impossibility of victory in a nuclear conflict (DIA, 2017; Source 1, 2015). But under President Putin power centralized in the Kremlin with significant MOD input, particularly on nuclear forces given the military's influence over doctrine but not on spending or research (DIA, 2017; Source 1, 2015; Source 6, 2015). Those who opposed were pushed out (Source 6, 2015). Drawing on prior experience, the Kremlin prioritized nuclear forces to compensate for inadequate nonnuclear forces and offset adversarial MD and superior nonnuclear forces (DIA, 2017; Source 1, 2015; Source 2, 2015; Weir, 2015). Indeed, domestic structures pursued a military to deter and defeat America and NATO (Colby, 2016).

As Table 4-2 shows, the RFSC and MOD led policy implementation and, unlike the MFA, were closed from other domestic structures and states and intransigent on arms control. Conversely, the IC and DI had little policy influence, and the legislature was a rubber stamp of the Kremlin. Despite this nominal structure and opaque policymaking,

domestic structures shaped policies resulting from a centralized policymaking process (Podvig, 2015; Paltiel, 2010). More efficient balancing was challenging because domestic structures pursued reliance on nuclear forces and because outsiders could not challenge policies when nuclear forces compensated for nonnuclear force inadequacies.

Table 4-2: Russian Domestic Structures	
Executive	Concentrated security policy articulation.
Legislative	Little influence on security policy. Saw nuclear forces as key to power and security.
RFSC	Intermediary with other domestic structures. Directed policy implementation.
MOD	Information supplied by anti-Western GRU with arms control expertise despite MOD's arms control intransigence. Growing conservative policy influence.
MFA	Broad arms control experience but generally heeded Kremlin directives.
IC	Anti-Western and not publicly accountable. Limited policy-making influence.
Industry	Because it built nuclear forces, it did not advocate for reducing reliance on them.
	Suspicious of U.S.–Russian cooperation. Advocated anti-Western views and nuclear reliance but production unreliable.
Academia	Limited policy influence despite expertise.

4. Supply Policies

NWSs develop military capabilities in response to threats to support policies that provide security by reducing the probability of real or perceived threats (Baldwin, 1997). Russian policies that determined the supply of military capabilities resulted from the mediating variables previously examined which are a proxy to understand mediating policies. With the unavoidable risk of mis-information, the research relies on publicly available information provided by Russia and its observers.

4.1 Supply: Nuclear Force Posture

Dissatisfied with the status quo in its "near abroad," security policies focused on restoring power in Russia's sphere of influence and defending from external threats with a revisionist approach (Colby, 2016; Snetkov, 2015; Gates, 2014; Mankoff, 2009). Its nuclear force posture underwent two phases. Until the year 2000 articulated policy increased and then decreased despite inadequate nonnuclear forces, but then increased

because of inadequate nonnuclear forces (Brooks, 2015; Source 1, 2015; Source 6, 2015; Weir, 2015). Despite the improbability of interstate conflict, Russia relied on the threat of escalatory first-strike or mass nuclear force retaliation for power and deterrence (Podvig, 2015; Brooks, 2015; Source 1, 2015; Source 6, 2015; Haffa, 2015; Brooks, 2015).

Russian nuclear policies outline useful trends in that nuclear forces were central to deterring and defeating all threats (RFSC, 2000). Whereas the Soviet Union espoused no-first-use,[102] Russia's 1993 posture allowed first use against an attack that threatened its sovereignty and survival (RFSC, 1993) in response to insecurities about national dismemberment and inadequate nonnuclear forces (Savelyev, 2011). But Russia assigned no new missions and reduced nuclear forces faster than required by START (Sokov, 2002). The 1997 posture retained first use (RFSC, 1997). But NATO expansion and intervention in the former Yugoslavia exacerbated insecurities and reliance on nuclear forces prompting concerns about coercive adversarial forces or a limited nonnuclear attack despite Western assurances to the contrary (Source 1 and 2, 2015; Sokov, 2002).

Without withdrawing from arms control agreements, Russia slowed nuclear force reductions and prioritized cost–effective security through SNFs and limited TNW use to deter and de-escalate conflict as her nonnuclear forces were inadequate and her nuclear force diminished due to natural obsolescence and arms control (DIA, 2017; Podvig, 2015; Source 4, 2015; Haffa, 2015; Sokov, 2002). In a Cold War inversion, Russia—rather than NATO—threatened limited nuclear use against nonnuclear threats with unpredictable escalation (Colby, 2016; Haffa, 2015; Larsen and Kartchner, 2014 and Schelling, 1966). Russia was more likely to use TNWs than SNFs seen as less vertically escalatory for retaliation and to supplement nonnuclear missions (Zhao, 2015; Ong–Webb, 2010).

[102] Not initiate but retain nuclear use to widen the escalation gap. See Sagan, 2009 and Ullman, 1972.

Though post-Kosovo Western rapprochement alleviated concerns, modernizing American nonnuclear forces increased insecurities and reliance on nuclear forces out of fear of coercion or the invalidation of Russia's deterrent (Colby, 2016a; Sokov, 2002). The 2000 posture expanded limited nuclear use to when an attack overcomes "all other measures of resolving [a] crisis" despite NATO's focus on deterring small-scale conflicts not threatening Russian security (Colby, 2016; Sokov, 2004; RFSC, 2000). The posture thereby recognized the inadequacies of Russian nonnuclear forces and made explicit that Russia would use nuclear forces in nonnuclear missions—namely with NATO—which Russia thought she could not win (Colby 2016; Sokov, 2004).

Concerned with superior nonnuclear threats, the 2010 posture retained the use of nuclear forces for regional or large-scale wars (Sokov, 2010). But in a notable departure, the posture allowed nuclear use when "the very existence of Russia is under threat" and in first-use against nonnuclear attacks (RFSC, 2010). It also called for the "maintenance of strategic stability and a sufficient nuclear deterrence capability" (RFSC, 2010) to deter nonnuclear threats and avoid escalation elsewhere (Haas, 2011; Sokov, 2010). Russia prioritized SNF modernization, though adequate nonnuclear forces could have enhanced her conventional deterrent but Russia struggled to do so (Barabanov, 2012; Sokov, 2009).

China loomed larger than NATO in the 2010 postural shift, even though it posed no direct threat and, unlike the 2000 posture, a pre-emptive attack by Russia against a threat was discarded (McDermott, 2011a; Sueldo, 2011; Herspring, 2011; Kipp, 2010 and 2011a). The posture afforded less attention to nuclear vis-a-vis nonnuclear forces with which Russia historically lagged, reflecting higher reliance on nuclear forces as a temporary measure until its military modernized (Sokov, 2010). Notably, the posture did

not define a role for TNWs and gave precision (apparently nonnuclear) forces nonnuclear deterrence missions, imitating America's equipping of SOANNC (RFSC, 2010; Sokov, 2010). Historically, ambiguity and the lack of transparency about Russian TNWs and their use was a cornerstone of Russian nuclear deterrence (Westerlund, 2015).

Suspicious of Western intentions after the 2014 Ukraine crisis and emboldened by its annexation of Crimea, Russia increased reliance on nuclear forces and viewed them as a safeguard and political–force multiplier to demarcate its sphere of influence, while relying on nonnuclear forces for regional nonnuclear threats (Baltiskiy, 2015; Source 6, 2015; Haffa, 2015; Blank, 2011b). The 2014 posture thus called for use of force after non-military options are exhausted, but noted that conflict with the West was unlikely (RFSC, 2014; Agence France-Presse, 2014). It also stressed nonnuclear force reliance for conventional deterrence, thereby recognizing that nuclear forces were inadequate to deter nonnuclear threats (Source 6 and 7, 2015; Golts, 2014; Agence France–Presse, 2014).

As Russia was riven by threats like deteriorated relations with the West and superior American nonnuclear forces and MD, the 2015 posture emphasized familiar themes by denoting America and NATO as threats, to which Russia deployed new, penetrating nuclear forces, including along NATO borders (RFSC, 2015 and 2009; Galeotti, 2016; Oliker, 2016; McDermott, 2016; Hall, 2016). The posture also highlighted arms control, nuclear deterrence, and U.S.–Russian relations (RFSC, 2015).

The Soviet focus on nonnuclear forces and Russian emphasis on nuclear forces were directly (if imperfectly) related. Russia relied on modernizing nonnuclear forces despite growing defence spending, mercurial energy prices, Western sanctions, offensive foreign and defence policies, and a weak DI. This fomented reliance on nuclear forces,

including limited nuclear use against nonnuclear threats, reflecting ongoing asymmetries vis-à-vis adversarial nonnuclear forces (Weir, 2015; Haffa, 2015; RFSC, 2009).

As Russia did not embrace no-first-use, it envisioned nuclear use, potentially pre-emptively, to deter or defeat threats and compensate for inadequate nonnuclear forces (Savelyev, 2011; Herspring, 2011; Fenenko, 2009). This offensive strategy reflected a belief that Russia could control conflict escalation, including to nuclear use, if it initiated (Sokov, 2010). At the implementation stage, Russia espoused an offensive strategy of nuclear force deterrence and use—particularly in limited conflict—though not reflected in articulated policy out of fear of controversy and for deception[103] (Colby, 2016; Tayler, 2014; Sokov, 2011; Schneider, 2010; Weitz, 2011; de Haas, 2010; Podvig, 2009). Divergent nuclear force policies contributed to underbalancing.

Despite pursuing interests, she articulated and implemented less rational policies. This reduced utility to security and made it vulnerable to threats by undermining the credibility and effectiveness of its deterrent and increasing potential losses in conflict through escalation. Russia did so because it did not pursue policies that support more efficient balancing, thereby increasing Russian reliance on nuclear forces and adversarial gain through nonnuclear conflict. This disadvantaged Russia in the balance of power in the anarchic system, compounded by adversarial offensive deterrence such as MD. This fomented an arms race and interstate nuclear stalemates and encouraged Russian pursuit of pre-emptive conflict through its escalate–to–de-escalate policy to deter nonnuclear threats or terminate conflict early (Reynolds, 1989).

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[103] For example, in October 2003, then-Defence Minister Ivanov stated, "What we say is one thing. That sounds cynical, but everything that we plan does not necessarily have to be made public. But what we actually do is an entirely different matter. If we are talking about nuclear forces, they are the chief components of our security . . . and attention toward them cannot be relaxed." See Schneider, 2006: 3.

Russia leveraged the uncertain costs of conflict for strategic stability through interstate stalemates but with reduced cooperation and a higher risk of conflict (Kumar, 2007). Russia emphasized its capacity to punish for deterrence to be perceived as a threat with at least the nuclear forces necessary for parity (Forsyth et al., 2010; Kumar, 2007). Russian nuclear deterrence depended more on what it could do at the implementation stage, though its balancing was limited to deter and defeat nonnuclear threats and, thus, Russia may have even facilitated adversarial lower force levels (Jervis, 1978).

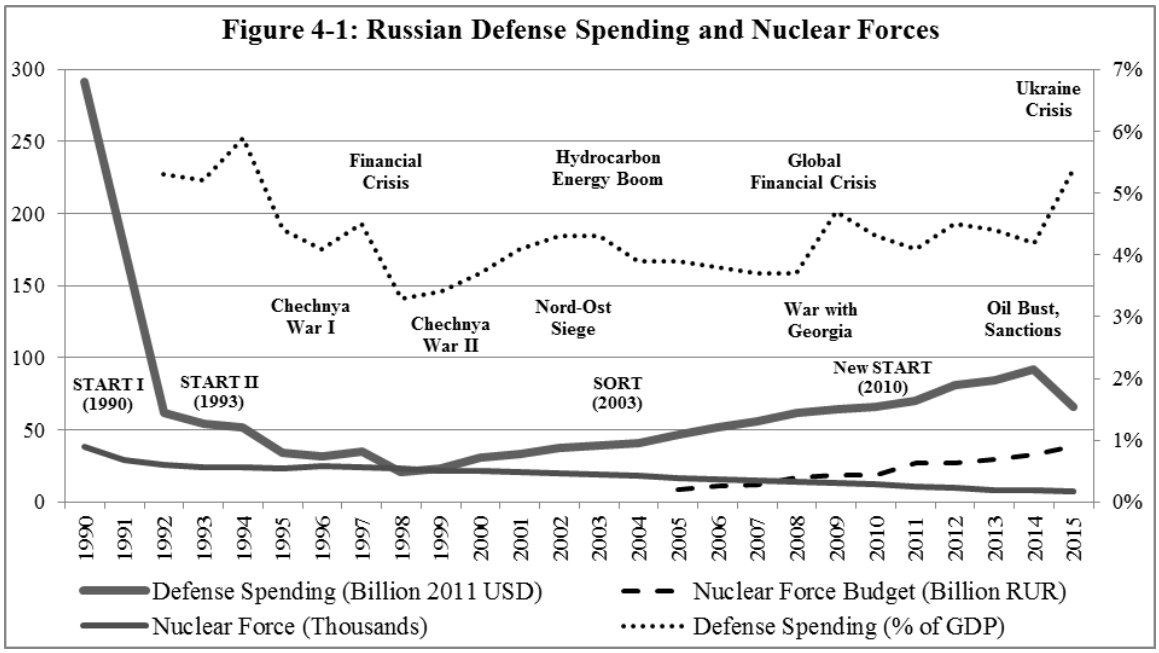
Nuclear forces inevitably dominated Russian strategy, particularly offensive, limited counterforce, and coercive strategies. In certain respects it eliminated strategies particularly because they narrowed the role of nonnuclear forces to conflicts over vital interests since escalation with NWSs to nuclear war had no utility due to a threat context dominated by low-intensity nonnuclear conflict below the threshold of nuclear use and, therefore, reduced the extent of relative gains without risking devastation (Waltz, 2009). This was exacerbated by the perceived threat of adversarial MD to destroy its warheads and negate the absolute quality of Russian nuclear forces (Waltz, 2009). Russian nuclear postures shifted competition to the tactical level and diminished escalation dominance in the absence of adequate nonnuclear forces (Waltz, 2009). And as there was no real or perceived acute external threat, adequate nonnuclear forces could have reduced reliance on nuclear forces. That would have reduced reliance on nuclear forces for power and phased out the nuclear–deterrence aspect of offensive policies based on MAD.

4.2 Supply: Defence Spending

States rely on their resources or those of others to advance interests and manage but not eliminate threats. Defence spending, military capabilities, and threats should

correlate, but this was not so with Russia because it had procured most of its military capabilities during the Cold War during high spending (McDermott, 2015a; Walker, 2014). While spending was not transparent, military capabilities reflect and are a proxy for trends in spending and the prioritization of forces as an indicator of balancing. The research draws on publicly available data but notes the potential for inaccuracy because of methodological differences among sources or political or national security reasons.

Russia drastically cut spending during the first post-Soviet decade, halting new capabilities and minimizing readiness. But spending grew the following decade to reach a record with the rise of energy prices to support offensive strategies and by 50% between 2007 and 2015 to support military reform (Economist, 2015) despite reductions in the military's size. Russia had the fiscal strength and political will for modernization but could not generate adequate nonnuclear forces due to challenges discussed herein.



Source: SIPRI; The World Bank; Centre for Arms Control and Non-Proliferation; Adomanis, 2013; State Duma, 2012; Cooper, 2013, 2012 and 2009; Zolotukhina, 2015. Note: defence spending for 1991 is an average of 1990 and 1992 because reliable data for 1991 is not available. Additionally, nuclear force data includes retired and stockpiled warheads.

While post-Cold War spending grew exponentially, the nuclear force diminished significantly. But Russia was unable to translate investment into adequate nonnuclear forces, so compensated by inefficiently over-relying on nuclear forces through qualitative nuclear force modernization and offensive strategies but which did not correlate with prevailing threats, partly because Russia had procured most military capabilities during Cold War spending in a different threat context (Walker, 2014; McDermott, 2015a). Even so, Russia's ability to articulate spending into forces was hindered by an inadequate DI and depended on the import of foreign military capabilities.

Consequently, Russia increased reliance on nuclear forces for nonnuclear threats with—as Figure 4-1 shows—growing defence spending for nuclear forces that exceeded late Cold War levels (e.g., increasing defence spending by 50% between 2013 and 2016) to supply a qualitatively modern nuclear force at much lower force levels (Ria Novosti, 2013; Sokov, 2011; Economist, 2015). Despite obsolescence, Russia had a number of deployed nuclear forces underscoring reliance on nuclear forces (Source 6, 2015).

4.3 Supply: DI[104]

A deficient DI was key to incongruities in policy articulation and implementation and resultant inadequate military capabilities (Barabanov, 2012; Nichol, 2011). For years, nearly two-thirds of Russia's nuclear triad was unusable (Herspring, 2011). The 2008 Russia–Georgia War underscored shortcomings and led to criticisms of the DI and the State Armaments Program, and calls in 2010 for Russia—then one of the largest arms exporters—to import military capabilities stressed its deteriorated DI (Herspring, 2011; Umbach, 2000). Despite resistance, DI modernization and greater domestic sourcing of

[104] This section also draws on Sueldo 2011a and Shlykov, 2004.

military capabilities were pillars of military reform as of 2008 (President of the Russian Federation, 2011; Source 2, 2015; Nichol, 2011; Russian Defence Policy, 2010).

In a vicious cycle, balancing suffered from misplaced demand for a robust nuclear force and unnecessary nonnuclear forces because of a DI that could not supply adequate capabilities to meet demand, reduce nuclear reliance, or shrink military asymmetries. While nonnuclear force modernization helped diminish nuclear force reliance, as forces were inferior vis-à-vis the West, Russia increased reliance on nuclear forces at both policy stages upon offensive strategies (Haffa, 2015; Sutyagin, 2015; Golts, 2012; McDermott, 2011a; Pyadushkin, 2015). Military reform was tied to an inadequate DI that lost ground at home and abroad (Weitz, 2015; Herspring, 2010). As the DI could not supply adequate nonnuclear forces to support reduced reliance on nuclear forces for non-nuclear threats, balancing was inefficient and could not effectively leverage self-help.

4.4 Supply: Nonnuclear Forces

The utility of conventional deterrence in a nonnuclear–dominated threat context accentuated by power competition and NWSs undermining extended deterrence is broad despite continued nonnuclear threats and conflict, particularly for non-existential threats. It thus helps reduce reliance on nuclear forces and support efficient balancing. But non-nuclear forces are a relative capability conditioned by the forces of others. They demand a credible deterrent through self-help by maintaining the fear of conflict and escalation with threats, particularly as nuclear forces are impractical against nonnuclear threats. This includes because of self-deterrence and even if an acute external threat exists and in the absence of ASMs. A NWS thereby increases realizable preferences through self-help and utility to power through security and limits reliance on, and escalation to, nuclear use.

Adversaries thereby perceive superiority with adequate conventional capabilities and strategies, meaning scarcity of interstate threats relates to deterrence effectiveness.

Russian was under no illusion that its military was capable. Despite several reform efforts in articulated policy, Russia struggled to supply adequate nonnuclear forces at the policy implementation stage. Among others, budgetary, demographic, and technological issues worsened inadequacies (McDermott, 2011a; Nichol, 2011). The military thus remained a scaled-down version of its Soviet predecessor, largely organized to lead a mass war against the West in a threat context where mass war was unlikely. This archaic military left it ill-suited to confront threats (DIA, 2017; RIA, 2008).

4.4.1 *Failed Military Modernization*[105]

At the height of Soviet power in the mid-1980s, the Soviet Union had 4.9 million soldiers and the Warsaw Treaty Organization another 1 million (Nichol, 2011). After the USSR collapsed, the military precipitously declined, despite reforms viewed as an all–embracing process of political, economic, technical, and social policies designed to transform the military within available resources, as Table 4-3 outlines (Arbatov, 1998; Dick, 1998; Kipp, 1998; Kokoshin, 1995 and 1996; Golts and Putnam, 2004).

Table 4-3: Russian Military Reform Objectives

Doctrinal Reform	Cultural Reform	Institutional Reform	Qualitative Reform
- address real threats. - reasonable share of GDP spending. - maintain nuclear force deterrent.	- respect human rights. - shift focus to local and regional threats. - mature ties with NATO and America.	- reorganize command. - civilian control. - all volunteer force. - joint and mobile force.	- maintain adequate personnel, weapons, and DI. - innovation. - improve readiness.

See generally Aldis and McDermott, 2003; Arbatov, 1998 and 2004; Baev, 2005; Barbanov, 2012; Barany, 2006; Betz and Volkov, 2003; Blank, 2005 and 2011a; DIA, 2017; Golts and Putnam, 2004; Felgenhauer, 1997; Kipp, 1998; Labarre, 2001.

[105] See also DIA, 2017; Golts and Krasnov, 2011. Russia's conscript-based army trimmed down from the Soviet high of 4.9 million to about 1.13 million in 2008. Bartles, 2011 quoting Garilov, 2008

As Table 4-4 shows, Russia pursued reforms, each beginning with a pivotal event, but which were unsuccessful and led to the downsizing of the military (Labarre, 2001).

Table 4-4: Russian Military Reforms

Period	Pivotal Event	Political Context	Major Crisis	Objectives
August 1991–December 1993	Military Coup	Consolidation of Yeltsin's Regime	Confrontation in Moscow	Withdrawal, Downsizing, Peace-making
January 1994–September 1996	Parliamentary Elections	Yeltsin's Re-election	Chechnya War I	Fighting, Peace-making
October 1996–September 1999	Peace in Chechnya	Struggle for Secession	Financial Meltdown	Restructuring, Peace-making
October 1999–July 2000	Invasion of Chechnya	Consolidation of Putinism	Chechnya War II	Fighting, Projecting Power
August 2000–September 2002	Kursk Submarine Tragedy		Avert Military Meltdown	Restructuring, Fighting
October 2002–August 2008	Moscow Theatre Hostage Taking		Chechen Insurgency	
September 2008–February 2014	2008 Russia–Georgia War	Putinism	Regional Instability	Modernizing, Projecting Power
As of March 2014	Annexation of Crimea		Ukraine Crisis	

See generally Bartles, 2011; Blank, 2011; Baev, 2004.

The absence of doctrine upon which to advance the reforms explains their trial–and–error nature (McDermott, 2011a). Despite wide recognition of reform failures, explanations vary and include policy gaps,[106] declining social prestige,[107] socio-economic decline,[108] and reliance on nuclear forces.[109] Reform failures at the policy articulation and implementation stages[110] have local and external quantitative[111] and qualitative[112] reasons

[106] Aldis and McDermott, 2003; Arbatov, 1998 and 2004; Baev, 2001, 2003 and 2004; Barany, 2006 and 2008; Betz and Volkov, 2003; Blank, 2005; Daucé and Sieca–Kozlowski, 2006; Dick, 1998; Galeotti, 1998; Gotls and Putnam, 2004; Herspring, 2010; Kipp, 1998; Labarre, 2001; Lambeth, 1995; Leijonhielm, 2005; Liaropoulos, 2008, McDermott, 2009 and 2011a; Miller and Trenin, 2004; Odom, 2004; Pallin, 2008; Renz, 2010; Parchomenko, 1999; Raevsky, 1993; Renz, 2010; Rogov, 1992; Vorob'ev, 1998.

[107] See Barany, 2008; Labarre, 2001.

[108] See Baev, 2002; Barany, 2007; Golts and Putnam, 2004; Raevsky, 1993.

[109] See Aldis and McDermott, 2003; Arbatov, 1998 and 2004; Baev, 2001, 2003 and 2004; Blank, 2005; Dick 1998; Gottemoeller, 2004a, b; Golts and Putnam, 2004; Herspring, 2010; Kipp, 1998; Labarre, 2001; Liaropoulos, 2008; McDermott, 2009 and 2011a; Odom, 2003, Miller and Trenin, 2004; Parchomenko, 1999; Sokov, 2009; Umbach, 2002.

[110] See Moravcsik, 1997.

[111] See Aldis, 2003; Arbatov, 1997, 1998, 2000 and 2004; Baev, 2001, 2002, 2003 and 2004; Barany, 2006, 2007 and 2008; Barabanov, 2012; Bartles, 2011; Betz and Volkov, 2003; Blank, 2005; Boltenkov et

(Herspring and McDermott, 2010; Barany, 2008; Betz, 2003; Arbatov, 1998 and 2001; Labarre, 2001). The research focuses on how such reliance hindered efficient balancing.

The First Chechen War (which Russia lost) and 2008 Russia–Georgia War (which Russia won despite serious challenges), among other examples, showed the inadequacy of the military (DIA, 2017; Herspring and McDermott, 2010). Russia was in no condition to fight a modern conventional conflict (Nichol, 2011; Herspring and McDermott, 2010). The prevalence of nonnuclear threats and decreasing utility of nuclear forces made the status quo unsustainable. As of 2008, Russia sought a military capable of taking on threats (particularly America and NATO) through modern, integrated, and decisive forces with sophisticated technology based on combat–ready and deployable brigades, despite limited resources and challenges that crippled prior reforms (Colby, 2016; Martens, 2015; Einhorn et al., 2015; Gady, 2015a; Gvosdev, 2014; McDermott, 2011c; IISS, 2014).[113] While the economy improved as of the millennium to support reform, the military remained inadequate—though it was one of the largest and best financed—and, thus, Russia relied heavily on nuclear forces (DIA, 2017; Nichol, 2011).

Russia first conceived the need for a rapidly deployable, well-equipped, and well-trained volunteer military in 2003, but this did not advance in articulated policy until after the 2008 Russia–Georgia War with an overdue $673 billion, ten-year reform that did not

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al., 2011; Cimbala, 2001; Daucé and Sieca, 2006; Dick, 1998; Galeotti, 1998; Golts and Putnam, 2004; Herspring, 2010; Labarre, 2011; McDermott, 2009, 2011; Miller and Trenin, 2004; Odom 2004; Pallin, 2008, Parchomenko, 1999; Renz, 2010; Raevsky, 1993; Shlykov, 1998; Umbach, 2002; Vorob'ev, 1998; Zelnov, 1997.

[112] Allison, 1997; Arbatov, 1998 and 2004; Baev, 2001, 2002, 2003 and 2004; Barany, 2006, 2007, 2008; Barabanov, 2012; Bartles, 2011; Betz and Volkov, 2003; Blank, 2005; Dick, 1998, Golts and Putnam, 2004; Galeotti, 1998; Herspring and McDermott, 2010 and 2011a; Miller and Trenin, 2004; Isakova, 2002; Kipp, 1998; Orr, 2003; Pallin, 2008, Parchomenko, 1999; Soloev, 2002; Vorob'ev, 1998; Umbach, 2002.

[113] See also Bartles, 2011; Clover, 2011 and 2012; Golts, 2011; Herspring and McDermott, 2010; Nichol, 2011; Podvig, 2011; Pukhov, 2008, 2011a and 2011b.

really begin until 2010 (Pukhov, 2012; Blank, 2011a; McDermott, 2011a; Nichol, 2011). While the research does not detail this reform, it examines aspects implicating balancing.

That reform sought to reorganize the military's structure, C2, and size into an all–volunteer force. It introduced a procurement program aimed at restoring degraded nuclear and nonnuclear forces. Essentially, it sought to imitate the U.S. military and improve readiness (Barabanov, 2012; McDermott, 2011c; Haas, 2011; RIA Novosti, 2010; Felgenhauer, 2009; LaBarre, 2001). As Figure 4-1 shows, Russia leveraged profits from high energy prices to increase defence spending and modernize its nuclear force (Source 3, 2015; Gomart, 2011; McDermott, 2011a; RFSC, 2009; Barany, 2007).

In 2011, then-Prime Minister Putin outlined the military reform. Russia would procure more than 400 ICBMs, more than 600 combat aircraft, 1,000 helicopters, dozens of ballistic missiles and attack submarines, thousands of armoured vehicles, advanced air defence systems, and modern tactical missiles (Einhorn et al., 2015; McDermott, 2011a; Putin, 2011). Russia would also increase pay for military personnel, reduce the number of conscripted forces, heavily resource and transform the DI, and respond to U.S.–NATO MD with penetrating military capabilities (Putin, 2011). Putin was keen on restoring Russian power lost in the 1990s but faced challenges, including expenditures and an inadequate DI (Podvig, 2015; Clover, 2012; McDermott, 2011a; RFSC, 2009).

In 2011, then-Deputy Defence Minister Popovkin stated that the reform aimed at increasing capabilities to support permanent formations, improve C4, revolutionize the DI, develop SOANNC, and reduce draftees to 10%–15% by 2017 (though as of 2015 this was uncertain due to population deterioration) (Russian President, 2011; Nichol, 2011; McDermott, 2011 and 2011b). Even so, reliance on nuclear forces increased to support

offensive strategies, and nonnuclear forces were reduced to hybrid tactics over-reliant on nuclear forces far from the combined approach of the Soviet military (Haffa, 2015).

Nonnuclear forces stayed inadequate vis-à-vis China and the West (Westerlund, 2015). Torn between countering an unlikely interstate war with a superior military power like America or China and fighting a probable local conflict, the reform sought to prepare for nonnuclear conflict requiring significant nonnuclear forces backed by nuclear forces. Russia therefore sought reliance on nonnuclear forces that provided deterrent options, but because those forces lagged, Russia compensated by increasing nuclear force reliance for tactical conventional deterrence (Westerlund, 2015; Gorenburg, 2015; Haffa, 2015; Starr, 2015). Russia prioritized nuclear forces as cost-effective security to compensate for inadequate nonnuclear forces by developing improved warheads and delivery vehicles, longer-range cruise missiles, and SLBMs (Source 3, 2015; Source 4, 2015; Gorenburg, 2015). As the West reduced reliance on nuclear forces, Russia modernized its nuclear force to its detriment as they are costly and impractical for prevailing nonnuclear threats (Barany, 2008). Hence, more adequate nonnuclear forces could have reduced reliance on nuclear forces and increased self-help through conventional deterrence and conflict.

Because of the limited capacity of its nonnuclear forces, Russia could not pursue effectively defensive strategies aimed at leaving the defender with no option, denying it advantage, or achieving limited objectives with little or no engagement, namely if the defender used a defensive strategy (CEIP, 2010). As conventional deterrence depends on what Russia could do, in the absence of an adequate nonnuclear deterrent, Russia over relied on nuclear forces for conventional deterrence by punishment and existential threats. Russia had limited capacity to adaptably deter or defeat threats below the

threshold of nuclear or conventional deterrence that would produce costs too high relative to the gain sought or permit use throughout the escalation ladder. The utility to security was therefore lower, escalation was not contained, nuclear forces were over relied on and the threshold of their use was lower, allocation of resources was inefficient, and resulting interstate stalemates fomented hybrid warfare and proxy conflicts.

As a relative military capability, the inadequacies of Russian nonnuclear forces were exacerbated by superior adversarial military capabilities, and, thus, Russia had to threaten punishment through offensive strategies during conventional conflict (Waltz, 2009). Because Russia could not pursue a mixed nuclear–conventional deterrence and use of force strategy, its ability to asymptomatically substitute, and thereby reduce reliance on, nuclear forces with nonnuclear forces was limited despite needing to sustain strategic stability with retaliation and adversarial symmetric or asymmetric forces that undermined conventional deterrence but which require ongoing modernization due to competition and non-MAD-based deterrence without the threat or use of nuclear forces (Colby, 2010).

4.5 Supply: Nuclear Forces[114]

NWSs rely on nuclear forces for direct or extended deterrence and conflict though their utility is limited, including because of self-deterrence and limited deterrence of non-nuclear conflict, non-NWS aggression, and nonnuclear threats. Except for existential threats and limiting escalation to nuclear use for which only limited number of survivable warheads are needed, nuclear forces are too destructive, lack credibility, have diminished threat perception, shift competition to the tactical level, and reduce gains without risking devastation. Nuclear forces are impractical and add little to power through security as the

[114] See also Podvig, 2011; Renz, 2010; Sokov, 2009; Schneider, 2006; Raevsky, 1993.

types of conflicts they are useful for are rare and do not need significant nuclear forces, placing a premium on nonnuclear forces. They do not offer effective self-help and reduce realizable preferences with balancing, extended deterrence, and relative gains. Still, they are relied on to balance adversarial relative gains because inadequate nonnuclear forces drive insecurity, uncertainty, and relative loss under anarchy and thus power asymmetry, risk, and the security dilemma from adversarial military capabilities even in the absence of direct or existential threats. This encourages counterbalancing nuclear force offensive strategies to manipulate threat perception by reducing adversarial security, certainty, and military advantage often disproportionate to means to also renew the balance of power.

Russia relied on nuclear forces to reduce uncertainty, insecurity, and relative loss perceived as a unitary rational actor about proximate adversarial military capabilities and strategies. This included forward–deployed forces near NATO and the threat perception of the capacity to exact punishment, namely at the tactical level, even if not threatened. Russia sought to achieve power disproportionate to means to balance, as anticipated by balance of power, by manipulating adversarial threat perception through uncertainty and insecurity, to deter, prevent escalation, de-escalate, renew the balance of power, contest dominance, and challenge military advantage. But in so doing, Russia reacted to military asymmetries and risked disadvantage as offensive strategies are impractical against non-nuclear threats and NWSs, shifting competition to hybrid and proxy conflicts.

During the Cold War, the USSR was deliberately vague about the circumstances it might use nuclear forces as it assumed NATO would employ TNWs and that nuclear war would follow (Ullman, 1972). This contrasted with articulated policy that the use (and not only the first use) of nuclear forces should be banned and forces destroyed due

to nuclear force inferiority vis-à-vis America (Ullman, 1972). Conversely, during the Cold War—as Russia did, America linked arms control to Soviet reductions in non-nuclear forces because of its and allied nonnuclear force inferiority vis-à-vis the USSR despite similar nuclear disarmament objectives in articulated policy (Ullman, 1972).

After the Cold War, Russia struggled in an evolving global context and deterred America, China, other powers, and non-state threats, and, in many respects, this debate endures (Golts and Putnam, 2004). Russian reliance on limited nuclear use responded to nonnuclear forces asymmetries vis-à-vis China and the West and the limited utility of nuclear forces (Colby, 2016; Kokoshin, 2010; Source 6, 2015). Also, variegated nuclear forces permitted limited nuclear strikes for strategic effect (as practiced since the year 2000) (DIA, 2017; Colby, 2016; Kristensen and Norris, 2015; Sokov, 2014; Kipp, 2001).

Russia relied on nuclear deterrence down the escalation ladder to scenarios below nuclear use to deter adversaries from leveraging its nonnuclear force inadequacies, thus prioritizing an escalate–to–de–escalate strategy through SNFs or tailored and limited TNWs against which Russia believed adversaries were not willing to match escalation (Colby, 2016 and 2014; Podvig, 2015; Sokov, 2014 and 2011; Kokoshin, 2010. But see Ross, 2018). As reflected in its changing nuclear posture, the conditions under which Russia would employ this strategy were purposefully ambiguous, but which encouraged quantitative and qualitative reductions in nonnuclear forces due to cost optimization (Colby 2016; SIPRI, 2013; Sokov, 2011; Golts and Putnam, 2004; Schneider, 2003).

Russia thereby relied on nuclear forces for power, existential deterrence,[115] and military missions, foremost to deter superior nonnuclear threats (Colby, 2016; Podvig, 2015; Sonne, 2015; Sokov, 2009). But the inability of its DI to maintain a costly nuclear

[115] Underlying MAD is that no threat will attack because of nuclear retaliation.

force contributed to force obsolescence often under the guise of arms control, which also satisfied Russia's NPT obligations to disarm: e.g., Russia's rate of warhead deployment was one-tenth of the Soviet Union's, and because Russia was unable to replace its aging nuclear force it engaged America in arms control to also ensure that America maintained nuclear force parity with it (Podvig, 2015; Haffa, 2015; Sokov, 2009). Further, articulated policy extended nuclear deterrence to allies, but it was unclear to which—neither Russia nor allies faced existential threats (Trenin, 2005).

Nuclear forces—even with a reduced force—played an archaic role of existential deterrence, though the threat of nuclear war was negligible, to challenge the status quo (Podvig, 2015; Economist, 2015), and deter the improbability of an overwhelming force. As planning for nuclear use requires scenarios, Russia planned for nonnuclear threats that were difficult to deter or defeat with its inadequate nonnuclear forces, compensating for insecurities under anarchy (Sokov, 2009). Russia prioritized reactive reliance policies to adversarial military capabilities such as offensive nuclear postures, the non-negotiation of TNWs, nuclear force modernization, and penetrating nuclear forces. Russia modernized its nuclear force to provide warning and penetrate adversarial defences (Colby, 2016; Kristensen and Norris, 2015; McDermott, 2014). SNFs were the priority to provide security on its flanks, reduce nonnuclear forces, and pursue military reform without fear (Arbatov, 1998). Hence, SNFs had the most highly trained, ready, and reliable units, and qualitative modernization at reduced levels characterized the nuclear force to enhance its first- and second-strike capacity but at a lower threshold of nuclear use (Blank, 2005).

Greater qualitative reliance on nuclear forces was reflected in new ICBMs (e.g., the *Sarmat*, which carried up to 15 MIRVed warheads, including for first-strike), *Borei-*

class SSBNs on permanent patrol for first time since the Cold War, stealth nuclear bombers, TNW modernization in violation of the INF and despite commitments to reduce TNWs (Kristensen, 2014; Economist, 2015). As Russia could not reliably use nuclear forces for nonnuclear threats, Russia deterred by punishment through unacceptable costs (versus preventing aggression or adversarial objectives with deterrence by denial) due to inadequate nonnuclear forces. Articulated policy thus had little credibility, predictability, or impact on nuclear force reliance but rather was merely declaratory (Source 1, 2015).

Russia perceived utility limited nuclear use, namely with TNWs, as cost–effective security (Arban, 2003; Sokov, 2009 and 2002).[116] While Russia pledged[117] to reduce TNWs, the pledges only indicated the proportion of warheads and were never verified (Pomper, Potter, and Sokov, 2010). Indeed, data on destroyed or non-deployed TNWs was unavailable. TNW reliance was thus calculatedly uncertain (e.g., the 2010 posture left unclear how they are employed) in response to insecurities regarding China, though TNW type and deployment configuration (largely in western Russia and mainly for air or missile defence) did not reflect that concern (Sueldo, 2011). TNWs were a bulwark against insecurities regarding inadequate nonnuclear forces and the DI and nonnuclear threats, and while Russia promised to reduce them, it included TNWs into war–fighting strategies (Zysk, 2017; Dorell, 2016; Bluth, 2014; McDermott, 2011a and 2011c).

TNWs were thus a means to an equal footing with other powers and a bargaining chip for arms control. Russian strategy further misunderstood TNWs as an offset to non-nuclear threats. Despite no real threat from America, NATO, or China requiring the use

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[116] See also Podvig, 2011; Sueldo 2011; Weitz, 2011; Zagorsky, 2011; Sokov, 2009; Schneider, 2006; Arbman and Thorton, 2003; Woolf, 2001.

[117] In 1991, President Bush and Premier Gorbachev, and in 1992 Bush and President Yeltsin, made parallel but unilateral pledges to reduce and store most TNWs, but these commitments were never defined.

of TNWs, Russia believed that TNWs would not escalate to nuclear use (unlike SNFs), even though America would unlikely use nonnuclear forces as Russia could respond with nuclear forces with escalation (Sueldo, 2011). Thus, apart from their perceived utility and cost–effective security, TNWs had no military utility (Podvig, 2015; Sokov, 2011).

Russia avoided TNW arms control despite interest from America, fearing it would lose a bulwark (Pravda, 2011). Even so, the challenges with verifying TNW reductions—including eliminating dual-purpose delivery vehicles and monitoring storage—hindered talks (Artemyev, 2010) despite being unlikely until America withdrew (unilaterally) its nuclear forces from Europe, or Russia attained qualitative nonnuclear force parity with America (McDermott, 2011c). But parity would have also hindered efficient reliance on nuclear forces because NATO would have clamoured for offsetting extended American deterrence, to which Russia would have responded with retaliatory defences, even though NATO posed no real threat to Russia (Karaganov, 2010).

4.6 Supply: ASMs

Reducing reliance on nuclear forces occurs if NWSs pursue mission alternatives but which absence can drive reliance on nuclear forces and undermine strategic stability (Colby, 2013 and 2010; Lukasik, 2010; Sokov, 2002; Barkenbus, 1989). Russia called for the CIS, SCO, and CSTO to address regional threats (see, e.g., RFSC, 2010). Years after the dissolution of the Warsaw Pact, the CSTO was meant as a counterweight to NATO by reintegrating former Soviet states and restore buffer zones Russia lost when the USSR disintegrated. In practice, the CSTO was used by Russia to assert influence, reject NATO expansion, and support offensive strategies (Haffa, 2015; Gorenburg, 2015; Source 2, 2015; Source 6, 2015). These ISOs were inconsequential to balancing as members did not

contribute substantial forces (e.g., Russia was the main contributor to the CSTO rapid–reaction force) and were dependent on Russia for security (Westerlund, 2015). Indeed, the ISOs were a means for Russian influence despite differing threat matrices, an absence of trust among members, and inadequate capabilities (DIA, 2017).

Moreover diplomacy, Russia put little stock in external balancing which requires reliance on others despite viewing adversarial alliances like NATO as unreliable. Russia saw ISOs as an inexpensive means to constrain other powers and increase multipolarity and remain globally relevant by acting regionally though Russia did not rely on ISOs for security (Kuhrt, 2014; Makarychev and Morozov, 2011; Ragansimaporn, 2009). As Russia could not or did not rely on ASMs for nonnuclear missions, as it could not capitalize on self-help through ASMs for conventional deterrence or conflict, reliance on nuclear forces remained inefficient and increased adversarial gain through nonnuclear conflict absent Russia's threat or use of nuclear forces.

5. Russian Balancing

Russia articulated and implemented incongruent reactive and proactive supply and demand policies as Table 4-5 shows.

Table 4-5: Russian Supply and Demand Policies

Demand	**Security**	Primarily nonnuclear threats and superior adversarial military power.
	Domestic Structures	Policies articulated in the Kremlin and implemented by institutions.
Supply	**Nuclear Force Posture**	Persistent reliance on nuclear forces despite rise of nonnuclear threats.
	Defence Spending	Inadequate to supply adequate military capabilities across threats.
	DI	
	Nuclear Forces	Qualitatively adequate force at reduced levels.
	Nonnuclear Forces	Inadequate to deter and defeat the spectrum of nonnuclear threats.
	ASMs	Pursued for ulterior motives and not relied on for security.

In a denuclearized context, Russia should have increased reliance on nonnuclear forces for nonnuclear threats but this was not the case. Policy documented persistently inefficient reliance on nuclear forces despite the prevalence of nonnuclear threats, and offensive strategies fomented by failed military reform efforts, high energy prices, inadequate nonnuclear forces, an inefficient DI, and insufficient defence spending.

Articulated policy reflected inefficient reliance on nuclear forces in response to insecurities regarding Russian nonnuclear forces because policy implementation could not rectify this incongruity. Consequently, offensive strategies demanded reliance on a visible nuclear threat for deterrence, coercion, and an escalate–to–de-escalate posture to deter nonnuclear threats or terminate conflict early, which would be unlikely if involving a nonnuclear state or a non-state actor, and before escalation to the use of nuclear forces if involving a NWS or its allies (Source 4, 2015; Sutyagin, 2015; Source 3, 2015; Haffa, 2015; Brooks, 2015; Westerlund, 2015). Balancing was inefficient due to Russia's need to threaten or impose unacceptable punishment with nuclear forces to deter nonnuclear threats because its nonnuclear forces could not credibly sustain conventional deterrence and Russia perceived cost–effective security through nuclear forces without ASMs.

While Russia reduced and then increased reliance on nuclear forces in articulated policy, this was not supported by adjustments at the policy implementation stage, despite offensive strategies and insecurities about military capabilities. Tables 4-6 and 4-7 reflect policy incongruities and resulting shifts in reliance on nuclear forces.

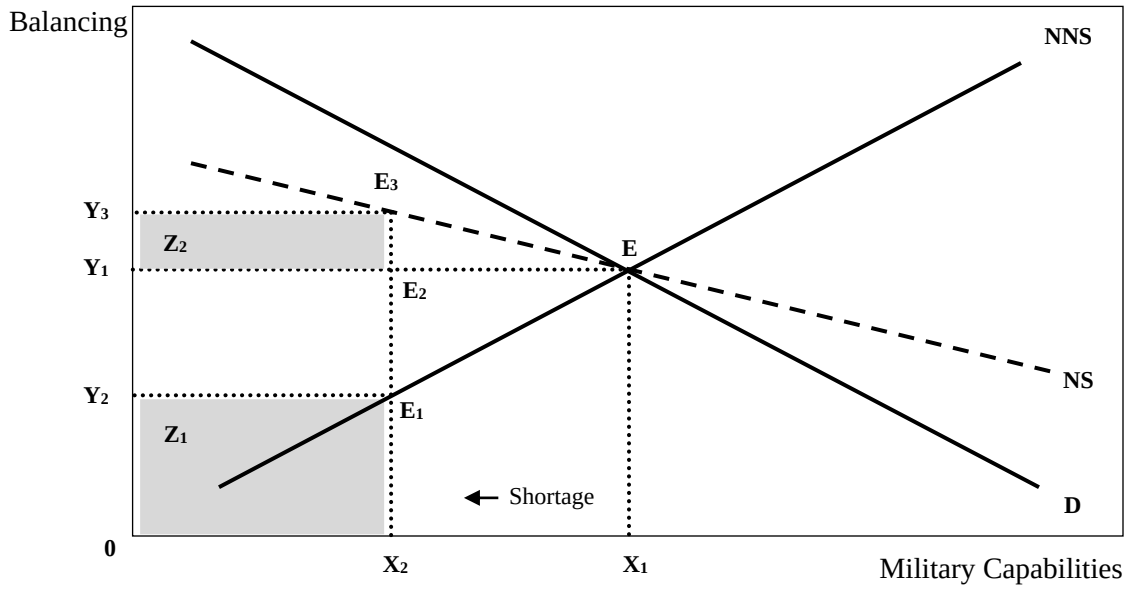
Table 4-6: Russian Reliance on Nuclear Forces

Stage	**Articulation**		**Implementation**			
Type	**Declaratory**	**Strategic**	**Resource**	**Quantitative**	**Qualitative**	**Deployment**
1991–2001	Decreased	Increased	Decreased			
2002–2015				Decreased	Increased	

Table 4-7: Russian Shifts in Reliance on Nuclear Forces		
Period	**Trigger**	**Reliance Shift**
1991–1993	End of Cold War	Reverse no-first-use policy, but no new missions for nuclear forces.
1994–1998	NATO Expansion	Emphasize TNWs for limited use in theatre–level conflicts.
1999–2001	Kosovo/Chechnya	Deter foreign intervention with SNFs and arrest arms control.
2001–2015	Superior Threats	Deter and compel adversarial restraint with limited nuclear strike.[118]
	U.S.–NATO	Penetrating nuclear forces to counter MD and SOANNC.

See generally Zysk, 2017; Podvig, 2015; Economist, 2015b; Sokov, 2014 and 1999.

Figure 4-2: Russian Balancing

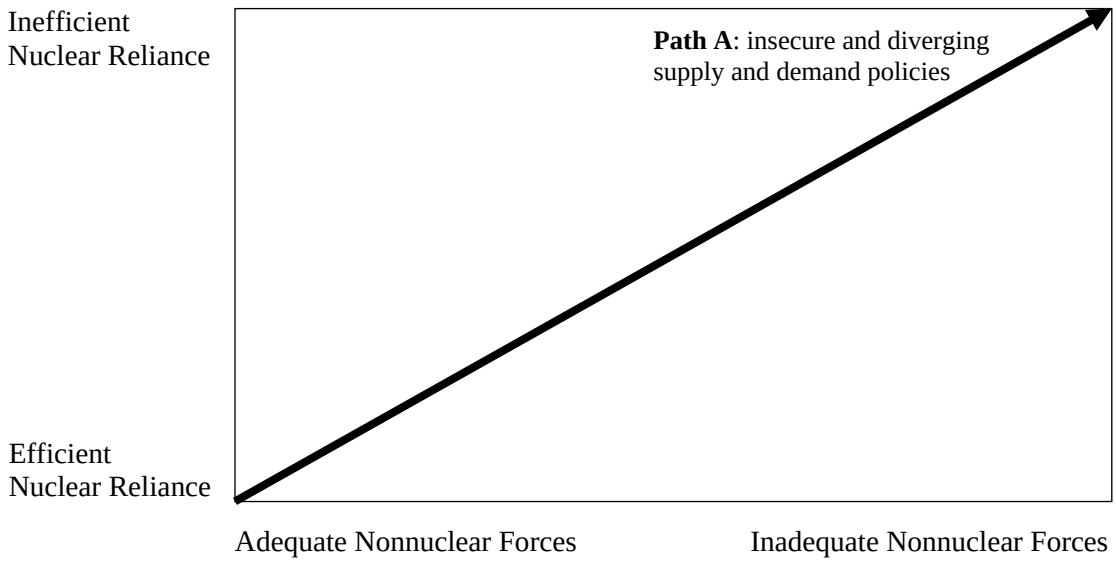


As Figure 4-2 illustrates, Russia underbalanced. The slopes of Russia's supply curves (NS + NNS) illustrate a shortage (X_2) of adequate military capabilities to deter and defeat threats (D) due to inadequate nonnuclear forces for nonnuclear threats. Balancing was inefficient because it had to over-rely on nuclear forces across threats. As shaded areas Z_1 and Z_2 show, the utility to security from reliance on nuclear forces (Y_3-E_3-E_2-Y_1) was smaller than from available nonnuclear forces (0-X_2-E_1-Y_2). Incongruent policies across threats—and, therefore, types of balancing, particularly an inadequate DI and insufficient investment (or resource balancing type) (INC + INNC < 1)—made its nuclear

[118] Escalate–to–de-escalate strategy envisioned the threat of a limited nuclear strike to force a threat with superior nonnuclear forces to return to the *status quo ante* by imposing unacceptable costs. See Westerlund, 2015; Sokov, 2014.

and conventional deterrence less credible due to adversarial perceived gain through non-nuclear conflict absent Russia's threat or use of nuclear forces, as a nuclear strike would have followed conventional deterrence failure (Weir, 2015; Daalder and Lodal, 2008; Smith, 2006; Blechman and Fisher, 1994; Betts, 1985).

Figure 4-3: Illustrated Russian Balancing



Nonnuclear forces could not defeat a superior nonnuclear threat (Weir, 2015). But because the damage nuclear forces inflict is too great for the threat of use to be credible, nuclear forces could support defensive countervalue but not offensive counterforce targeting strategies against nonnuclear threats with greater escalation (Podvig, 2015; Sokov, 2014; Bergman, 2010; Smith, 2006; Paul, 1995; McNamara, 1983). Per Table 3-1, due to underbalancing, self-help from deterrence and conflict was inferior to reliance on more adequate nonnuclear forces. Russia therefore tempered arms control as it was sensitive to adversarial military capabilities that could or which it perceived to undermine its deterrent (Podvig, 2015; Westerlund, 2015). The missions and configuration of nuclear forces corresponded to nuclear force over-reliance—including for limited

counterforce use against nonnuclear threats, with SNFs on patrol to reduce vulnerability and ensure second–strike retaliation with varied delivery vehicles and nuclear warheads allowing flexible nuclear use for signalling or conflict (Westerlund, 2015).

Per Path A of Figure 1-1, Russia attempted to transition to adequate nonnuclear forces but exhibited incongruent and reactionary supply and demand policy articulation and implementation in response to insecurities about its nonnuclear forces, particularly vis-à-vis superior adversarial nonnuclear forces perceived to undermine its deterrent and the lacking capacity of its nonnuclear forces to deter and defeat nonnuclear threats. Russia thus exhibited unreliable arms control vis-à-vis America despite reduced nuclear threats and the prevalence of low-intensity nonnuclear threats.

While Russia modernized nonnuclear forces, it was unable to shift reliance away from nuclear forces—a reliance that was higher than that of other NWSs. Russia valued nuclear forces as a cost–effective means to compensate for inadequate nonnuclear forces as they were the only capability that made Russia a power (Sonne, 2015; Pukhov, 2011c). Russia linked militarization with nuclear force modernization, signalling to adversaries—namely America and China—that it would also modernize forces (Shoumikhin, 2011).

The two options for reducing reliance on nuclear forces were closed to Russia. Inadequate nonnuclear forces persisted and over time it increased the perceived acuteness of threats that called for the threat or use of nuclear forces, as Russia perceived it had to maintain its nuclear force at a readiness that would allow it to inflict unacceptable costs and that adversaries had to know this (Diakov, 1997). Russia was thus reluctant to restrict the size and capacity of its nuclear force, making Russia sensitive to adversarial military capabilities that could—or it perceived to—devalue its deterrent (Sueldo, 2011). For

example, the creation of the Aerospace Force in 2015 was partly a result of perceived threats about surprise attacks and superior adversarial forces (McDermott, 2015).

Despite nuclear sabre-rattling and the security objectives sought through nuclear forces, Russia leveraged nuclear forces to balance perceived threats posed by America and China (Mathers, 2012; Sokov, 2011). Russia maintained the threat of nuclear use to deter superior nonnuclear forces because it perceived certain threats as acute to warrant a nuclear response (Sokov, 2009). However, such reliance reduced the focus of domestic structures toward more adequate nonnuclear forces, reducing efforts to diminish nuclear confrontation and de-nuclearize relations. Nuclear forces also remained a policy tool, as a threatening mantra, and a means to engage other powers (Sueldo, 2011).

Russia was resolved to threaten or use force for political or coercive gain even if adversaries did not seek conflict (Colby, 2016; Braw, 2015; Stoltenberg, 2015), but over-reliance on nuclear forces compelled extending the lifespan of nuclear forces and rely on new nuclear forces—particularly survivable systems. Because its inefficient DI hindered the supply of adequate nonnuclear forces, it struggled to develop the military it wanted[119] (Blank, 2005; Leijonhielm, 2005; Sueldo, 2011a). Concerns outlined in articulated policy about nonnuclear threats reflected the chronic shortage of military options, despite the military recognizing that nuclear forces were inadequate and stressing options below the threat or use of nuclear forces (McDermott, 2011c).

It is difficult to rely, as Russia did, on punishment–based strategies. Such reliance reduces advantage and conflict escalation management, and increases reliance on nuclear forces for even limited contingencies and the need to operate under identifiable levels of punishable aggression (e.g., cyberwarfare or Russia's Crimea land incursion) (Mitchell,

[119] Nuclear forces played a de-escalatory role through the threat of limited nuclear use.

2015). Russia had to thus shift the burden of conflict from a fear of retaliation to a fear of escalation in a threat that must under-respond to provocation (losing control of vital spaces) or over-respond and risk conflict (Mitchell, 2015). But Russia's ability to respond to provocation without risking conflict, escalation, and retaliation was also limited by the inadequacies of its nonnuclear forces (Mitchell, 2015). The resulting interstate stalemate perpetuated hybrid warfare and proxy conflicts, particularly in non-NWSs (e.g., Ukraine), where Russia could conduct limited conflict without serious risk (Reynolds, 1989).

Russia thus relied on offensive strategies like the threat of pre-emption or counter-retaliation to increase costs to what adversaries valued through punishment but which were perceived as MAD-based and competitive (Bunn and Sokolsky, 2001; Glaser, 1992; Reynolds, 1989; Nguyen, 1989). With offensive strategies based on nuclear forces and countervalue and counterforce targeting, Russia exacerbated the security dilemma, threatened its and adversarial defensive capacity—thereby risking decreasing security, and fuelled an arms race and the pursuit of ASMs (Glaser, 1992). In an action–reaction process, such offensive strategies diminished adversarial security and negatively changed their perception of Russian strategies (Glaser, 1997; Jervis, 1978 and 1976).

Certain Russian actions could have limited that perception, even if deceptively: e.g., conditioning military modernization or reducing offensive forces in excess of what was needed for retaliation with a focus on destabilizing forces, reducing pre-emption. But certain domestic structures (particularly those that benefited) exaggerated the offensive potential of adversarial, namely American, capabilities and imputed malign strategies (Van Evera, 1998; Glaser, 1997). With offensive strategies, sub-optimal policies resulted in a net loss to Russian security because of diminished military capacity vis-à-vis threats.

As adversaries were uncertain about Russia, particularly given incongruities between articulated policy and its implementation, they inferred strategies at the policy implementation stage which prioritized offensive strategies. In a spiral model, policies drove adversarial military capabilities and strategies to reduce uncertainty about Russian strategies but which also threatened Russia's deterrent (Glaser, 1997). For other powers, restraint on the uncertainty and insecurity fomented by the threat perceived by Russia diminished with defensive strategies designed to deter by denying. This raises the risk of failure in conventional conflict without the need to resort to punishment with nuclear forces, supporting more stable deterrence and attenuating the security dilemma.

Russian offensive capabilities and strategies increased the security dilemma, intensified arms races, and raised conflict probability insofar as they reduced adversarial capacity to deter and defeat (Glaser, 1997). Adversaries modernized to maintain adequate military capabilities to balance Russia with resulting military asymmetries compounding the security dilemma and Russian offensive capabilities and strategies. Because of the resulting increase in mutual insecurity and uncertainty, political strategies that would help defuse threats that induced underbalancing, and limited offensive and unilateral defensive strategies, were crucial to communicate benign strategies, but without showing lack of resolve to deter and defeat threats (Glaser, 1997).

Adequate nonnuclear forces would have supported more efficient balancing with conventional deterrence by denial and strengthen deterrence by inducing prudence rather than compellance (Mitchell, 2015). That would have maintained Russian advantage in conflict, limited reliance on nuclear forces, and allowed a better response to threats below nuclear or conventional deterrence or conflict. Also, as it prevents threats from achieving

goals, relies on a perception that Russia has the resolve to act, and allows for conflict escalation control, deterrence by denial would not have required that Russia maintain an imbalance of forces but rather those adequate to deny adversarial objectives.

5.1 America, NATO, and Russian Balancing[120]

The U.S.–Russian rivalry stemmed from a Russia that demanded equality, locking America into a mutual hostage relationship based on deterrence and vulnerability (Blank, 2011b). Since the 1999 U.S.-led NATO conflict in Kosovo, Russia saw America and NATO as perceived threats given U.S.–NATO willingness to use force outside channels that Russia saw as legitimate like the United Nations, particularly in areas of interest to Russia (Colby, 2016; RFSC, 2010, 2014 and 2015; Huggler, 2015).

Russia perceived America and NATO as threats as reflected in articulated policy, exercises (e.g., *Zapad*), and deployments (e.g., *Iskaander* forces in Kaliningrad). Russia viewed nuclear forces backed by nonnuclear forces as the means to erode American military advantage, despite other Western forms of balancing (e.g., sanctions) (Reuters, 2015). Indeed, military reform under Putin gave the impression Russia was preparing for interstate war while creating the perception they posed a threat (Einhorn et al., 2015). But this contradicted policy that identified only NATO expansion as a threat. There were thus incongruities between what Russia said and did. Russian posturing and deployments toward NATO were seen by it as defensive, and NATO played a larger role in rhetoric than real concerns regarding American rather than NATO forces did (Source 6, 2015).

Ingrained distrust and hawkish domestic structures leveraged threats like MD and SOANNC to over-rely on nuclear forces, which are less effective for nonnuclear threats.

[120] See also Staples and Otto, 2000 and Sueldo, 2011.

Russian assessments of the balance of forces factored into its calculations about how far it could press NATO such as by undermining the Baltics and how NATO would respond (Colby, 2016). While America, for geographic reasons, required long-range strategic forces, Russia emphasized tactical forces and was concerned with adversarial nonnuclear forces if they undermined its deterrent: e.g., Russia was concerned that if a NWS could destroy its SNFs then it could use TNWs in counterforce targeting with lower escalation effects (Gorenburg, 2015; Dvorkin, 2014; Blank, 2011b; Goure, 2011; Sokov, 2011).

But war with America or NATO was unlikely and would have been disastrous. This incongruity with articulated policy and its implementation was driven by America and NATO remaining perceived threats. Russia unsuccessfully tried to impose constraints unacceptable to the West on nonnuclear forces like MD despite Western efforts to ameliorate related concerns (Weir, 2015; Brooks, 2015). Even so, to diminish the nuclear aspect of relations, for example, the Strategic Framework Declaration rejected zero-sum and declared a shift in relations toward shared threats and strategic stability rather than MAD which was important as America and Russia reduced SNFs (Savelyev, 2014).

Uncertainty as to U.S. military capabilities and NATO expansion fostered Russian distrust and justifications for inefficient reliance on—and procurement of—unnecessary military capabilities, despite real nonnuclear threats. Importantly, U.S.–NATO MD did not pose a threat to Russian SNFs, and the configuration of Russian MD indicated greater concern for Iranian and Chinese nuclear forces and the counterforce potential of Western nonnuclear forces[121] against Russian nuclear forces, despite pressing real nonnuclear threats to Russian security and interests (Podvig, 2015; Sutyagin, 2014).

[121] For example, in 2007, then-Deputy Defence Minister Antonov stated that PGS, "when combined with global missile defence, becomes a means of seeking to dominate the world." Acton, 2013.

While driven by insecurities about its forces, Russian rationale about advanced Western nonnuclear forces like SOANNC was faulty as they require long preparation and attack times and many strikes to damage nuclear forces, notwithstanding that Russian nuclear warheads were deployed on survivable vehicles (Miasnikov, 2009; Acton, 2013a; Arbatov, 2013). This despite Russian imitation of SOANNC per its understanding that nuclear forces were less effective at deterring and defeating nonnuclear threats (Arbatov, 2013; Sokov, 2011). Further, a threat would have to neutralize Russian missile defences notwithstanding the risk of escalation to nuclear use (Miasnikov, 2009). Even so, because Russia saw such advanced nonnuclear forces as threats, they remained a hindrance to efficient balancing. Such Russian balancing in response to superior Western and Chinese nonnuclear forces that did not pose real threats would have prioritized fewer survivable nuclear forces (which are harder to localize and destroy), rather than costlier, more vulnerable and escalatory, and less effective stationary nuclear forces (Acton, 2013).

5.2 China and Russian Balancing[122]

Russian relations with China were complex and contradictory (DIA, 2017; Lo, 2005). While they agreed on many issues, Russia was uneasy with China's rise (Lo, 2012 and 2005). But Russian fears of a "yellow peril" were unfounded because the real threat was not military, but rather economic (Ostrovskaia, 2010; Kipp, 2011a). Though it did not reference China as a threat in policies to not undermine relations, Russia was concerned with Chinese exercises that emulated intervention in Russia and Central Asia (McDermott, 2011a; Colby, 2016; Saradzhyan, 2010). But insecurities were motivated more by perception about Chinese military capabilities than by any real Chinese threat.

[122] See also Azizian, 2012; Collins, 2011; Sueldo, 2011 and 2011b; Trenin, 2011.

Russia saw China as unpredictable and worried about its technical dominance, growing military capabilities, and how its rise reduced Russia to a junior power (DIA, 2017; Lo, 2012; Lo et al., 2006; Shoumikhin, 2011). Within that prism, Russia perceived nuclear forces as a deterrent against the possibility of China becoming a threat coercing Russia (Sokov, 2009). China's ability to expand its nuclear force worried Russia because at parity levels Russia's deterrent could lose credibility against China's counterstrike potential (Sueldo, 2011b). Fear of China thus drove reliance on nuclear forces to maintain nuclear advantage but hindered TNW arms control (Sokov, 2011).

Following the millennium, Chinese military modernization elicited calls to deploy Russian nuclear forces in its Far East due to potential Chinese nonnuclear threats (Kipp, 2011a). Russia desired to assert herself against a rising China which was also driven by unsuccessful attempts to do so on European security issues from which it had learned and sought to avoid (Kuhrt, 2014). Fears also drove calls to include China in arms control, ever less a means to engage America as Russian nuclear forces diminished. China, a NWS that America and Russia saw as a growing challenge to the status quo, was thus a fulcrum upon which to maintain equality vis-à-vis America. But Russia did not know how to engage China and needed America to encourage China to engage and for political cover should arms control talks fail despite disparities in their respective nuclear forces.

5.3 Russian Balancing and Arms Control

Whereas arms control helped avoid nuclear war during the Cold War, that was not the case after it because nuclear war was unlikely which deprioritized arms control except to advance other objectives. Russian arms control centred on engaging America and cost savings from reducing its nuclear force. Security conditions were conducive to arms

control fomented by force obsolescence and the DI's low force replacement rate, but such urgency did not exist in Russia (Source 7, 2015; Sokov, 2011). Russia was sensitive to arms control involving its first-strike nuclear forces and conditioned force reductions below New START-levels on Chinese arms control (Weir, 2015; Westerlund, 2015).

Russia's weak DI and its ability to maintain parity through arms control with qualitatively superior nuclear forces as it reduced its nuclear force drove arms control: e.g., President Putin stressed that all NWSs pursue arms control (Putin, 2012; Blank, 2011b). Despite attempts to multilateralize arms control, Cold War incentives no longer applied, and other NWSs were unlikely to participate because of their own reliance on nuclear forces (Podvig, 2015; Savelyev, 2014). Arms control requires predictability and transparency, which Russian domestic structures resisted (Podvig, 2015; Savelyev, 2014). Despite adversarial military capabilities, arms control was compatible with security as the threat context reduced the nuclear forces Russia needed for threats (Zagorsky, 2014).

Arms control proved hard for a Russia with inadequate nonnuclear forces as varied nuclear forces hedged against adversarial breakouts of nuclear forces (Haffa, 2015; Westerlund, 2015). Russia increased the qualitative capacity (namely survivability and precision) of Russian nuclear forces (Haffa, 2015). But as there was no existential threat (though articulated policy stated otherwise), Russian reliance on nuclear forces should have been limited to existential threats (Sokov, 2002).

Russia could have also reduced its TNWs, but it signalled disinterest to do so as it saw them as a counterweight to Chinese and U.S.–NATO nonnuclear forces (Westerlund, 2015; Brooks, 2015; Sokov, 2011). Indeed, the treaty limiting TNWs—the INF—was eroded by its testing of ground-based cruise missiles (Westerlund, 2015; Gordon, 2014).

Domestic structures drove policy on arms control: no unreciprocated concessions with America; new leadership or external catalysts could only change policy; Russia was reluctant to part with forces in a security context perceived as uncertain and insecure; because no domestic structure cared to change the status quo, interests to retain TNWs prevailed; crafting a verifiable TNW treaty was challenging; accounting and reduction rules required unacceptably intrusive measures; and suspicion and worst-case planning dominated policy (Podvig, 2015; Brooks, 2015; Sokov, 2011).

Russia was committed to disarmament, but in modest steps. America was eager to unilaterally cut its nuclear force, and if it retained only a second–strike capacity (which it could have afforded to do), then Russia may have reduced its nuclear force. But U.S.–NATO nonnuclear forces and MD hindered arms control, though Russia sought to limit such forces while justifying its military modernization (Source 6, 2015; Colby, 2016).

5.4 Russian Balancing Paradigm

Table 4-8 reflects Russian balancing driven by insecurities and regional and global ambitions buttressed by nuclear forces despite prevailing nonnuclear threats. This required nonnuclear force modernization which its DI struggled to supply. Domestic structures increased reliance on nuclear forces though ineffective at deterring and defeating prevailing nonnuclear threats. The centralized and insular nature of policy-making could have helped reduce reliance on nuclear forces when in the interest of the executive. Russian balancing policies are thus not impenetrable, but Russia may increase the publicized utility of nuclear forces when expedient to do so.

Even amid financial challenges, Russia increased defence spending while slashing almost every other rubric and despite endemic corruption (Kendall, 2015; Golts, 2015).

Other NWSs can help reduce Russia's perceived utility of nuclear forces by, among other methods, denuclearizing their relationships, calling attention to more pressing nonnuclear threats, pursuing arms control, and reducing their reliance on nuclear forces. It would also behove Russia to deploy adequate domestically–sourced nonnuclear forces. Notably, its 2014 annexation of Crimea showed an improvement and that, with SNF modernization, it could project power over neighbours (Gady, 2015; Chivers and Herszenhorn, 2014).

Table 4-8: Russian Balancing Paradigm	
Strategic Culture	History of insecurity drives fear of attack, encirclement, and subjugation.
National Interests	National sovereignty, territorial integrity, and control of its "near abroad."
Geopolitical Goals	Maintain regional hegemony and achieve parity vis-à-vis America.
Real Threats	Terrorism, cyber warfare, nuclear proliferation, and nuclear terrorism.
Security Context	Relatively insecure; growing threats of regional instability and terrorism.
Armed Forces	Need to increase adequacy for prevailing nonnuclear threats.
External Balancing	Low prioritization of, and dependence on, ASMs.
Military Reform	Modernization driven by new military capabilities and nonnuclear threats.
Regime Type	Closed to domestic or external influence.
Domestic Structures	Relatively closed but with a history of arms control. Divergent (Podvig, 2015), advocating for over-reliance on nuclear forces.
DI	Requires significant modernization to supply necessary capabilities.
Nuclear Posture	Relatively transparent; reflects institutionalization of arms control.
Arms Control	Means to equalize adversarial capabilities, particularly if weaker.
Deterrence Goal	Achieve nonnuclear parity and maintain nuclear parity with America.
Nuclear Forces	Relied for status, coercion, and to compensate for nonnuclear forces.
Utility of Military Capabilities	Key to preventing unilateral advantage, balancing strategic relations, and maintaining mutual vulnerability, but significant investment in nonnuclear forces central to adequate nonnuclear forces.

6. Conclusion

The Russian military deteriorated significantly following the Cold War. Years later, Russia pursued the most radical military transformation in nearly a century aimed at improving military capabilities across threats and vis-à-vis other powers. Serious and unpopular reforms were pivotal. Russia sought nonnuclear force superiority backed by nuclear forces employed coercively to deter the West—namely a superior U.S. military—

as the USSR did and which anchored Soviet force analysis[123] (Owens; 2004; Lider, 1980; Schulte, 2015). But as this chapter shows, Russia faced challenges in supplying adequate nonnuclear forces (Podvig, 2015; Schulte, 2015; Herspring, 2010b; Barabanov, 2012; McDermott, 2011c). Reform may have even unintentionally diminished readiness (Herspring and McDermott, 2010) and shifted balancing from the numerical superiority of the Soviet military to technological capabilities upon a weak DI (Barabanov, 2012).

Russia perceived uncertainty and insecurity because of persistently inadequate nonnuclear forces undergirding underbalancing, and mistrusted others under anarchy compounded by geographically proximate superior adversarial forces, namely NATO. Despite no real threat, Russia leveraged nuclear forces despite a context dominated by nonnuclear threats and unconventional capabilities through hybrid and proxy conflicts, particularly in Eastern Europe, to balance American power perceived as threatening its independence, regional hegemony, and power under multipolarity.

Russia was unlikely to change its reliance on nuclear forces, much less relinquish valued instruments of power (Shoumikhin, 2011). More adequate nonnuclear forces were thus unlikely to reduce reliance on nuclear forces. They would have been more capable against nonnuclear threats but would have remained inferior to superior adversarial non-nuclear forces against which Russia hedged strategically through SNFs and tactically with TNWs (e.g., military exercises against NATO envisioned the same) (Schulte, 2015; Source 6, 2015; Source 1, 2015; Sueldo, 2011a; Blank, 2011b and 2005; Weitz, 2011).

Despite a significant rise in defence spending, particularly since reform instituted as of 2008, Russia could not achieve nonnuclear force parity with the West (Golts, 2014). Russia's do-it-all approach to modernization overextended the DI, despite the Kremlin's

[123] Assessing the balance between forces in a conflict relationship. Deane, 1976.

commitment to reform (Gibbons–Neff, 2015; McDermott, 2011a; Nichol, 2011). This underscores the need for targeted modernization to address inadequacies (Brzoska et al., 2011). The way Russia sets a realistic threat matrix as its military capabilities evolve will remain a conundrum for Russia (McDermott, 2015a). Because of such inefficiencies and inadequacies, Russia will likely remain a second–tier NWS power.

Ongoing inadequate nonnuclear forces may ossify over-reliance on nuclear forces to deter real and perceived threats driving underbalancing as Russia values nuclear forces for signalling and holds the unsettling Soviet belief that it can control nuclear bargaining through conflict escalation prior to nuclear conflict by first using nuclear forces and that, even post-Cold War, she can be a target of coercion, invasion, or subjugation (Schulte, 2015; Blank, 2011b). This drove offensive strategies and over-reliance on nuclear forces as war–fighting capabilities even as the size of the nuclear force shrunk (Blank, 2011b). Russia thereby maintained less mobile nuclear forces largely for posturing and to position as a nuclear power beyond its means (DIA, 2017; Doure, 2011; Schröder, 2009).

Russia will continue to pursue destabilizing offensive capabilities and strategies and cost–effective inefficient nuclear forces (Source 6, 2015), hindering arms control. Nuclear forces will remain a valued aspect of Russian security because for relatively little expense they deter superior powers and enable Russia to maintain inadequate nonnuclear forces and be perceived as an equal to America (Sueldo, 2011; Pukhov, 2011c). Russian strategies will therefore remain offensive and anchored on nuclear forces (Haffa, 2015).

As anticipated by offensive neorealism to explain interstate competition, as a revisionist state, Russia leveraged offensive capabilities and strategies for power through relative gains in security despite adversarial balancing. The research validates offensive

neorealism by examining this regional hegemon not limited by geography, and which pursued projection albeit constrained by capabilities to balance American dominance and for regional and global hegemony. The research posits a means to distinguish offensive strategies through policies, with a net loss to deterrence for Russia, and an assessment of military capabilities, particularly nuclear forces, beyond what is adequate for security vis-à-vis articulated threats and driven by shifts in interstate distribution of military power.

Inherent in Russia's offensive nuclear posture is that nonnuclear forces define its ability to manage conflict escalation (Kipp, 2011). Russia will pursue nonnuclear forces and deploy nuclear forces for parity, namely vis-à-vis America, with the aspiration that nonnuclear force modernization reduces nuclear force reliance despite its DI inadequacies (Source 3, 2015; Blank, 2011b; Sokov, 2011 and 2000). Further, Russia will rely on TNWs as a cost–effective alternative, especially against nonnuclear and regional threats, and seek concessions on enemy forces that reduce or restrict its deterrent, particularly given its MAD-based deterrent (Sonne, 2015; Kipp, 2011; Weitz, 2011; Sueldo, 2011; Pukhov, 2011c; Khramchikin, 2010). Nuclear forces will thus play a continued role, and TNW reductions will depend on assurances about China's nuclear forces, transparency with advanced American nonnuclear forces, and European security (Sueldo, 2011).

But Russian over-reliance on nuclear forces is questionable because conflict in the post-Soviet space has the greatest probability but poses no existential threat (Barabanov, 2012). Nonetheless, Russia perceives localized conflicts near its borders as likely and can metastasize into major conflict that could necessitate the threat or use of nuclear forces, so Russia's nuclear posture has less to do with U.S. nuclear forces or its posture (Source 6, 2015). Further, Russia defines threats on terms that maintain reliance on nuclear

forces, even though they make it less secure by triggering reciprocal adversarial reliance on nuclear forces and MD and undermining its conventional deterrent and retaliatory potential against nonnuclear threats by under-resourcing nonnuclear forces.

Balance of power between China and Russia may be maintained with an adequate nuclear deterrent so there remains a need for nuclear forces (Barabanov, 2012). American Asia–Pacific alliances and advanced nonnuclear forces are as menacing to Russia as it loses its Pacific presence (Blank, 2011b and 2008) and its European influence wavers. As a nonnuclear force underdog on its eastern and western flanks, nuclear deterrence (and the acceptance of its insecurity) is Russia's answer to that dilemma, which is why it is sensitive to adversarial capabilities that undermine its deterrent (or that it perceives to do so) (Trenin, 2010). Further, Russia is resigned to long-term reliance on nuclear forces for deterrence based on insecurity and uncertainty about the changing global context and the imbalance in nonnuclear forces on its eastern and western flanks (McDermott, 2011a).

And while China desists from challenging U.S. MD in Asia by modernizing its nuclear force, Russia openly opposes U.S.–NATO MD and works against it in Asia while modernizing its nuclear forces and demanding it be considered a global power (Blank, 2011b; Pei, 2007). As Russia did not perceive Iran or North Korea to be impending threats, unlike America, it discounted the need for MD and, instead, relied on nuclear forces and relations with such so-called rogue states to contain possible threats because of its inability to deter them absent the threat or use of nuclear forces (Sueldo, 2011). As its nuclear force diminishes, evolving threats and nonnuclear forces will be determinative of arms control. The ability of its DI to meet modernization demands—and Russia's ability to deter and defeat nonnuclear threats—will influence its balancing and arms control

(Podvig, 2015; Blank, 2011a). However, Russia must overcome challenges to efficiently balance and will rely on nuclear forces for the foreseeable future (Weir, 2015). Russia may also pursue arms control if faced with the prospect of America's or China's nuclear forces outgrowing or outmanoeuvring, which may happen because of its DI (Podvig, 2015; Westerlund, 2015). Indeed, Russia is unlikely to risk reducing its nuclear force to parity with China until China is subject to an arms control treaty (Westerlund, 2015).

Russia will also spin out arms control, particularly by linking arms control with issues like adversarial offensive and defensive capabilities to maximise negotiated gains without disarming, principally due to Western and Chinese nonnuclear force superiority and other competitors (Russia forecasted more NWSs in the future), and because nuclear forces are the key to being considered a power and an issue upon which to engage NWSs (Podvig, 2015; McDermott, 2011a; Karaganov, 2010; Sokov, 2011; Sueldo, 2011). Also, Russia will keep TNW unpredictability undermining arms control (Westerlund, 2015).

Russian concerns with adversarial nonnuclear forces will cloud arms control as military planning is driven by worst-case scenarios such as the difficulty to distinguish nuclear and nonnuclear delivery vehicles, and Russia's need to rely on TNWs, especially against a rising China and its counterstrike capacity vis-à-vis the adequacy of Russian nonnuclear forces (Antonov, 2013; Sokov, 2011; Blank, 2011b; Ivanov, 2010; Lavrov, 2010; Kozin, 2010; Kipp, 2011 and 2011b; Weitz, 2011). Uncertainties and the short deployment time frame of such forces may induce Russia to respond with nuclear forces despite their escalation effects (Antonov, 2013; Arbatov, 2013). But Russian concerns with advanced U.S.–NATO nonnuclear forces are faulty because of the limited ability of such forces to damage Russian nuclear forces with which it could respond (Miasnikov,

2009). Russian confrontation with the West will therefore continue as China rises and pressing threats near its borders increasingly divide Russian attention.

To efficiently balance, domestic structures that generate threat perception (namely the military) will have to posit that there is no threat from NATO, America, or China or that Russian nonnuclear forces can deter and defeat nonnuclear threats (Brooks, 2015). Demographic and economic challenges and DI deficiencies will remain obstacles to adequate nonnuclear forces (Hedenskog and Vendil Pallin, 2013). Discord between Russia and America or other NWSs may erode or break existing arms control treaties and undermine future arms control (Weir, 2015). But arms control does not require good relations, only mutual benefit (Podvig, 2015; Brooks, 2015). Also, reduced reliance on nuclear forces is not a prerequisite, as America and the USSR relied on nuclear forces and pursued arms control (Brooks, 2015). Arms control is less about quantity and more about capabilities, and Russian reticence is less about parity and more about inadequate capabilities—even though it loses leverage as it reduces its nuclear force (Podvig, 2015). Arms control has chances of success, but, in interstate relationships that MAD still defines, arms control will require reduced reliance on nuclear forces (Source 4, 2015).

Driven by worst–case thinking, Russia sees global zero as an attempt to disarm it and neutralize its nuclear forces (Podvig, 2015; Shoumikhin, 2011). A credible nuclear deterrent will remain its insurance against the improbable threat of nuclear use. But over–reliance on nuclear forces hinders reciprocal reductions and encourages non-NWSs to pursue nuclear forces or rely on extended deterrence. Political strategies are thus pivotal to defuse threats that induce such reliance (Podvig, 2015; Blank, 2011b; Kipp, 2011). Russian domestic structures will define threats and capabilities vis-à-vis reactive policies

that support nuclear reliance (Podvig, 2015) but which weaken arms control and strategic stability. Offensive strategies are likely to justify unnecessary military procurements and challenge adversarial power (Podvig, 2015; Sueldo, 2011). Russia will also emphasize its ability to damage for deterrence to manipulate adversarial threat perception, achieve stability vis-à-vis adversaries, and induce cooperation (Kumar, 2007), but Western and Chinese forces will hinder cooperation and foment inefficient Russian balancing.

Inefficient Russian balancing resulted from incongruent policies and balancing types combining conventional deterrence by punishment and threats of nuclear use if conventional deterrence fails because of capacity gaps between nonnuclear forces and threats caused less credible deterrence due to adversarial gain absent the threat or use of nuclear forces. Self-help was thus inferior in a nonnuclear–threat dominated context due to reduced military advantage and power through security. Consistent with neorealism, Russia showed NWSs tend to act alone and that internal balancing is the most effective means to balance and achieve security disproportionate to means even without a direct threat. This includes fomenting uncertainty and insecurity and contesting hegemony with nuclear forces to deter through punishment and shun external balancing despite inferior nonnuclear forces exacerbated by inefficient balancing. But this shifts competition to the tactical level with lower use thresholds (e.g., TNWs) and hybrid and proxy conflicts (e.g., Ukraine), limits nonnuclear forces, and reduces relative gains and escalation dominance.

6.1 Prescriptive Lessons

The research yields observations relevant to reliance and to the USSR/Russia and similar NWSs. First, Russia prioritized nuclear forces over nonnuclear forces. Second, its reliance at the implementation stage was reactive to domestic insecurities and external

threats—particularly the adequacy of Russian nonnuclear forces—but was incongruent with articulated policy. Third, the transition to adequate nonnuclear forces was driven by threats but hindered by domestic constraints, including an inadequate DI.

Fourth, the supply of military capabilities was incongruent at the implementation stage with demand in articulated policy. Balancing remained inefficient due to inadequate nonnuclear forces even without a direct threat. Cost–effective security through nuclear forces, their perceived utility, and the absence or unreliability of ASMs exacerbated inefficiency. Russia needed to threaten or impose unacceptable punishment[124] to deter or defeat threats with nuclear forces as its conventional deterrent was inadequate.

The chapter shows that NWSs balance despite polarity and hegemony, and that internal balancing is preferred in multipolarity with uneven military capabilities. But these are subject to power shifts for realizable preferences through self-help and to reduce adversarial power through the erosion of military advantage and manipulation of adversarial threat perception. As anticipated by balance of power, Russia counterbalanced American power even if not threatened, with offensive military capabilities and strategies including through revaluation of nuclear forces despite prevailing nonnuclear threats. The analysis of Russian sub-optimal policies articulated and implemented by domestic structures explains such balancing, relative losses, and interstate power asymmetries with systemic implications, compounded by adversarial geographic proximity and military capabilities and strategies even if not offensive in nature. The chapter validates realism to explain power balancing under anarchy through internal balancing despite external balancing including of distant competitors constrained by the adequacy of capabilities for

[124] Readiness, conventional deterrence, and unacceptable punishment are related in Russian doctrine by linking deterrence to active restraint, a flexible condition to avoid escalatory responses. Conversely, in the West, deterrence is an established condition. DIA, 2017.

power through security. Further, the chapter addresses why underbalancing due to inadequate forces, not just geography, encourages offensive strategies to contest power.

This chapter supports the link between adequacy of military capabilities across threats, the mediating variables, and balancing. Russia tended to prosecute nonnuclear force modernization during periods of low and high salience of arms control and greater and less efficient reliance on nuclear forces, in the context of the mediating variables. During insecurity regarding the adequacy of nonnuclear forces in the case of Russia or NWSs like it, reliance on nuclear forces may increase or arms control marginalized, more adequate nonnuclear forces may reduce reliance on nuclear forces or foment arms control, or periods of greater reliance on nuclear forces may correlate with nonnuclear force modernization or arms control marginalization.

Chapter Five:
American Balancing

1. Introduction

American quantitative reduction in reliance on nuclear forces was accompanied by adjustments in other balancing types that resulted in more efficient balancing driven by superior nonnuclear forces and the prioritization of prevailing nonnuclear threats. Qualitative modernization of nuclear forces was coupled with policies favourable to arms control. This chapter discusses how more efficient U.S. balancing resulted from relatively congruent supply and demand policies and, consequently, convergent policy articulation and implementation, resulting in greater self-help through deterrence and conflict.

2. American Strategic Culture

National interests informed by strategic culture relate to the domestic structure's identification of threats in articulated policy and balancing power through security. Prevailing in American strategic culture was a conception of security that valued the security and independence of America and its allies. To pursue interests in the anarchic system, America generated adequate military capabilities anchored on nonnuclear forces and defensive strategies. Its strategic culture is shaped by free security and instilled with exceptionalism ideals and emphasizes direct strategies, an industrial approach to warfare, and both firepower- and technology-based deterrence and conflict (Mahnken, 2006; Lippmann, 1952). Its protected geography and weak neighbours bred over time the view that conflict is a deviation from peace and a cause of good versus evil (Mahnken, 2006). America therefore sees conflict not as Clausewitz's continuation of policy by other means but rather as a breakdown of policy (Mahnken, 2006; Gray, 1981; McWylie, 1967).

Despite its proclivity for pacifism, America mobilizes behind high–intensity operations in response to threats (Mahnken, 2006; Huntington, 1957). Its military favours victory through direct engagement that encourages an approach to conflict that prioritizes firepower but which can be dysfunctional in unconventional conflict (Mahnken, 2006; Gray, 1994). America values technology to minimize conflict duration and casualties which allies and threats view as exploitable (Mahnken and Fitzsimonds, 2003; Mahnken, 2006; Balshaw, 2001; Feaver and Gelpi, 1999; Gray, 1999a; Pillsbury, 1997).

Nuclear forces reinforce the view of a dichotomy between peace and war, that they are an abhorrent weapon for deterrence, and they are different, uncontainable, and illimitable once used (Mahnken, 2006; Schelling, 2006; Tannenwald, 2005; Botti, 1996). Being the only NWS to have used nuclear forces, it views nuclear use or the threat of use as illegitimate (Mahnken, 2006). Even the military views nuclear forces as an inadequate deterrent of nonnuclear threats (Butler, 1998 and 1996). This contrasts with Russia's threatening to use, or using, nuclear forces to deter and defeat nuclear and nonnuclear threats. But America is sceptical about eliminating its nuclear force and values a smaller nuclear force despite espousing little optimism about nuclear deterrence in a nuclear proliferated world (Mahnken, 2006; Gormley and Mahnken, 2000).

Because America espoused exceptionalism and saw conflict as a breakdown of policy, it was sensitive to adversarial relative gains diminishing its systemic position and undermining its or allied independence and security, particularly in Eastern Europe and the South China Sea. America pursued primarily defensive strategies through power projection including out-of-region but was deterred by conflict duration and potential casualties that adversaries exploited like Russian unacceptable punishment with TNWs

and Chinese A2/AD challenges. Consistent with its approach to nuclear forces, in a prevailing nonnuclear threat context, America primarily relied on nonnuclear forces through internal balancing to, as foreseen by balance of power, preserve the status quo, arrest competitors, avoid relative losses, and maintain power under multipolarity despite uneven military capabilities, relying on ASMs and defensive capabilities and strategies to reduce uncertainty and insecurity and manage hybrid and proxy conflicts. As America was self-reliant, she could more efficiently balance for self-help to support hegemony.

3. Demand Policies

America's strategic culture conditioned how it defined security, identified threats, and articulated and implemented policies to achieve security. Demand policies (or policy goals) delineate the supply of military capabilities in articulated policy, within which threats condition demand for military capabilities as determined by domestic structures.

3.1 Demand: Threat Matrix

As states mistrust others under anarchy, they leverage military capabilities for power through security to deter external military threats and counterbalance adversarial power driving insecurity and uncertainty compounded by multipolarity, rewarding states that balance efficiently even in the absence of direct threats. American balancing focused on out-of-region power projection, including in support of European and Asian allies, to maintain the status quo and arrest or reverse competitors and declining power. As Table 5-1 shows, most articulated threats were perceived vis-à-vis adversarial capabilities and strategies—as an extension of balance of power, particularly geographically proximate to European and Asian allies, encouraging out-of-region projection. This explains American

policy responses informed by what America protected: its and allied independence and security to support global hegemony and limiting nuclear forces. America, therefore, perceived risk in the anarchic system and relied on self-hep through mediating domestic structures to balance out-of-region, primarily with nonnuclear forces even absent direct threats but with greater competition. However, such balancing increased allied buck-passing and adversarial reliance on nuclear forces because of military asymmetries.

In pursuing interests, security as a policy objective is conceptualized vis-à-vis the capacity to deter and defeat real and perceived threats that condition balance of power. In identifying threats through a policy process, specificity improves capacity to deter and defat threats but which may be underestimated or overestimated (Mazarr, 2018; Sulovic, 2010; Sheehan, 2005; Baldwin, 1997). Articulated policies in the public domain indicate trends on security—including strategies and the military's role and expected areas of conflict and interest. Policy was driven by the National Security Strategy, which outlines threats and how America confronts them, and the National Military Strategy and Quadrennial Defence Review, which discuss America's strategic objectives.

Policies paid little attention to nuclear threats or nuclear forces for deterring or defeating nonnuclear threats. They indicate a focus on nonnuclear threats and reliance on nonnuclear forces while drawing attention to how rising powers have eroded America's influence (e.g., White House, 2010). America considered violent extremism, cyber threats, climate change, and fossil fuel dependence to be threats (White House, 2010; Sanger and Baker, 2010; Joint Chiefs of Staff, 2011). Policy indicated greater reliance on nonnuclear forces while accepting the relevance of nuclear forces for existential threats. While nuclear forces existed, deterring a nuclear attack on America or its partners was a

mission of its nuclear force, so maintaining a safe, secure, and effective nuclear force was important (Joint Chiefs of Staff, 2011). America recognized multilateralizing efforts to deter threats that "would like to see America sap [its] strength by overextending [its] power" (White House, 2010: 4). America also sought to contain peer rival powers while recognizing that it faced no military competitor despite its power being increasingly diffuse (Stone, 2019; Sanger and Baker, 2010; White House, 2010; DOD, 2010b).

Though America recognized the prevalence of nonnuclear threats and an evolving security context, it identified WMDs, nuclear terrorism, and nuclear proliferation as real threats (DOD, 2010b). It viewed efforts to reduce and secure related technologies and materials as enhancing security. America continued to address the challenge of ensuring strategic stability with China and Russia (Sueldo, 2011; DOD, 2010b). Importantly, it deemed conflict with Russia as unlikely, but considered China's military modernization as concerning—particularly for neighbouring American allies (DOD, 2010b).

America was concerned with Chinese investment in advanced nonnuclear forces and A2/AD challenges, but not the modernization of nuclear forces (Goure, 2011). While China's assertiveness, military capabilities, and rise presented challenges, China was more of a political and economic competitor that hindered American power in the Asia-Pacific region (Freir, 2012). Accordingly, the locus of their interstate competition was then outside the military sphere (Freir, 2012). However, when adversaries link political and economic tools with military capabilities, threats can become acute (Freir, 2012).

The American Joint Operational Access Concept underscored the threat posed by A2/AD challenges and lethal precision weapons that made deployments into contested areas like the South China Sea hazardous despite America's military superiority, thereby

undermining interests and extended deterrence (Joint Chiefs of Staff, 2012; Holmes, 2012). The military therefore leveraged its strength to perform missions within contested areas where threats could impose losses which America feared (e.g., Chinese A2/AD challenges demanded a reassessment of military capabilities and threats) (Holmes, 2012; Joint Chiefs of Staff, 2012). Table 5-1 summarizes threats to America.

Table 5-1: American Threat Matrix	
Real Threats	Terrorism, cyber warfare, nuclear proliferation, and nuclear terrorism.
Perceived Threats	China, Russia, North Korea, Iran, Iraq, and Syria. Adversarial and allied military capabilities. Challenges to U.S. hegemony.

See, for example, DOD, 2002, 2006, 2009, 2010, 2010(a), 2010(b) and 2010(c), 2011, 2012 and 2012(a), 2013, 2014 and 2014(a), 2015, 2016 and 2018; Clark, 2014; Freir, 2012.

There were no nuclear force missions other than existential threats, underscoring prevailing reliance on nonnuclear forces. While America could not control threats, it could determine how they were perceived and the capabilities relied on. America thus could, and did reduce reliance on nuclear forces with greater self-help. This demonstrates deploying adequate military capabilities to deter threats above the threshold of nuclear use and below nuclear and conventional deterrence, including for interstate contingencies that may not escalate to high-intensity, all-out war as states innovatively deter and defeat threats. As America could not predict which threat would cause it damage or the context, a mixed threat- and capabilities-based strategy based on a range of military capabilities allowed America to prepare for rather than react to threats (Christianson, 2016).

3.2 Demand: Domestic Structures

State–level domestic structures explain threat identification and balancing policy determinative of military capabilities and strategies for power through security under anarchy. Consistent with realism, domestic structures, for the state as a unitary rational actor, identify threats to security in policy and respond to threats through policy. Policy

choices are based on a cost-benefit analysis with domestic structures seeking to maximise self-help through realizable preferences and costs to threats through military capabilities and strategies (Larsen and Kartchner, 2014). The unitary rational state leverages policy for self-help, with self-reliant states better placed to balance. The research contributes to the explanatory and predictive capacity of realism and makes it more determinate by identifying domestic structures to explain balancing as a continuation of policy by referring to variations in reactive and proactive supply and demand policies for relative gain and, thereby, garner generality, policy relevance, and descriptive accuracy.

Adequacy of military capabilities is conditioned by the extent to which domestic structures operating in a defined regime type converge or diverge on the articulation and implementation of policies that support such forces. Convergence of domestic structures to articulate and implement policies results in greater relative gains with balancing and utility to power through self-help. Policy is a benchmark to assess balancing conditioned by capacity. Policymaking determinative of military capabilities was relatively closed, exempt from controls (Born, 2007) and concentrated in the executive. The ability of the DI principally conditioned the supply of military capabilities supplemented by ASMs. By examining policies, the research notes the assumption of aggregating policies though they are the product of competing domestic structures (Bueno de Mesquita, 1998). Domestic structures acted more rationally by generating policies that increased utility to security. As a democracy, policymaking was particularly susceptible to issue linkage.

Top-heavy leadership limited by Congress characterized policymaking. Policy articulation was concentrated in the executive per the Constitution, a practice that had developed since independence, affording the executive formal and informal powers but

constrained by other domestic structures (Hook, 2005). While the president and Congress principally articulate policy, its execution rests with massive and decentralized domestic structures (Hook, 2005). Reducing reliance on nuclear forces depended on domestic structures, including Congress's power to allocate funds and ratify arms control treaties (e.g., the U.S. Senate delayed the ratification of New START, compared with rapid passage by the Russian Duma). Because of its power of the purse, Congress supported military modernization to buttress military superiority and hegemony.

Table 5-2: American Domestic Structures	
Executive	Concentrated security policymaking.
Legislative Branch	Little influence on policy apart from its power of the purse. Saw nuclear forces as key to security and was subject to the influence of nuclear force–hosting allies.
NSC	Intermediary between the White House and other domestic structures. Directed policy formulation and implementation.
DOD	Central to threat identification. Supported arms control.
State Department	Significant foreign contact and arms control experience but heeded to centrally–established policy. Risk averse.
DOE	Despite its mandate to design, test, and supply nuclear forces, it had relatively little policy influence.
Industry	Focused on nonnuclear forces. Little policy influence.
Academia	Indirect but relevant role because of the academia–policy link.

Policies resulted from a centralized yet permeable process. More efficient reliance was possible because domestic structures advocated reliance on nonnuclear forces despite modernization of nuclear forces notwithstanding prevailing nonnuclear threats.

4. Supply Policies

A NWS develops military capabilities to support policies that provide security by reducing the probability of real or perceived threats (Baldwin, 1997). American policies determinative of the supply of military capabilities resulted from the mediating variables (or the demand policies) previously examined which are a proxy to understand the

mediating variables. With the unavoidable risk of mis-information, the research relies on publicly available information provided by America and its observers.

4.1 Supply: Nuclear Force Posture

The NPR outlined security priorities and the role of nuclear forces which—unlike Russia—guaranteed U.S. and allied security and discouraged conflict while adapting to threats and U.S. and allied military capabilities (Colby, 2013a). Until the early 2000s, policy reduced reliance on nuclear forces. Though the 1994 NPR was classified, the post-9/11 2002 NPR called for plans for nuclear use against Russia, Iraq, Iran, North Korea, China, Libya, and Syria (DOD, 2002; Arkin, 2002).

America thus revisited nuclear use in response to HDBTs, slowed nuclear force reductions, and considered cost–effective security through nuclear forces, suggesting that its nonnuclear forces were inadequate to deter and defeat all nonnuclear threats. Though America did not expand its SNF per its treaty obligations, it modernized its nuclear force with greater—albeit temporary—post-9/11 reliance on low-yield nuclear forces, shifting its deterrent focus to smaller nuclear threats like unpredictable North Korea and Iran, and away from SNFs for established NWSs like Russia and China.

The 2010 NPR, published following President Obama's 2009 global zero speech, called for reducing reliance on nuclear forces and strategic nuclear deterrence through a reduced but effective nuclear force (DOD, 2010b). America declared it would not use nuclear forces against non-NWSs in compliance with the NPT[125] (DOD, 2010b). Unrivalled adequacy of nonnuclear forces, MD, and the easing of rivalries were central to this reduction, which also advanced its NPT disarmament obligations (DOD, 2010b).

[125] This was conditioned by biological weapon threats. See DOD, 2010b; Schulte, 2013.

The NPR also recognized that nuclear forces were ill-suited to address nonnuclear threats, including nuclear terrorism and nuclear proliferation (DOD, 2010b). But in also underscoring the relevance of nuclear forces, the NPR noted that Russia was the only NWS peer and cautioned against lacking transparency with China's nuclear force (DOD, 2010b). The NPR stressed the need to cooperate with Russia and other powers to promote transparency, strategic stability, and reduce nuclear reliance (DOD, 2010b).

The modernization of SNFs remained a priority, while superior nonnuclear forces enhanced conventional deterrence credibility. Like Russia, America left undefined a role for TNWs despite reducing and restricting them, thereby retaining their role in extended deterrence like against Russian TNWs near NATO. However, unlike SNFs, TNWs have a higher likelihood of use in conventional missions due to their counterforce reliability and damage–limiting effects, which are perceived to be less vertical escalatory but less useful for retaliation because of diminished accuracy (Zhao, 2015; Ong-Webb, 2010).

Russian nuclear forces remained a factor in how far and fast America reduced its nuclear force, recognizing that while numerical parity was not as compelling, disparities in size was not conducive to strategic stability (DOD, 2010b). Like Russia, America thus prioritized qualitative modernization, coupled with nuclear force reductions with Russia, TNW maintenance, and stored nuclear warheads (DOD, 2013).

A Cold War emphasis on nuclear forces and post-Cold War focus on nonnuclear forces were directly (if imperfectly) related. America did not have to rely on nuclear forces for most nonnuclear threats because of superior nonnuclear forces. But because it did not adopt a no-first-use policy, it reserved nuclear use—possibly pre-emptively—for threats, potentially including nonnuclear threats. American balancing reflected a belief

that nuclear conflict is uncontrollable, no matter the initiator. To fortify predictability and deter nuclear conflict, it espoused a restricted conception of nuclear use to attenuate adversarial threat perceptions and concerns with its nuclear posture.

While pursuing interests, America articulated and implemented policies that more efficiently relied on military capabilities, increased power through security, and diminished vulnerability by increasing the credibility and effectiveness of deterrence and diminishing the likelihood of losses incurred through escalation. America did so as it pursued policies that supported efficient balancing, increasing adversarial loss through nonnuclear conflict, diminishing American reliance on nuclear forces, and gaining in the balance of power. However, offensive deterrence like MD fomented arms races and interstate stalemates and encouraged adversarial pre-emptive conflict strategies to deter superior American nonnuclear forces (Reynolds, 1989).

America leveraged the uncertain costs of conflict to strengthen strategic stability with increased cooperation and a reduced risk of conflict (Kumar, 2007). Unlike Russia, America did not have to emphasize a capacity to inflict punishment, but rather an ability to deny adversarial objectives and confidence in them as a condition for deterrence through denial and counterforce targeting. Deterrence was supported by what military capabilities could do and, thus, America sought to curb adversarial use of lower levels of force through a capacity to deter and defeat (Jervis, 1978).

Nuclear forces did not dominate strategy nor, unlike Russia, were they necessarily relied on for offensive, limited counterforce, or coercive strategies. America anchored reliance on nonnuclear forces for “less–than–vital” contingencies per a context dominated by low-intensity nonnuclear threats (Waltz, 2009). Unlike Russia, America did not need

to be perceived as a threat to induce cooperation (Kumar, 2007). But while it possessed adequate nuclear forces, MD undermined the credibility of American balancing because of the perceived capacity to negate adversarial deterrents (Waltz, 2009).

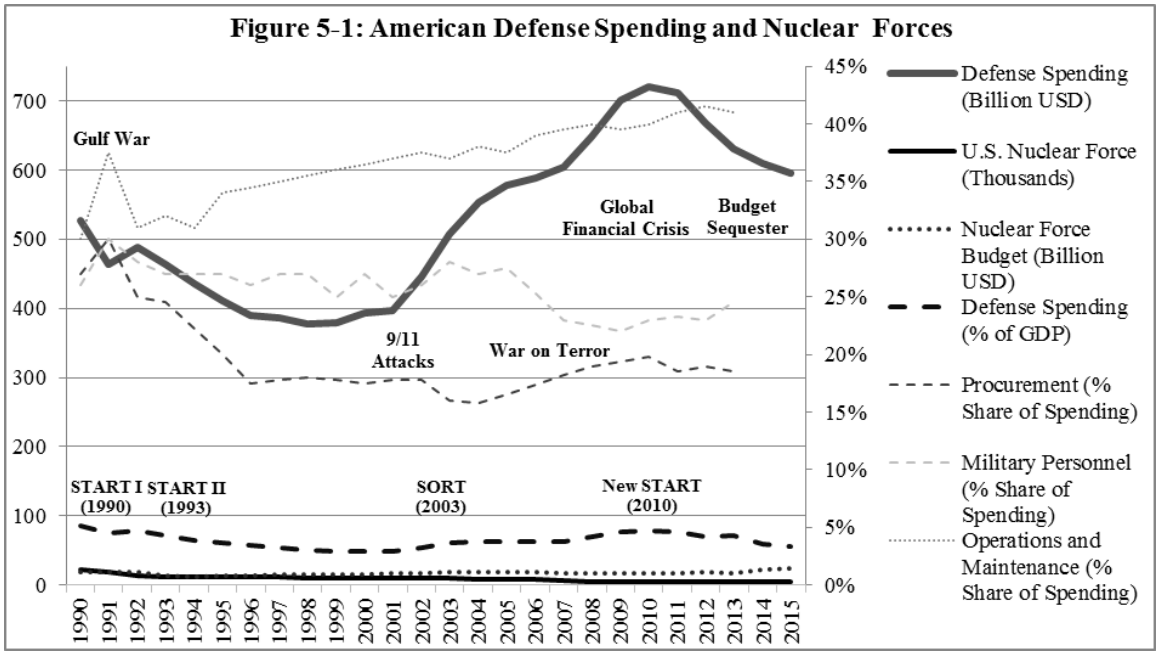
More adequate nonnuclear forces strengthened deterrence but shifted competition to the tactical level and increased American escalation dominance (Waltz, 2009). And as there was no acute threat, unlike Russia, the utility of nuclear forces was limited despite ASMs. Unlike Russia, that also reduced American nuclear reliance for power and phased out the confrontational nuclear deterrence aspect of MAD-based policies.

4.2 Supply: Defence Spending

States rely on their resources or those of others to advance interests, and thereby manage but not eliminate threats. Defence spending, military capabilities, and threats should correlate. While American defence spending was not fully transparent, its military capabilities are a proxy for defence spending and the prioritization of capabilities. The research draws on publicly available information about defence spending but notes the potential for inaccuracy due to methodological differences or political or security reasons.

Spending fell but rose after 9/11 (because of the War on Terror), and then fell again with reductions in military operations and budgetary cuts. For much of the research period, spending was higher than at the end of the Cold War, but as a percentage of GDP it decreased nearly four-fold since the Korean War and would fall to 2.4% of GDP by 2023, the lowest post-WWII (Walker, 2014). America dedicated a significant portion to operations and maintenance and a small percentage to procurement. Defence spending prioritized nonnuclear forces even during low military engagement. This reflects relative correlation between military capabilities and real and perceived threats.

Figure 5-1 shows defence spending and notes key events. Spending fell, rose, and fell as the nuclear force diminished, reflecting a focus on nonnuclear threats and non-nuclear forces supporting efficient balancing. A majority of spending went to personnel (whereas other powers like Russia, China, and India spent far less on personnel) despite cuts as of 2012 and inefficiencies because of collusion with the DI (Urban, 2015).



See Walker, 2014; Nissenbaum and Barnes, 2014; Tollefson, 2013; U.S. Congressional Budget Office; Kristensen and Norris, 2013a; NTI, 2013; SIPRI; DOD, 2012; The World Bank; Hunt, 2015.
Note: U.S. nuclear force data does not include retired and stockpiled warheads.

Despite fluctuations in spending, as Figure 5-1 shows, DOE nuclear force funding fluctuated little as of 1990, and was nearly as high with thousands more warheads during the Cold War (Tollefson, 2013). This reflects a focus on the qualitative modernization of a smaller nuclear force. Albeit a fraction of defence spending, America was projected to spend about $179 billion between 2010 and 2018, $348 billion between 2015 and 2025, and $1 trillion between 2014 and 2044 to modernize its nuclear force, while cutting funds for dismantling obsolete forces despite global zero and nuclear reliance reduction (NTI; 2013; DOE, 2014; Economist, 2015; Waldron, 2014). Resource balancing thus focused

on modernizing nonnuclear forces for nonnuclear threats and nuclear forces at reduced numeric levels for existential threats.

While defence spending grew exponentially, nuclear forces diminished. America thus translated investment into relatively adequate nonnuclear forces and, unlike Russia, was not compelled to inefficiently over-rely on nuclear forces upon offensive strategies. While the research does not review the minutiae of defence spending,[126] it underscores correlations with military capabilities and balancing which shows greater reliance on adequate nonnuclear forces for nonnuclear threats (Nissenbaum and Barnes, 2014; Shanker and Cooper, 2014). By retiring obsolete forces and cutting troop levels, America made available funds for advanced nonnuclear forces like MD and SOANNC, which helped maintain its imitable military advantage (Alexander, 2014; Shalal–Esa, 2014).

Though beholden to the ideas of security through nuclear superiority and peace through strength, America delayed nuclear force modernization as nonnuclear threats prevailed (Mehta, 2016). But due to its aging nuclear force, rising China and Russia, and new NWSs, America increased spending on nuclear forces across delivery systems and C2, though the cost of nuclear force modernization at 5% or less of total spending did not overwhelm the defence budget (Mehta, 2016 and 2015; NTI; 2013; DOE, 2014; Waldron, 2014; Economist, 2015. But see Weisgerber, 2015).

Nuclear force modernization synced the deployment of nuclear forces to ensure direct and extended deterrence at lower ends of escalation while maintaining parity with Russia, nuclear superiority over China, and deterring NWSs that sought to coerce, counter, or negate U.S. nonnuclear forces (Murdoch, 2015; Payne, 2015). Some analysts posit that nuclear forces added few options and had no role beyond deterring existential

[126] See also Walker, 2014.

threats (Murdoch, 2015). The research substantiates that and recognizes that arms control had no moderating effect on nuclear forces or their proliferation (Payne, 2015).

4.2 Supply: DI

A superior DI was central to policy congruence and adequate military capabilities. America's military led global capabilities due to a superior DI and its capacity to supply adequate forces. As former President Eisenhower (1961) presaged, "a vital element in keeping the peace is our military establishment." To ensure a superior DI, it developed consistent, thoughtful, long-term, and effective DI-related policies (Watts, 2008). While much has been written,[127] the research is concerned with implications for American and adversarial balancing. Military asymmetries fomented adversarial nuclear reliance to deter superior American military capabilities despite its transparent and measured nuclear posture. Apart from scaling back the configuration of MD to assuage Russia, America did not restrain its military capabilities to diminish adversarial reliance on nuclear forces.

Despite demand among domestic structures for a robust nuclear force, America deployed superior nonnuclear forces because its DI could support a reduction of reliance on nuclear forces and expand military advantage vis-à-vis other powers. Fundamental to this were policies to rely on—and modernize—nonnuclear forces for deterrence, conflict, and power through security for greater self-help through efficient balancing. Despite America's military superiority, its procurement was somewhat misaligned. Domestic structures peppered defence spending with unnecessary procurements (Macgregor, 2014; Fallows, 2014; Ratnam, 2013) and certain miscalculations of present and future threats, including during congressionally–imposed defence spending cuts. Though nuclear forces

[127] See, e.g., Dunlap, 2011; Goure, 2011a; Beckley, 2010; Eaglen and Sayers, 2009; Jones, 2002.

were a marginal component of defence spending, America reduced reliance on nuclear forces and produced savings from a smaller force without sacrificing qualitative capacity despite nonnuclear threats prompting a re-assessment of military capabilities.

4.3 Supply: Nonnuclear Forces

The utility of conventional deterrence in a nonnuclear–dominated threat context accentuated by regional power competition in the South China Sea and Eastern Europe and NWSs undermining extended deterrence is broad, namely for non-existential threats. It thus can help reduce reliance on nuclear forces and support efficient balancing. But nonnuclear forces are a relative capability conditioned by the forces of other actors. This demands a credible deterrent for greater self-help by maintaining the fear of conflict and escalation with threats, especially as nuclear forces have little utility against nonnuclear threats, including because of self-deterrence and even if an acute external threat exists and in the absence of ASMs. A NWS thereby increases realizable preferences with self-help and utility to power through security and limits reliance on and escalation to nuclear use. Adversaries, therefore, perceive superiority with adequate conventional capabilities and strategies, meaning scarcity of interstate threats relates to deterrence effectiveness.

American nonnuclear forces deterred and defeated nonnuclear threats within a defensive last resort balancing posture (Narang, 2009) below the threat or use of nuclear forces. While others increased reliance on nuclear forces to their detriment, as nuclear forces are impractical for nonnuclear threats, America shifted reliance to nonnuclear forces despite credible, reliable, and effective ASMs, thereby leveraging self-help.

Despite enduring aspects of American extended deterrence, nuclear forces were an important though diminished pillar of how America conceived deterrence and conflict

(Mahnken, 2006). Superior nonnuclear forces allowed America to more effectively deter and defeat nonnuclear threats undergirding reactive and proactive policies to reduce reliance on nuclear forces. Other states, including NWSs, imitated U.S. nonnuclear forces (Goure, 2011). Though America dominated warfare, as Figure 5-1 illustrates, it invested in nonnuclear forces, particularly post-millennium (Goure, 2011). Despite recognition of the changing threat context and a shift away from MAD, certain military capabilities—namely nuclear forces—were not effective at deterring and defeating nonnuclear threats but still received congressional funding (Ratnam, 2013; White House, 2013).

Superior nonnuclear forces allowed America to reduce reliance on nuclear forces because they afforded real and perceived assurances that most nonnuclear threats could be deterred and defeated. America could thus more efficiently rely on nuclear forces and pursue arms control. America proactively prioritized policies to augment nonnuclear forces per articulated policy and reduce reliance on nuclear forces. Unlike Russia and China, America shifted reliance from mass mobilization to nimble nonnuclear forces for nonnuclear threats. This helped reconfigure the structure and composition of the military to focus on advanced nonnuclear forces and defensive technologies for power projection.

American reliance on nuclear forces diminished as its nonnuclear forces were adequate for real and perceived superiority. Hence, it reduced its nuclear force, pursued arms control, and fomented an institutional context to do so, but diminished the threshold of, and increased its predisposition at the implementation stage for, conventional conflict because potential relative gains outweighed losses (Goure, 2011; Podvig, 2001). Because nuclear forces were inadequate deterrents of nonnuclear threats (which existed despite nuclear forces), America pursued advanced nonnuclear forces like SOANNC, which

played important roles for reliance but fomented adversarial concerns that they could undermine their deterrents (Sokolski, 2010). For example, SOANNC evaded arms control definitions upon which Russia could limit its development. Such nonnuclear forces made America and its allies vulnerable to a first strike from, in particular, nonnuclear long-range missiles (Sokolski, 2010) that pre-empt the potential impact of such capabilities.

There were concerns that NWSs could misread nonnuclear forces (e.g. SOANNC) as a nuclear strike and react in kind, but they could not address threats tasked to nuclear forces, particularly mobile threats or HDBTs. Hence, such capabilities could not threaten NWSs as they could not substitute for the deterrent effect against existential threats. And while nonnuclear forces substitute for some nuclear counterforce missions, adversarial asymmetric forces could offset them. Adequate nonnuclear forces helped reduce reliance on nuclear forces and increase self-help through conventional deterrence and conflict. But American advantage diminished not least due to offsetting adversarial forces—a sign that military capabilities are imitable and require updating (Ackerman, 2015; Urban, 2015).

Because of America's nonnuclear force capacity, America pursued conventional defensive strategies to deny adversarial advantage or leave it with no option, or achieve objectives with little to no engagement even if the defender utilized a defensive strategy (CEIP, 2010). As that defensive strategy depended on what it could achieve at the policy implementation stage, America relied on conventional deterrence by denial throughout the escalation ladder and nuclear forces for existential threats. Hence, its nonnuclear forces were useful, conflict escalation was limited, nuclear forces were efficiently relied upon and their threshold of use was higher, and allocation of resources was relatively efficient but interstate stalemates encouraged hybrid and proxy conflicts.

As a relative capability, the adequacy of nonnuclear forces grew with inferior adversarial capabilities, and America did not have to threaten punishment through offensive strategies during conventional conflict (Waltz, 2009). As it could pursue a nuclear–conventional deterrence and conflict strategy, America could asymptomatically substitute and reduce reliance on nuclear forces despite strategic stability with second–strike retaliation and adversarial symmetric or asymmetric capabilities. But this required modernization due to competition and non-MAD-based deterrence (Colby, 2010).

4.4 Supply: Nuclear Forces

NWSs rely on nuclear forces for direct or extended deterrence and conflict though impractical including due to self-deterrence and limited deterrence of nonnuclear conflict, non-NWS aggression, and prevailing nonnuclear threats. Except for existential threats and limiting escalation to nuclear use, for which a limited number of survivable warheads is needed, they are too destructive, lack credibility, have diminished threat perception, shift competition to the tactical level, and reduce gains without risking devastation. Nuclear forces thus add little to power through security, as the types of conflicts they are useful for are rare and do not need significant nuclear forces. This places a premium on nonnuclear forces. Nuclear forces do not proffer effective self-help and reduce realizable preferences with balancing, extended deterrence, and relative gains in the power balance.

Except for existential threats, America did not have to rely on nuclear forces to reduce uncertainty, insecurity, and relative loss perceived as a unitary rational actor about adversarial military capabilities and strategies geographically proximate to European and Asian allies through the threat perception of the capacity to punish even if not threatened. America balanced as anticipated by balance of power to reduce uncertainty and insecurity

primarily with nonnuclear forces to manipulate adversarial threat perception to deter, de-escalate, prevent escalation, preserve the status quo, arrest and reverse competitors, and challenge military advantage. America proactively responded to military asymmetries with defensive strategies against nonnuclear threats, increasing realizable preferences and relative gains in the balance of power, while mitigating the security dilemma and counter-balancing but shifting competition to enemy imitation and hybrid and proxy conflicts.

During the Cold War, America relied on nuclear deterrence against large-scale conventional aggression (i.e., massive retaliation) (Ullman, 1972). As the Soviet Union's SNFs could offset a first strike, it emphasized second-strike retaliation SNFs (Ullman, 1972). TNWs deterred theatre–conventional wars in Europe and Asia through extended deterrence, so America, like Russia's asymmetric escalation posture, was ambiguous about TNW use (Ullman, 1972; Narang, 2009). America stressed adequate nonnuclear forces to avoid escalation to the threat or use of nuclear forces against a superior non-nuclear attack despite its resolve to use nuclear forces (i.e., flexible response) (Ullman, 1972). Whereas the USSR sought to ban the use (not merely the first use) of nuclear forces and destroy stockpiles—due to its nuclear force inadequacies vis-à-vis America, America, like Russia, linked nuclear disarmament to conventional arms control, a result of its and its allies' nonnuclear force inadequacies vis-à-vis the USSR (Ullman, 1972).

Post-Cold War, America was the sole superpower in a security context defined by nonnuclear threats, not MAD. Nuclear forces deterred existential threats and coercion against America and its allies and backstopped conventional military failure (Colby, 2013a; Ogilvie-White, 2011; DOD, 2010b; Walker, 2007; NATO, 1968). America reduced its nuclear force but also developed nuclear forces and extended the lifespan of

existing ones to ensure an effective nuclear deterrent at lower force levels (DOD, 2010b). Policy implementation converged with articulated policy to prioritize nonnuclear forces.

Unlike Russia, America did not have to extend its nuclear deterrent down the conflict–escalation ladder to deter nonnuclear threats or threaten to use, or use, SNFs or tailored TNWs with uncertain escalation effects. And unlike Russia and China, America was relatively transparent about its nuclear posture and relied on nuclear forces for two missions: existential threats and curbing nuclear escalation. Moreover the impracticality of nuclear forces, America recognized its NPT obligations to disarm and pursued arms control despite episodic congressional opposition and allied extended nuclear deterrence commitments. Like other NWSs, America ensured that in the calculation of any threat, the potential gain was outweighed by its response (DOD, 2010b; Sueldo, 2011).

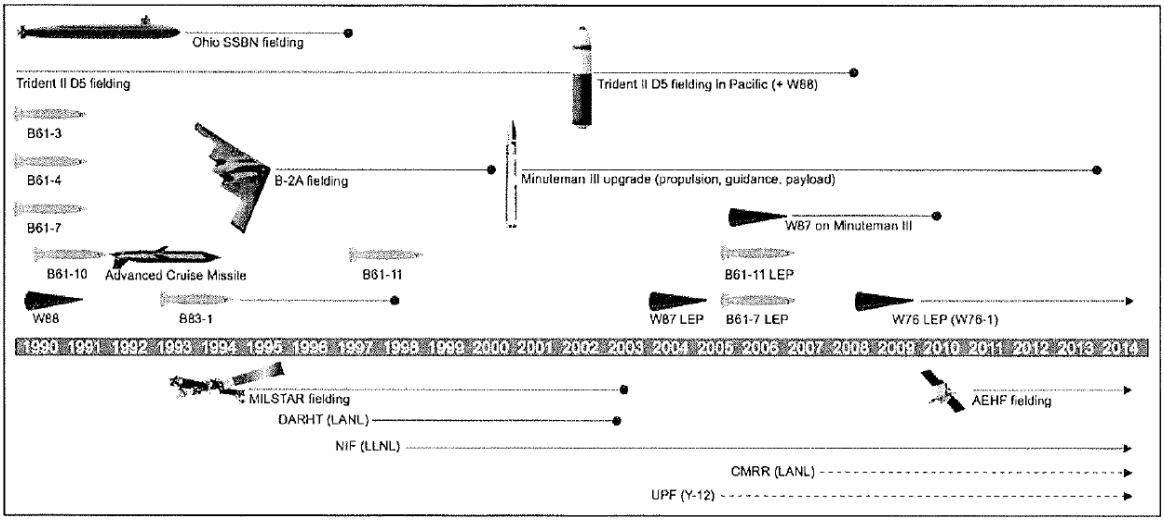
SNFs remained a priority but at reduced force levels against improbable nuclear use. America planned for nuclear use against NWS nuclear threats, and later explicitly excluded non-NWSs compliant with the NPT anchored on the adequacy of its nonnuclear forces and a denuclearized context. However, its nuclear force qualitatively modernized at reduced force levels for deterrence and retaliation but at higher, more predictable, and transparent thresholds of nuclear use. Nuclear forces were thus principally for deterrence by denial, and not necessarily for use other than defensive last resort (Narang, 2009).

Because articulated policy and its implementation reflected reduced reliance on nuclear forces, they had greater deterrence and operational credibility and predictability. At both stages America perceived low utility of nuclear forces for deterring and defeating nonnuclear threats deemed insufficiently acute for reliance on nuclear forces over reliable nonnuclear and non-military ASMs with greater self-help. To maintain a credible nuclear

deterrent, America qualitatively modernized its nuclear force and deployed variegated nuclear forces, including nuclear–conventional bomber–missile systems and SLBMs.

Figure 5-2 shows the nuclear forces that America deployed. It prioritized reliance on sea-based platforms for first– and survivable second–strike capacity and dual–use delivery vehicles—namely cruise-missile systems—for targeting. After 9/11, America episodically relied on low-yield TNWs against HDBTs, but then restricted its nuclear posture and shifted reliance to advanced nonnuclear–tipped forces for such targets. America also reduced and stored TNWs, retaining few in Europe and domestically for extended deterrence (DOD, 2010b). Perhaps in substitution of TNWs, long-range non-nuclear strike forces supplemented regional extended deterrence, whereas Russia kept a larger TNW force, many near NATO (DOD, 2010b). Extended deterrence hindered TNW reductions and efficient reliance on nuclear forces due to inadequate allied nonnuclear forces. America made little change to deployed forces without consulting allies, increasing external constraints on U.S. forces and allied reliance on ASMs, particularly U.S.–NATO extended deterrence through bandwagoning (Emmott, 2016; DOD, 2010b).

Figure 5-2: American Supply of Nuclear Forces



Source: Kristensen, 2015a.

Variegated nuclear forces[128] played an essential role in extended deterrence—namely to Europe and Asia that possessed or sought nuclear forces (Sueldo, 2011; DOD, 2010b). The mix varied over time and region: e.g., in Europe, America reduced forward-deployed nuclear forces (DOD, 2010b). Apart from security objectives, though a nuclear attack was negligible, America achieved other objectives through extended deterrence like cohesion, curbing new NWSs and reassuring allies (DOD, 2010b).

In Asia and the Middle East where there were no analogous structures to NATO, America maintained extended deterrence through guarantees as with Japan and Israel and deployed nonnuclear forces (Sueldo, 2011; DOD, 2010b). Except for South Korea, Israel, and Taiwan, no ally faced an existential threat requiring nuclear deterrence or retaliation. As with America, prevailing threats to allies were not deterred or defeated by nuclear forces. Though America relied on forward–deployed nuclear forces to support allies during crisis, it relied on nonnuclear forces to reinforce commitments, including a non-nuclear force presence and theatre MD (DOD, 2010b). As America reduced reliance on nuclear forces, nonnuclear forces assumed a greater burden in extended deterrence (DOD, 2010b), while MD reduced allied need to develop or acquire nuclear forces.

These trends call attention to the role nuclear forces played in American extended deterrence, as most NATO members reduced defence spending, often below the 2% of GDP NATO defence spending requirement, despite collectively representing a significant percentage of global defence spending (Walker, 2014). Greater reliance on nuclear forces was unlikely to result from reduced allied spending because they are impractical for prevailing nonnuclear threats. Hence, America and its allies reduced nuclear forces and maintained a credible nuclear deterrent, a mutual security structure, MD, and nonnuclear

[128] The nuclear triad, forward-deployed TNWs, and deployable nuclear forces. See DOD, 2010b.

forces (though less so due to allied spending cuts), and, consequently, assured non-NWS allies that they did not need nuclear forces (DOD, 2010b). For example, in response to Russian aggression, America increased defence spending for nonnuclear forces to deter and communicate that NATO would defend itself, though this disturbed European conventional strategic stability (Landler and Cooper, 2016).

4.5 Supply: ASMs

Despite diplomacy, except to balance out-of-region and enhance allied security, America put little stock in external balancing for its security, which requires reliance on others despite the unavailability or unreliability of adversarial alliances. Restraint on the uncertainty and insecurity perceived by America diminished with defensive strategies to deter by denying, raising the risk of failure in conventional conflict without punishment with nuclear forces, fomenting stable deterrence, and attenuating the security dilemma.

Reducing reliance on nuclear forces occurs if NWSs forsake missions or pursue alternatives (Barkenbus, 1989). The absence of alternatives can drive reliance on nuclear forces and undermine strategic stability (Colby, 2013 and 2010; Lukasik, 2010; Sokov, 2002). Alliances and NATO commitments conditioned missions assigned to military capabilities, as policy prioritized a credible nuclear force, MD, and superior nonnuclear forces to reduce reliance on nuclear forces for extended deterrence—particularly vis-à-vis Russia (Schmitt and Myers, 2015; DOD, 2010b). America tended to regard alliances with regional NWSs and non-NWSs as key to deterring and defeating in line with its strategic culture of war as a breakdown of peace (Mahnken, 2006).

ASMs played a consequential role in reliance and allies contributed forces while bandwagoning America for security. As America could rely on credible ASMs to achieve

nonnuclear missions, its reliance on nuclear forces was more efficient and more optimally capitalized on self-help with conventional strategies so its and allied nonnuclear forces decreased adversarial gain through nonnuclear conflict even without an American threat or use of nuclear forces. But extended nuclear deterrence in Asia and Europe was limited due to the potential for nuclear escalation against NWSs, explaining forward–deployed forces as a tripwire to respond if American forces were killed. But this encouraged adversarial TNW reliance to offset nonnuclear inferiority and deter foreign involvement, and a shift to hybrid and proxy conflicts to challenge American and allied advantage.

5. American Balancing

In a denuclearized context America diminished reliance on nuclear forces to more efficiently balance anchored on adequate nonnuclear forces without the threat or use of nuclear forces. America recognized the prevalence of nonnuclear threats, diminished acuteness of nuclear threats, and relative adequacy of nonnuclear forces. America did not have to threaten or use nuclear forces to deter or impose unacceptable punishment except for existential threats and, thus, as Table 5-3 summarizes, perceived low utility and cost-effective security with nuclear forces despite reliable ASMs.

Table 5-3: American Supply and Demand Policies

Demand	**Security**	Threat matrix characterized principally by nonnuclear threats.
	Domestic Structures	Policies concentrated in the executive but constrained by Congress and implemented by domestic structures.
Supply	**Nuclear Force Posture**	Diminished acuteness of nuclear threats and reliance on nuclear forces.
	Defence Spending	Adequate to support balancing.
	DI	Unparalleled reliability of technology–centred warfare.
	Nuclear Forces	Qualitatively adequate force at reduced numeric levels.
	Nonnuclear Forces	Unparalleled nonnuclear forces adequate to support balancing.
	ASMs	Prioritized NATO but did not rely on ISOs for security.

American reliance on nuclear forces diminished in a denuclearized context and shifted to nonnuclear forces for nonnuclear threats. Its force posture documented reduced reliance on nuclear forces and acuteness of nuclear threats, supporting more efficient balancing mainly because of adequate nonnuclear forces, unparalleled defence spending, and a superior DI. Consequently, America did not have to rely on a visible nuclear threat for deterrence, coercion, or retaliation—particularly pre-emptively, early in conflict, or against non-NWSs or non-state threats, or threaten or impose unacceptable punishment with nuclear forces except against existential threats. Diminished reliance in articulated policy translated into correlative adjustments in balancing types at the implementation stage. Table 5-4 summarizes changes in balancing types on nuclear forces.

Table 5-4: American Reliance on Nuclear Forces

Stage	Articulation		Implementation			
Type	**Declaratory**	**Strategic**	**Resource**	**Quantitative**	**Qualitative**	**Deployment**
1991–2001	Decreased				Increased	Decreased
2002–2015			Increased			

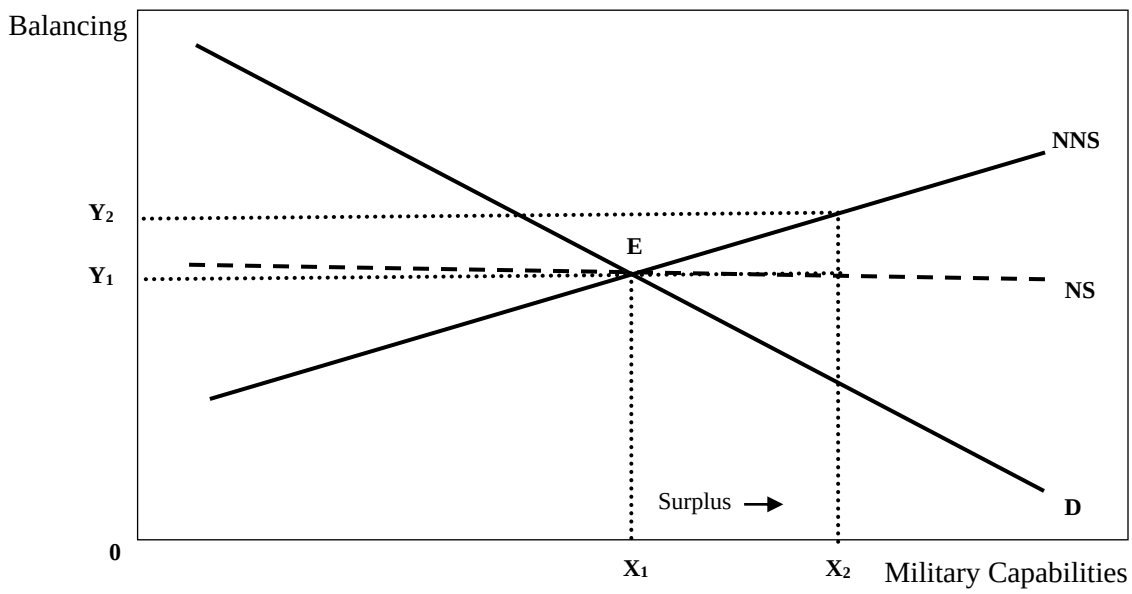
Table 5-5 summarizes an episodic policy shift in reliance on nuclear forces.

Table 5-5: American Shift in Reliance on Nuclear Forces

Period	Trigger	Reliance Shift
2002–2008	Rogue States	Low-yield nuclear forces for HDBTs (Sokov, 2002).

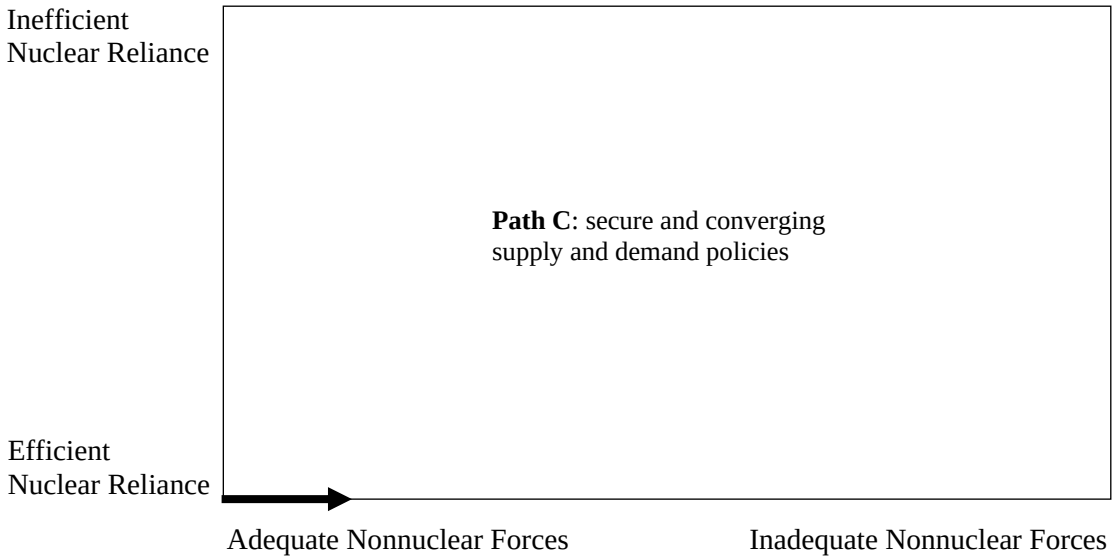
Figure 5-3 illustrates efficient balancing. The slopes of America's supply curves (NS + NNS) illustrate a surplus (X_2) of military capabilities to deter and defeat threats (D) because of superior nonnuclear forces vis-à-vis nonnuclear threats. The supply curves show a capacity to generate adequate military capabilities and the prioritization of non-nuclear forces. Reliance was relatively efficient vis-à-vis threats, and America did not have to over-rely on nuclear forces. But the utility from the oversupply of nonnuclear forces was small though preferable to a shortage to reduce the need for nuclear forces.

Figure 5-3: American Balancing



Relatively congruent policies and reliance types—namely adequate investment (or resource balancing) in military capabilities (INC + INNC ≥ 1)—made deterrence credible and effective due to adversarial losses through nonnuclear conflict absent the threat or use of nuclear forces, as a nuclear strike was unlikely absent an existential threat. And as nuclear forces damage inflict is too great for the threat of their use to be credible (Sokov, 2015; Smith, 2006; Paul, 1995; McNamara, 1983), they supported a defensive counter-value targeting strategy but were not needed for offensive targeting (particularly against nonnuclear threats) with greater escalation. America could efficiently rely on nuclear forces with lower escalation, provide positive security, and pursue arms control. Figure 5-4 shows this. Per Table 3-1, self-help was greater to increasing reliance on nuclear forces. America tended to pursue arms control, bolster transparency and verification, strengthen strategic stability and the NPT, and curb nuclear proliferation and nuclear terrorism. The disposition of nuclear forces accorded with countervalue targeting to deter existential threats, with SNFs, like Russia's, on patrol to reduce vulnerability and ensure retaliation.

Figure 5-4: Illustrated American Balancing



Per Path C of Figure 1-1, America transitioned to adequate nonnuclear forces and exhibited relatively congruent proactive policies provided by superior nonnuclear forces for deterrence and conflict. America exhibited arms control relative to unreliable Russia pursuant to reduced NWS nuclear threats and prevailing nonnuclear threats (compared to China). Unlike Russia, America did not have to value nuclear forces for status, prestige, or cost–effective security to support American primarily defensive strategies.

America perceived uncertainty and insecurity because of counterbalancing under anarchy compounded by threats geographically proximate to allies, particularly NATO. Despite no direct threat, America leveraged nonnuclear forces to deter nonnuclear threats and defensive strategies in Eastern Europe and Asia to balance adversarial relative gain, deter threats to allies, and arrest or reverse competitors under increasing multipolarity.

As America modernized nonnuclear forces, it shifted reliance away from nuclear forces—a reliance that was lower than other NWSs—because nonnuclear forces afforded options for non-existential threats. As it valued nonnuclear forces and deemed nuclear

forces uncontrollable, balancing was unlikely to notably change. Further, arms control was a signal (namely to Russia and China) that America anchored its deterrent on non-nuclear forces. Nonetheless, it kept its nuclear force at lower numeric levels but at a readiness that would impose unacceptable losses under any circumstance (Diakov, 1997).

America could reduce reliance on nuclear forces by supplying adequate non-nuclear forces, diminishing the perceived acuteness of threats calling for the threat or use of nuclear forces. This meant it could focus on nonnuclear threats and reduce nuclear confrontation vis-à-vis other NWSs through adequate nonnuclear forces backstopped by nuclear forces as a defensive last resort. Policy reflected limits on nuclear forces upon the premise that, unlike Russia, America could restrict and control nonnuclear conflict but that escalation to nuclear use could not be foreseen or controlled (Tannewald, 2006). While it reduced—at least in articulated policy—reliance on nuclear forces, America tended to maintain an adequate nuclear force at the implementation stage. Congress compelled nuclear force modernization by issue linking defence spending to, for example, arms control (White House, 2010) despite the prevalence of nonnuclear threats and a focus on nonnuclear forces in articulated policy. America thereby deterred and hedged against existential threats and coercive action by unpredictable NWSs.

This implied the need to maintain and extend the lifespan of its nuclear force. The assurances this provided facilitated nonnuclear force modernization and a focus on non-nuclear threats without fear of conventional aggression against it or its allies. Qualitative modernization at lower force levels and a higher threshold of nuclear use characterized the nuclear force and advanced NPT obligations and arms control objectives. Nuclear forces played a role to engage NWSs (namely Russia) in arms control and discourage

non-NWSs from a nuclear force. But America undermined strategic stability by—for example—pursuing advanced nonnuclear forces like MD and SOANNC, which NWSs like Russia and China perceived as undermining their deterrents. But consistent with its strategic culture, America viewed such forces as affording options below nuclear use and dejecting the view that, unlike Russia, nuclear forces are for general purpose.

Because it is difficult to rely, as Russia did, on offensive punishment strategies, American defensive denial strategies increased military advantage and conflict escalation management, diminished reliance on nuclear forces including for limited scenarios, and increased operability above identifiable levels of punishable aggression (Mitchell, 2015). Such strategies and conditional threats also limited the offensive capacity of threats by decreasing adversarial potential gains, diminishing the security dilemma and incentives to attack (Bunn and Sokolsky, 2001; Glaser, 1992).

Unlike Russia, America could shift the burden of conflict to a threat, respond to ambiguous provocations, and, except for other NWSs, it could limit adversarial capacity to respond to ambiguous provocations without losing control of strategically vital spaces or risk conflict (Mitchell, 2015). The resulting interstate stalemate, however, fomented hybrid and proxy conflicts, namely in non-NWSs like Ukraine and vis-à-vis Hong Kong and Taiwan, where adversaries balanced with less risk (Reynolds, 1989). By generating capabilities that favoured defensive strategies, America garnered a net gain in deterrence due to policies that increased military capacity, balancing efficiency, and utility to power.

Adequate nonnuclear forces supported efficient balancing through conventional deterrence by denial and reduced the risk of failure in conventional conflict without the need to resort to, as Russia did, deterrence by punishment through the threat or use of

nuclear forces or adversarial compellance (Mitchell, 2015). Thus, America did not have to rely on offensive strategies which are more competitive, but rather defensive strategies which are more cooperative (Glaser, 1992). However, in an action–reaction process, in the absence of political strategies to defuse threats, superior nonnuclear forces fuelled the security dilemma, arms races, and adversarial ASMs (Glaser, 1997; Jervis, 1978).

Actions could have limited that perception, even if deceptively: e.g., conditioning modernization. But domestic structures (namely those that benefit) emphasized military capabilities perceived as undermining adversarial deterrence. Despite policy congruence, strategy is inferred at the implementation stage, which prioritized defensive strategies. Military asymmetries fomented the security dilemma and, as Russia did, adversarial offensive capabilities and strategies. Due to the net reduction in security from mutual insecurity, political strategies to defuse threats that induced such strategies were key to demonstrate defensive strategies but without showing lack of resolve (Glaser, 1997).

Defensive strategies maintained advantage in conflict, limited reliance on nuclear forces, allowed a better response to threats below nuclear and nonnuclear deterrence or conflict, and did not require that America keep an imbalance of forces but rather those adequate to deny adversarial goals or confidence in them. But such strategies depend on a rational cost–benefit calculus recognized in the deterrent relationship, possibly including unacceptable costs through nuclear forces and are exploitable by adversaries even if they lack the means to existentially threaten (Gray, 2002; Reynolds, 1989). And because they require cooperation, political strategies help defuse threats that drive offensive strategies, particularly those based on nuclear forces (Nguyen, 1989; Steinbruner, 1987). To limit the security dilemma, contain the spiral model, and show benign strategies, America,

particularly vis-à-vis offensive deterrence like MD, conditioned modernization (Glaser, 1997). Hence, not all America did to enhance its security was zero sum but also enhanced the security of others, although modernization was perceived offensively by adversaries, namely Russia (Baldwin, 1997). Still, asymmetries, namely with Russia, fomented the security dilemma despite efforts to the contrary, whereby albeit the temporary superiority of defensive military capabilities like MD induced adversarial offensive strategies.

5.1 Implications of Nonnuclear Forces

Advanced nonnuclear forces and defensive capabilities maintained deterrence, reduced reliance on nuclear forces, and dissuaded non-NWSs from a nuclear force but strained relations with powers because of the perceived threat to their deterrents (Goure, 2011). America recognized this (see, e.g., DOD, 2010b). Hence, military capabilities that maintained its power and reduced nuclear reliance threatened the real and perceived security of others, including those with which America had little to gain from conflict.

In 2009, the Congressional Commission on the Strategic Posture of the United States noted, "Ironically, our edge in conventional capabilities has induced the Russians, now feeling their conventional deficiencies, to increase their reliance on both tactical and strategic nuclear forces" (Perry and Schlesinger, 2009: 121). Superior nonnuclear forces also increased the possibility of conventional conflict because of the confidence they afforded America to engage threats, reducing the threshold of nonnuclear use of force into contested areas of interest (Goure, 2011; Podvig, 2001).

Nonnuclear force superiority allowed America to reduce its nuclear force to fewer survivable, dispersed warheads (Forsyth et al., 2010). Sceptical domestic structures were likely to embrace that if the force was reduced, regardless of whether Russia—its nuclear

force peer—followed suit, as Russia did not have relative advantage and because of the deterrent effect of countervalue nuclear retaliation (Forsyth et al., 2010). While America and its allies contended with possible threats, in most contingencies, superior nonnuclear forces were preferred and a small nuclear force was effective (Forsyth et al., 2010).

5.2 Russia and American Balancing

Between 1991 and 2010, America and Russia reduced deployed SNFs by about 75 percent, though they retained many more than needed for deterrence (DOD, 2010b). Washington was committed to working with Russia to reduce nuclear force levels, even though nuclear–force parity was no longer compelling (DOD, 2010b). Still, qualitative and quantitative asymmetries in nuclear forces raised concerns and were not conducive to strategic stability if nuclear forces were significantly reduced (DOD, 2010b). Reciprocal nuclear reductions were, therefore, important despite NATO expansion and American MD and advanced nonnuclear forces like SOANNC.

MD was a thorn in U.S.–Russian relations. America saw MD as central to direct and extended deterrence as MD—if properly managed in a phased, adaptive approach—could provide direct and extended deterrence (namely non-NWSs) of missile threats that might otherwise have only been attained by nuclear force guarantees (Goure, 2011). But Russia was concerned that tactical MD could negate its forces, be a platform for strategic MD, or be used with advanced precision nonnuclear forces like SOANNC to negate its first-strike capacity (Goure, 2011; Sokolski, 2010).

The perceived threat MD posed could have compelled its withdraw from arms control treaties, but Russia instead responded by fielding MIRVed missiles to penetrate MD as there would be more warheads to destroy than counter-missiles which saturates

defensive systems, thereby increasing Russian reliance on nuclear forces (Sokolski, 2010). Because of its modernizing nuclear force, Russia remained the pacing NWS threat to America as America needed nuclear forces to deter and respond to—namely—Russian limited TNW use for strategic effect by expanding and escalating conflict by targeting, for example, low-value military targets to de-escalate conventional conflict (Woolf, 2018; Sokov, 2014; Colby, 2013a; Sueldo, 2011; Saradzhyan, 2010).

5.3 China and America Balancing

There were significant disagreements with China that will persist as China rises, particularly regarding Taiwan, North Korea, and territorial disputes with America's Asia allies (Colby and Riqiang, 2016b). Such power transitions are fraught with the danger of conflict and the security dilemma (Colby and Riqiang, 2016b; Gilpin, 1981; Organski, 1968). China also challenged American regional influence. Indeed, precision ground-based intermediate-range nonnuclear missiles threatened American and allied forces in the Pacific, Indian Ocean, and elsewhere (Sokolinski, 2010). America had to address the threat China posed—including through MD assets in Asia, regardless of the implications for arms control with Russia or others (Sokolinski, 2010). China could have generated more offensive ground-based missiles like Russia did, with more nuclear warheads than America and its allies had defences for (Sokolinski, 2010). Advances in American non-nuclear forces, however, had a certain effect on U.S.–China nuclear dynamics. China modernized its nuclear force to compensate for advances in MD, SOANNC, and strategic strike capabilities and pursued offensive strategies and military modernization heightened the risk of conflict escalation (Colby and Riqiang, 2016b).

Unless America gave China and Russia credible assurances to stop deploying and increasing reliance on offensive ground–launched missiles in response, America would have lost its strategic nuclear footing and—in a vicious cycle to mutual detriment—been compelled to deploy nuclear forces or MD to counter Chinese nonnuclear long-range and Russian nuclear ballistic missiles (Sokolinski, 2010), moreover the complexity, cost, and uncertainties associated with MD that undercut its credibility and effectiveness. Further, China relied on nuclear forces as a cost–effective means to increase security and balance American military power in the Pacific, as the USSR did in the 1980s in Europe and Russia similarly did post-Cold War (Sokolinski, 2010).

As with Russia, the sophistication of China's nuclear forces afforded options for use and coercion. Coupled with nonnuclear modernization that threatened American and allied forces, this forced America to evaluate how its nuclear forces could compensate for Chinese advantages (Colby, 2015b and 2013a; Manzo, 2015; Cronin, 2014; Lieber and Press, 2009). However, an expansion of China's nuclear force and shift away from legacy nuclear policies would have signalled a dangerous change (Colby and Riqiang, 2016b). An important factor of American reliance on nuclear forces for the Asia–Pacific was the challenge China posed, including to extended deterrence, with nuclear reliance receding if its nonnuclear forces could not threaten and increasing if the advantage shifted to China (which was increasingly so) (Colby and Riqiang, 2016b; Heginbotham et al., 2015).

5.4 Missile Defence and American Balancing

MD was the main nuclear–related issue with implications for American and allied security and that of other states, including adversarial NWSs. MD can be stabilizing and destabilizing (Forsyth et al., 2010). American MD was designed to neutralize the launch

potential of North Korean and Iranian nuclear forces rather than all adversarial nuclear forces. MD reflected American strategic culture of conflict as the breakdown of peace, that nuclear forces are abhorrent and uncontainable if used, and leveraging technology to neutralize threats (Tannewald, 2006). MD was thus meant to expand with new NWSs and be flexible, survivable, and reliable (Shalal–Esa, 2014; Sueldo, 2011; DOD, 2010c). Key to MD policies was regional deterrence by pursuing a tailored, phased, adaptive approach to threats through which adversarial ballistic missiles could be deterred, diminishing or eliminating threat objectives (DOD, 2010c). America also sought to ameliorate Russian and Chinese concerns regarding MD, but not if they restrained MD (DOD, 2010c).

Credible forces were key to reassuring non-NWS allies of their non-nuclear status (DOD, 2010b). Contrary to Russian and Chinese approaches, MD was a means to reduce American reliance on nuclear forces and curb nuclear proliferation. But MD fomented adversarial insecurity and reliance on nuclear forces who perceived MD as threatening their deterrent, power, and strategic stability (e.g., China could have expanded its nuclear force as it saw MD as rendering ineffective its small nuclear force) (Zhang, 2012; Bethe et al., 1984). China thus declared MD to be a threat constraining American reduction of nuclear force reliance, and America would have pursued offsetting military capabilities if it similarly perceived adversarial MD as threatening (see, e.g., F. Dahl, 2012).

After the millennium, America sought to curb nuclear threats to diminish demand for nuclear forces and MD, reduce adversarial reliance on nuclear forces, and increase its and allied security (White House, 2014). The Nuclear Security Summit—among other initiatives—sought to curb nuclear proliferation and nuclear terrorism and diminish the need for nuclear forces and MD (see, e.g., White House, 2010; 2010b; 2014; 2014a).

5.5 Arms Control and American Balancing

While arms control helped avoid nuclear war during the Cold War, it was not so afterward because nuclear war was unlikely. This made arms control a means to advance other interests in addition to access to—and verification of—nuclear forces supported by inspections, information exchanges, and securing facilities and technology. Conditions were conducive to arms control despite force obsolescence and the DI's replacement rate. But domestic structures conditioned arms control, including unreciprocated disarmament with Russia and a Congress reluctant to reduce the nuclear force despite a denuclearized context, more certain interstate relations, and amenability by certain American domestic structures to inspections to provide predictability and support strategic stability.

5.6 American Balancing Paradigm

Table 5-6: American Balancing Paradigm

Strategic Culture	Free security foments exceptionalist ideals. War is a breakdown of peace and policy. Nuclear forces are a deterrent, not a continuation of policy.
National Interests	National security, political independence, and extended deterrence.
Geopolitical Goals	Maintain global power status and promote a liberal democratic order.
Real Threats	Terrorism, cyber warfare, nuclear proliferation, and nuclear terrorism.
Security Context	Free security facilitates extended deterrence to allies.
Armed Forces	Modernizing and superior nonnuclear forces.
External Balancing	Prioritizes NATO but not dependent on ASMs for security.
Military Reform	Continuous military modernization supported by new military capabilities.
Regime Type	Open to domestic and external influence.
Domestic Structures	Closed yet permeable institutions. Convergent on lower reliance on nuclear and greater on nonnuclear forces and arms control.
DI	Effectively supports a technology–centred approach to security.
Nuclear Posture	Transparent; defensive last resort; arms control.
Arms Control	Means to advance verification and global security.
Deterrence Goal	Reduce nuclear force but maintain relative parity with Russia.
Nuclear Forces	Necessary for unlikely case of nuclear use but remains source of nuclear terrorism and proliferation and cause for others to pursue nuclear forces.
Utility of Military Capabilities	Key to preventing unilateral advantage, balancing strategic relations, and maintaining mutual vulnerability, but investment in nonnuclear forces central to nonnuclear missions.

Table 5-6 outlines American balancing driven by a sense of security anchored by its geography, superior nonnuclear forces, and nuclear force modernization. There was a diminished need for nuclear forces due to the negligible acuteness of nuclear threats, though domestic structures advocated for nuclear and nonnuclear force modernization. Efficient balancing will continue to depend on the executive, subject to congressional action and adequate nonnuclear forces (Williams, 2014).

6. Conclusion

America perceived uncertainty and insecurity due to counterbalancing adversaries employing offensive strategies, many geographically proximate to allies, namely in Asia and Eastern Europe, and, therefore, mistrusted others under anarchy. Despite no direct threat, as anticipated by balance of power, America leveraged nonnuclear forces, including out-of-region, in a nonnuclear threat–dominated context, to arrest and reverse declining power and counterbalance competitors under increasing multipolarity.

As a status–quo hegemon, America leveraged defensive capabilities and strategies for power through relative gains in security despite adversarial balancing, as anticipated by defensive neorealism, to steady the power balance and reduce uncertainty, insecurity, systemic change, signal defensive strategies, and curb counterbalancing resulting in a net gain to deterrence by limiting adversarial offensive capabilities and strategies. Russian and Chinese counterbalancing was undercut by status–quo defensive strategies while attenuating the security dilemma. The research contributes to defensive neorealism by examining this hegemon secured but not limited by geography, constrained by power projection capabilities, and which balanced adversaries through out-of-region projection. The research offers a means to distinguish defensive strategies through policies resulting

in a net gain to deterrence with an assessment of military capabilities for security vis-à-vis articulated threats driven by shifts in interstate military power through security.

Efficient American balancing resulted from congruent policies and balancing types, combining conventional deterrence by denial with adequate nonnuclear forces for self-help mainly in defensive strategies, with greater security as nuclear forces (namely in offensive strategies) are impractical. Adequate nonnuclear forces support such balancing, and raise the risk of failure in conventional conflict without the need to threaten or use nuclear forces, including with asymptomatic assumption of missions with lower conflict escalation effects and higher threshold of nuclear use. Consistent with neorealism, realizable preferences with self-help are thereby greater in a nonnuclear–threat dominated context due to military advantage and power through security. Despite diplomacy and extended deterrence, America shows NWSs tend to act alone or with states that buck-pass and that internal balancing is the most effective means for security. Even so, this case shows that multipolarity may compel nuclear force re-assessment because of the absence or devaluation of extended deterrence even absent acute threats to the NWS or its allies.

American nuclear force re-assessment for power based on defensive strategies to deter adversarial offensive strategies to renew the power balance also encouraged buck-passing typical of the Cold War, namely by European and Asian allies, and allowed allies to ignore the adequacy of their forces, thus raising the bar for America to deter aggression through extended deterrence and projection near aggressors. But unlike the Cold War, extended deterrence devaluation due to collective action issues and adversarial external balancing may encourage revaluation of nuclear forces, even absent an acute threat, to preserve the status quo, reduce insecurity and uncertainty, and limit counterbalancing.

America is committed to reducing reliance on nuclear forces without changing its nuclear posture and cooperating on arms control but in modest steps which depends on the supply of adequate nonnuclear forces through adequate defence spending and an effective DI.

America will confront significant challenges from capable powers vis-à-vis the immediate post-Cold War years, and a changing military context in which its force is not always superior, particularly vis-à-vis China and Russia (Roberts, 2015; Hagel, 2014 and 2014a; Colby, 2013a; Sueldo, 2011; Watts, 2011; Krepinevich, 2009 and 2002). This suggests that power balancing will increase conflict potential. America will rely on a flexible nuclear force due to the lower coercive power of its nonnuclear forces to deter and defeat threats (Larsen and Kartchner, 2014; Saunders, J., 2014; Colby, 2016, 2013, 2013a, and 2011; Leiber and Press, 2013; Ochmanek and Schwartz, 2008; Morgan et al., 2008; Morgan, 2012; Mies, 2012, DOD, 2014a; Knorr, 1962; Osgood, 1957). America and its allies will retain a nuclear force to respond to aggression (Colby, 2016 and 2015c; Colby and Gerson, 2013), though not always against other states, as shown by wavering responses to Russian actions in Ukraine and Syria and China's in the South China Sea.

If America has no existential threat, reliance on nuclear forces will be limited to defensive last resort, regardless of the capacity of its nonnuclear forces, as it can maintain a credible deterrent with a one-third reduction in deployed nuclear forces below New START and related TNW reductions (White House, 2013a; Brooks, 2015). America will keep a nuclear deterrent if others do, so future arms control depends on its ability to deter, strategic stability vis-à-vis Russia and China, and the adequacy of allied forces (DOD, 2010b). While modernization reduced the role of, and reliance on, nuclear forces despite uncertainty, superior nonnuclear forces cannot substitute for all nuclear missions (Colby,

2010; Lukasik, 2010; Sokolski, 2010). America recognizes that arms control and its reliance on nuclear forces are linked to the adequacy of its and allied nonnuclear forces (DOD, 2010b). Congressional prioritization of nuclear forces and budget constraints, inadequate allied capabilities, and adversarial efforts to link capabilities to arms control will constrain reduced reliance on nuclear forces. TNW arms control will be hindered by challenges with verification and extended deterrence but without insisting on nuclear use early in conflict or taking nonnuclear forces for granted (Colby, 2015; Artemyev, 2010).

Arms control does not require good relations, only mutual benefit (Brooks, 2015). American domestic structures will need to be convinced that the threat matrix supports reduced reliance on nuclear forces and that arms control plus nuclear force modernization is a means to security. Tensions with other NWSs is the most pressing factor, for arms control will succeed absent crises but requires mutual reduced reliance on nuclear forces (Source 4, 2015; Weir, 2015). Political strategies are key to defusing threats that foment reliance (Podvig, 2015; Blank, 2011b; Kipp, 2011). But reduced reliance on nuclear forces is not a prerequisite as shown by Cold War arms control (Brooks, 2015).

America has consistently modernized its military driven by defence spending and a superior DI. While nonnuclear forces were superior, the elusiveness of unconventional nonnuclear threats compelled re-assessment. Because the probability of nuclear war was negligible, demand for nuclear forces was low. Hence, unlike Russia, it did not have to rely on nuclear forces to deter or defeat conventional aggression (at least not expressly in articulated policy), nor did it believe that nuclear war could be controlled or de-escalated. If this would have changed with a superior adversary is questionable, unless it posed an existential threat or an adversary undermined its nuclear deterrent or extended deterrence.

It is unlikely that America will eliminate its nuclear force because of extended deterrence and because other NWSs—including adversaries—are unlikely to do so, even despite efforts to neutralize nuclear threats through MD. Despite arms control, adversarial concerns about MD and advanced nonnuclear forces will cloud cooperation and retard reduction of reliance on nuclear forces by other NWSs. Worst–case scenarios will drive adversarial policies—as they would those of America. Adversaries may use MD to justify nuclear force expansion and modernization to reciprocal detriment.

6.1 Prescriptive Lessons

The research yields observations relevant to balancing and to America and similar NWSs. First, nonnuclear forces were prioritized. Second, articulated policy and its implementation resulted in congruent proactive supply and demand policies resulting in superior nonnuclear forces for prevailing nonnuclear threats. Third, America exhibited a shift away from MAD-based strategies to nonnuclear force reliance. Fourth, domestic structures converged on adequate military capabilities. Balancing remained relatively efficient, largely due to the absence of existential threats and assurances afforded by adequate nonnuclear forces for conventional deterrence and adequate nuclear forces for nuclear deterrence. The need to threaten or use nuclear forces to deter with unacceptable punishment was thus negligible because of a credible American conventional deterrent.

The chapter shows that NWSs balance despite polarity and hegemony, and that internal balancing is preferred under multipolarity with military asymmetries. But these are subject to power shifts for realizable preferences through self-help, and to reduce adversarial power by eroding military advantage and manipulating adversarial threat perception. As anticipated by balance of power, America counterbalanced Chinese and

Russian power, even if not threatened, with primarily defensive conventional forces and strategies. The policies articulated and implemented by domestic structures explain balancing, relative gains, and interstate asymmetries with systemic effects, compounded by adversarial counterbalancing geographically proximate to allies. The chapter validates realism to explain balancing under anarchy through internal balancing despite external balancing, including of distant competitors constrained by the adequacy of capabilities for power through security. The chapter addresses why balancing with adequate forces, not just geography, encourages defensive strategies to maintain the status quo.

America will prioritize proactive policies in coordination with allies to reduce nuclear–related threats and focus on nonnuclear threats. America will define threats and military capabilities vis-à-vis proactive policies that reduce reliance on nuclear forces, promote arms control, and strengthen strategic stability. And while America's military is superior, its advantage is eroding (DOD, 2017). Other powers like China and Russia, less powerful but reckless NWSs like North Korea and Iran, and nonstate actors are assertive, modernizing, and imitating military capabilities (DOD, 2017; Economist, 2015c). Despite swaying defence spending, America will pursue offset strategies and develop forces that will impose costs below the threshold of use of nuclear forces to deter, reassure allies, and reduce reliance on nuclear forces (Schelling, 1966; Economist, 2015c). And by engaging China, America can contain and isolate Russia, promote arms control, and maintain a power paradigm that marginalizes Russia (Arbatov, 2014).

Such balancing is explained by reluctance to nuclear use due to the absence of their use, which reduces their credibility and utility and supports conventional deterrence (Gerson, 2009; Tannenwald, 2007 and 2005). But military superiority will foment nuclear

brinkmanship as adversaries pursue offensive strategies based on nuclear escalation as Russia's escalate–to–de-escalate policy (Colby, 2015a; Economist, 2015c). A NWS may respond in kind to advanced adversarial nuclear forces, namely in the low-yield spectrum (DOD, 2018; Gordon, 2018). But such reliance lowers the nuclear use threshold, makes nuclear use more destructive and tempting, foments an arms race, and shifts arms control towards qualitative rather than quantitative aspects (Sanger et al., 2018; Paltrow, 2017).

This chapter supports the link between the adequacy of military capabilities, the mediating variables, and balancing. The research posits that arms control is more likely during shifts to lower and more efficient reliance on nuclear forces. America tended to prosecute modernization during periods of low and high salience of arms control, in the context of the mediating variables, and low and efficient balancing on nuclear forces. For America and NWSs like it, during periods of adequacy of nonnuclear forces, reliance on nuclear forces may decrease or arms control pursued, or periods of lower reliance on nuclear forces may be correlated with nonnuclear force modernization or arms control.

Chapter Six:
Chinese Balancing

1. Introduction

For decades, China's military was inadequate. A small albeit modernizing nuclear force and a no-first-use policy backed by calls for peaceful coexistence defined Chinese reliance on nuclear forces. But what a NWS does with military capabilities matters more than what it says it will do with them. Chinese growth brought with it significant defence spending on, and qualitative modernization of, military capabilities. Such balancing catalysed neighbours and powers to counterbalance China which China perceived as threatening. This chapter shows that policy incongruities resulted in divergences in types of balancing and, therefore, diminished self-help through deterrence and conflict.

2. Chinese Strategic Culture

National interests informed by strategic culture relate to the domestic structure's identification of threats in articulated policy and balancing power through security. Chinese strategic culture has a conception of security that values political and territorial independence. To pursue interests under anarchy, China modernized military capabilities upon offensive and defensive deterrence and targeting strategies. China's strategic culture is defined by a defensive psyche, pragmatic nationalism,[129] and a drive for development to lead Asia and globally (Johnson, 2009). China's strategic culture draws upon Taoism, Confucianism, and Buddhism, together with Communism and, recently, Western values (Johnson, 2009; Feng, 2007).

[129] The CPC's bolstering of faith, pride, and interest in its political system during China's rapid and turbulent transformation into a post-Communist society but only if it does not jeopardize political stability and economic modernization. See Zhao, 2005.

Because China valued independence, espoused exceptionalism, perceived varied threats, and opposed American regional and global hegemony, China was sensitive to adversarial relative gains diminishing its systemic position and shifts in security because of the erosion of military advantage vis-à-vis regional and American military capabilities, particularly in the South China Sea. Even when not directly threatened, as anticipated by balance of power, China internally balanced to challenge the status quo, avoid relative losses, and attain power under multipolarity. China relied on defensive and offensive strategies and capabilities, limited external balancing, and hybrid and proxy conflicts to reduce uncertainty and insecurity and delay, frustrate, undermine, and contest American power. As China was relatively self-reliant, she could more effectively balance military asymmetries through self-help deterrence and conflict anchored on revisionist and power maximizing regional hegemony but with global aspirations with systemic implications.

As reflected in articulated policy but not at the implementation stage, China's strategic culture was non-expansionist and defensive per the idea of peaceful co-existence outlined in white papers despite a regime that, in theory, should have spread Communism (Johnson, 2009; Feng, 2007). As Johnston (1995) observes, Chinese strategic culture stresses nonviolent political and diplomatic means to deal with threats, or, when needed, the controlled, defensive use of force. China's suspicion of outsiders is built on its history of foreign intervention with the Opium War, Boxer Uprising, Eight-Nation Alliance, unequal Boxer Treaty (Young, 2000; Zhao, 2004; Johnson, 2009), and Second Sino–Japanese War. The narrative of the humiliating century due to imperialistic intervention is central to its nationalism, particularly regarding issues concerning its independence, unity, territorial integrity, and sovereignty (Gries, 2004; Kane, 2004; Johnson, 2009).

Shunned by democracies, China was pushed into an anti-Western position during Asia's Cold War to counter invading Western forces and develop a peaceful context to prosper (Goulden, 1982; Chen, 1992; Scobell, 1999; Johnson, 2009; Ji, 2003).

Following the Cold War, nationalism was based on a pride of being Chinese, a collective memory of humiliations, and aspirations of greatness but without confronting America or other powers that contributed to modernization and prosperity (Zhao, 2005; Johnson, 2009). China shed its history of conquered, exponentially grew, and narrowed military asymmetries with others, particularly America, to deter but not necessarily defeat threats, maintain peace, and assert itself (Zhao, 2015).

While Chinese strategic culture was pacifistic, defensive, and non-expansionist, China used force pre-emptively, preventatively, or coercively to assert itself and viewed that as defensive even if offensive in practice (Johnston, 1995a; Scobell, 2002; Johnson, 2009). Underpinning this is China's strategic culture, which is rooted in a hierarchical view of relations where China is at the core, namely in Asia, and so accepted by regional actors—in contrast with Western post-Westphalian equality, an informal hierarchy in conflict (Russett and Oneal, 2001; Kang, 2003; Twomey, 2006), and U.S. exceptionalism with, for example, freedom and democracy to be emulated. This is concerning, mainly because of regional tensions potentially involving the American military in the South and East China Seas, and because of China's propensity for striking first which it views as defensive (Pillsbury, 2000; Whiting, 2001; Twomey, 2006). China saw the first two post-millennium decades as an opportunity for power, with the year 2020 seen as a benchmark to prevail in regional conflicts, including against Taiwan, and defending China's western border and territorial claims in the South and East China Seas (DOD, 2014 and 2013).

3. Demand Policies

China's strategic culture conditioned how it defined security, identified threats, and articulated and implemented policies to achieve security. Demand policies (or policy goals) delineate the supply of military capabilities in articulated policy, within which threats condition demand for military capabilities as determined by domestic structures.

3.1 Demand: Threat Matrix

Because states mistrust others under anarchy, states leverage military capabilities to attain power through security to deter threats and counterbalance adversarial relative power driving insecurity and uncertainty. This is accentuated by multipolarity, rewarding states that balance more efficiently, even in the absence of direct threats. Chinese counterbalancing focused on American power in Asia with the locus of potential contact being the South and East China Seas—both part of China's sphere of influence, to delay, frustrate, and undermine American regional power, moreover a context dominated by nonnuclear threats. As Table 6-1 outlines, articulated threats were perceived vis-à-vis adversarial military capabilities and strategies in Asia as an extension of balance of power, explaining Chinese policies informed by what interests China valued protecting: independence, regional hegemony, and power under multipolarity.

Chinese threat perception, therefore, was driven by power asymmetries vis-à-vis other states, compounded by military asymmetries, adversarial geographic proximity and out-of-region projection into Asia, and their strategies perceived as offensive. China thus perceived risk in the anarchic system, and relied on self-help through mediating domestic structures to balance asymmetries through nuclear and nonnuclear forces even without a direct threat but with greater competition and arms control marginalization. In pursuing

interests, security as an objective is conceptualized vis-à-vis the capacity to deter and defeat threats identified through a policy process that condition balance of power, with specificity improving capacity but which may underestimate or overestimate threats (Mazarr, 2018; Sulovic, 2010; Sheehan, 2005; Baldwin, 1997).

While lacking in specifics, publicly available policies offer insight into security strategies, including plans and the military's role and expected areas of conflict (Ranade, 2013; PRC, 2006, 2008, 2010, and 2013). Per its strategic culture, China saw its position regionally as central in policy. Despite calls for coexistence, China made clear that the Asia–Pacific dominated its strategies, and military modernization was key to its regional role. China was concerned with American regional actions, including its alliances, non-nuclear forces, and MD (PRC, 2013) seen as undermining China's deterrent and counter-strike capacity and, thus, prioritized survivable forces (Chase et al., 2015; Keck, 2014; Xiaosong, 2013; Saalman et al., 2013; Zhang, 2012a). China viewed regional insecurity with foreign actions and American MD (Wortzel, 2015) and increased nuclear reliance.

China identified "multiple and complicated security threats," including territorial claims by Japan and "Taiwan independence separatist forces" (PRC, 2013: 2, 3). While identifying terrorism, separatism, and transnational extremism as threats, China relied on its military to win local wars and safeguard interests, but, apart from Taiwan and the Senkaku (Diaoyu) Islands, China did not define what those interests were (PRC, 2013: 3). Sovereignty claims and territorial disputes remained preeminent flashpoints, despite ebbs and flows in Sino–Taiwanese relations (DOD, 2013). China also saw America, Japan, India, and Russia as threats, though Taiwan and regional powers dominated its thinking, just as its neighbours and America viewed China's rise and capabilities with concern.

China viewed stable relations with America and its neighbours as essential to its stability and development (DOD, 2013). China was concerned with them balancing militarily, and perceived America's pivot to Asia under President Obama as Cold War thinking and meant to contain China (DOD, 2013). Articulated policy upon coexistence differed with offensive rhetoric and strategies at the implementation stage, which fuelled adversarial concerns, despite China viewing them as defensive responses (DOD, 2013).

China's suspicion of others and hierarchical view of Asian relations conflicted with its strategic culture, with actions that could jeopardize its stability and development. Though not stated in articulated policy, China saw defending its regional hegemony and territorial claims as just, righteous, and defensive. Despite its pacifist, defensive, and non-expansionist strategic culture, China leveraged pre-emptive, preventative, and coercive strategies to balance real and perceived threats (Johnson, 2009).

China did not identify an existential threat. While China felt insecure vis-à-vis America and India, India was not a major concern. China's threat matrix was driven by America and regional territorial issues, but nuclear forces did not afford it advantage in those scenarios (Zhao, 2015). While China could not control threats, it could determine how to perceive them and the forces relied on. As Table 6-1 outlines, prevailing threats were nonnuclear, which supported China's articulated nuclear policy of no-first-use and in response to a NWS nuclear attack. This substantiates its modernization of nonnuclear forces but questions its break with historical policy by modernizing its nuclear force.

Table 6-1: Chinese Threat Matrix	
Real Threats	Terrorism, separatism (e.g., Taiwan independence), and extremism.
Perceived Threats	Russia, America, India, and Asian alliances. Advanced adversarial non-nuclear forces including MD. Challenges to Chinese regional leadership.

See generally PRC, 1995, 1998, 2002, 2004, 2006, 2008, 2010, 2013, and 2015.

The foregoing indicates the complexity of hybrid threats and superior adversarial military capabilities that tested China's limits on deterrence and conflict, and the task of deploying adequate military capabilities to deter threats above the threshold of nuclear use and below non-existential threats. This includes interstate contingencies that may not escalate to high-intensity, all-out conflict. As China could not predict which threat would cause it damage, or how it would operate, a mixed threat- and capabilities-based strategy would have allowed China to proactively prepare for and deter and defeat threats rather than disadvantageously react to threats (Christianson, 2016).

3.2 Demand: Domestic Structures

State–level domestic structures explain threat identification and balancing policy determinative of military capabilities and strategies for power through security responsive to the anarchic system even when not threatened. Consistent with realism, domestic structures, for the state as a unitary rational actor, identify threats to security in policy and respond to threats through policy. Policy choices are based on a cost-benefit analysis with domestic structures seeking to maximise self-help through realizable preferences and costs to threats through military capabilities and strategies (Larsen and Kartchner, 2014).

The unitary rational state leverages policy for self-help to direct the anarchic system towards realizable preferences through policies, with self-reliant states better placed to balance. The research adds to the explanatory and predictive capacity of realism and makes it more determinate by identifying domestic structures, to explain balancing as a continuation of policy, by referring to variations in reactive and proactive supply and demand policies for relative gain and, thereby, garner generality, policy relevance, and descriptive accuracy with respect to the research and argument.

Adequacy of military capabilities is conditioned by domestic structures operating in a regime converging or diverging on the articulation and implementation of policies upon means available. Convergence of domestic structures to articulate and implement policies results in greater relative gains with balancing and utility to power through self-help. Policy is a benchmark to assess balancing, with implementation reflecting balancing conditioned by capacity. Chinese policymaking was closed, exempt from controls (Born, 2007), and centred in the executive. The DI mainly conditioned supply as supplemented by external forces and ASMs. By examining policies, the research recognizes the limits of aggregating policies, though they result from competing domestic structures (Bueno de Mesquita, 1998). As this chapter shows, Chinese domestic structures acted less rationally with policies that diminished utility to security (Bueno de Mesquita, 1998).

Top-heavy domestic structures characterized policymaking (Lanteigne, 2013). While opaque, as the CPC dominated the process, particularly compared to the West, the number of domestic structures was diverse though there is relatively negligible separation among them because China is a party–state (Zhao, 2015; Lanteigne, 2013). Within the opaque policymaking process, the PSC has ultimate policy power but is influenced by other domestic structures. As no PSC member has an exclusive policy portfolio, policy-making is inefficient (Jakobson and Knox, 2010). Policies are articulated in the LSGs—comprised of PSC and CPC officials, and particularly by the FALSG, after which the PSC approves (Jakobson and Knox, 2010). But as most PSC members are not well versed in policy they rely on experts (Jakobson and Knox, 2010). Two other entities are pivotal: the Policy Research Office conducts research, and provides advice and policies, and the General Office controls the information flow (Jakobson and Knox, 2010).

The State Council coordinates policies, which are implemented by subordinate entities, including the weak MFA (Paltiel, 2010). The CMC establishes policies for the PLA. Staffed by officers, the chairman is a civilian (typically the CPC general secretary), and other members include vice chairmen and the military services' commanders (DOD, 2013). The MND is not equivalent to a defence ministry but rather a small office that coordinates military-related tasks (DOD, 2013). The defence minister is a military officer member of the State Council and CMC (DOD, 2013). The PLASAF controls nuclear and nonnuclear missiles and in 2016 was renamed the PLA Rocket Force which—as a service on equal footing—controlled the nuclear triad despite related policymaking always being limited to a few top policymakers (Tiezzi, 2016; Zhao, 2015; DOD, 2013; PRC, 2013).

Table 6-2: Chinese Domestic Structures

CPC	PSC	Ultimate policymaking power influenced by domestic structures.
	LSG FALSG	Node for policy articulation that influenced PSC policymaking.
	State Council	Principal intermediary between the PSC and subordinate domestic structures. Coordinated policy implementation.
	CMC	Set policy for the PLA but had little policymaking influence. Being responsible for the military, the PLA influenced policy through the CMC. Dominated by the PLA but expanded to other services.
	PLA	Influential in defence–related issues and advocate of a hard line toward Taiwan and America's role in Asia. Previously exercised authority on arms control but later shared it with other domestic structures.
	MFA MND	Relatively weak with little policymaking influence.
	PLASAF	Growing yet limited influence beyond CMC role.

See, e.g., Jakobson and Manuel, 2016; Saunders and Scobell, 2015; Shambaugh, 2002; Swaine, 1998.

With PLA professionalization, the military held less positions while fewer leaders served in the military (DOD, 2013). But while the PLA was subordinated to the CPC, institutional divergences led to PLA statements and actions divergent with the CPC (DOD, 2013). Policy saw an ever diminished role of the military, experts, and the CPC as of the 1970s (Cabestan, 2009). As threats evolved and China's role grew, it prioritized

military modernization in a break with historical policy. The military especially pushed for reliance on nuclear forces (Source 5, 2015) and saw arms control with distrust and a means for adversaries to compete with, constrain, and disarm China (Zhao, 2015).

Though domestic structures were concerned with American MD and growing Asian role upon which to substantiate military modernization, China upgraded its military because it perceived risk due to nonnuclear force inadequacies while seeking to deter adversarial NWSs—particularly America. This increasingly justified offensive policies. Military modernization accelerated under Premier Jingping and was encouraged by the military, an institution dominated by the PLA and rooted in the revolution that swept the CPC into power and enforced its rule (Page, 2016; Olson, 2016). Efficient balancing was challenging as domestic structures advocated for greater reliance on nuclear forces, particularly post-millennium to compensate for nonnuclear force inadequacies.

4. Supply Policies

In response to threats, a NWS develops military capabilities to provide security by reducing the probability of real or perceived threats (Baldwin, 1997). Policies that determined the supply of military capabilities resulted from the mediating variables (or the demand policies) previously examined which are a proxy to understand the mediating variables. With the unavoidable risk of mis-information, the research relies on publicly available information provided by China and its observers.

4.1 Supply: Nuclear Force Posture

While nuclear forces were not an early priority (Twomey, 2006 and 2010), China pursued nuclear forces in the 1950s after coercive threats regarding Taiwan and relied on

the USSR to develop them (Lewis and Xie, 1988; Twomey, 2006). China maintained a small nuclear force despite disparities with other NWSs and U.S.–Soviet/Russian arms control (Twomey, 2006). Unlike America and the USSR, which held offensive nuclear postures during the Cold War (and Russia continued to), China adopted an existential deterrence nuclear posture, i.e., no threat will attack because of its retaliatory capacity (Narang, 2009; Twomey, 2006; Morgan, 2003). However, unlike Russia, China did not envision the threat or use of nuclear forces in conflict (Lieggi, 2005; Twomey, 2006). Its no-first-use policy also restrained nuclear modernization, but in later years and though not in articulated policy, leaders questioned China's no-first-use policy (Li, 2018).

Prestige, status, and security were the driving forces behind developing nuclear forces. Even with a small nuclear force China received power disproportionate to means because of its retaliatory capacity, though its nonnuclear forces also sustained power (Source 5, 2015; Wortzel, 2015; Zhao, 2015; Lieggi, 2015). Before the millennium, it saw its nuclear force as only a deterrent. The de-alerting, storage, configuration, and de-mating of warheads from delivery vehicles supported a vulnerable and less mobile land-based limited or second-strike force that it did not perceive to undermine its nuclear deterrent, though the military challenged this nuclear posture (Source 5, 2015; Riqiang, 2015; Lieggi, 2015; Wortzel, 2015; Zhao, 2015; Easton, 2015; Yuan, 2015).

Following the millennium, and because of perceived regional threats together with China's regional and global assertiveness, China prioritized the supply of survivable nuclear forces anchored by a sea-based nuclear deterrent (Kristensen, 2015; Ford, 2015; Saalman, 2015). Despite this shift at the policy implementation stage, China espoused a no-first-use policy in articulated policy and asserted that it would only use nuclear forces

against a nuclear attack (DOD, 2013; PRC, 2013). Nonetheless, its nuclear posture was opaque despite calls for transparency (Ford, 2015; Source 5, 2015; Zhao, 2015). Further, the de-mating of warheads offered China nuclear signalling options, including avoiding adversarial conclusions of a pre-emptive strategy and, in a crisis, re-mating could signal resolve to use nuclear forces (Ford, 2015).

For decades, China maintained an unsophisticated nuclear force commensurate with its no-first-use policy, centred on a small nuclear force to survive a nuclear attack and retaliate to inflict unacceptable damage (DOD, 2013). Post-millennium policies, however, were driven by its rise (Source 5, 2015), whereby China modernized its nuclear force to support regional hegemony on the superiority of its nonnuclear forces and the threat and deterrent of its SRBMs and nuclear–based ICBMs and SSBNs.

Confronted with uncertainty, China supplied new mobile platforms with nuclear warheads including MIRVs and penetrating aids to ensure its strategic nuclear deterrent against American and Russian nonnuclear forces, including precision–strike and MD (DOD, 2013). The PLA also deployed C3 capabilities to ensure a second-strike capacity and modernized a limited, survivable nuclear force (which it characterized as sufficient and effective) to ensure a damaging retaliatory strike (DOD, 2013; Wortzel, 2015).

At the articulation or implementation stage, China did not have to threaten to use, or use, nuclear forces against a non-NWS, nonnuclear forces, or a nuclear-weapon-free zone (DOD, 2013). But it tended to be unsure about how it would employ nuclear forces for conflict escalation control in case of a nuclear attack. Under its no-first-use policy, nuclear forces would not play a role as it could only deter an adversary from escalating conflict, so it would have prominently shown its nuclear forces in crisis (Zhao, 2015).

China's nuclear posture was ambiguous as it was not clear what it considered its territory to defend despite claims to, for example, Taiwan and other territories, and how it would respond to a nonnuclear attack that threatened its nuclear forces or CPC survival (DOD, 2013). China saw its nuclear and precision–strike forces as a "core force for China's strategic deterrence" (PRC, 2013). Indeed, it eroded its no-first-use policy while upgrading its nuclear force strategic early warning systems (PRC, 2015 and 2013; Zhao, 2015a; Acton, 2013b). The military also pressed to change its no-first-use policy away from survivability to launch–on–warning, which raised the risk of a nuclear exchange or accidental, mistaken, or unauthorized launch (Kulacki, 2016).

China's Cold War focus on nonnuclear forces and a post-Cold War emphasis on nonnuclear and nuclear forces were directly (if imperfectly) related. China perceived a need to rely on modernizing nuclear forces based on a less stable and predictable nuclear posture to deter and defeat threats and for offensive strategies despite the modernization of Chinese nonnuclear forces and lacking transparency as to spending, capabilities, and deployments. China's assured retaliation posture[130] reflected a belief—like America's—that nuclear conflict could not be controlled, no matter the initiator. China thus espoused a restricted nuclear posture based on no-first-use, but reserved the right to use nuclear forces to deter or defeat threats that endangered vital interests or China's existence, potentially including nonnuclear threats. Therefore, at the policy implementation stage, China pursued military capabilities like survivable and penetrating nuclear forces upon an offensive nuclear posture that could afford a nuclear deterrent and retaliatory options.

As China had a small nuclear force on which it increasingly relied, China shunned arms control. After 2001, and given America's pivot to Asia, China relied on cost–

[130] Deters nuclear attack and coercion through nuclear retaliation.

effective security through nuclear force modernization, like Russia did, to deter superior adversarial nonnuclear threats, though not articulated in policies. China perceived non-nuclear forces to be inadequate, and modernization was meant to deter superior non-nuclear forces and enhance conventional deterrence credibility and force projection.

Despite pursuing interests, China articulated and implemented policies that resulted in underbalancing, particularly at the policy implementation stage, and reduced utility to security and made China vulnerable to threats by increasing escalation and undermining the credibility and effectiveness of its deterrent. China was unwilling to pursue policies that supported more efficient balancing, increasing Chinese reliance on nuclear forces and adversarial gain through nonnuclear conflict. This disadvantaged China in the balance of power, compounded by adversarial offensive deterrence that fomented an arms race, interstate nuclear stalemates, and Chinese offensive strategies to deter nonnuclear threats or terminate conflict early.

China leveraged the uncertain costs of conflict to maintain strategic stability through interstate stalemates but with diminished cooperation and a higher risk of conflict (Kumar, 2007). China emphasized its capacity to inflict damage as a necessary condition for deterrence through punishment and countervalue and/or counterforce targeting to be perceived as a threat with the minimum nuclear forces necessary to deter (Forsyth et al., 2010; Kumar, 2007). Chinese deterrence depended more on what it could do at the policy implementation stage, and as it could deter and defeat a spectrum of nonnuclear threats, it limited adversarial use of lower levels of force (Jervis, 1978).

Military modernization dominated strategies based on offensive, limited counter-force, and coercive strategies and broadened the role of nonnuclear forces for conflict,

since escalation to nuclear war had no utility in a context dominated by “less–than–vital” nonnuclear threats (Waltz, 2009). Nuclear force modernization ensured their absolute quality, namely vis-à-vis adversarial MD (Waltz, 2009). Nonnuclear force modernization strengthened deterrence and shifted competition to the tactical level, increasing escalation dominance (Waltz, 2009). As there was no acute threat, the utility of nuclear forces was low, and adequate nonnuclear forces should have reduced reliance on them and ASMs.

China relied on retaliatory deterrence by punishment for peace but, threatened by adversarial forces, in a classic security dilemma, pursued military modernization which fomented interstate stalemates and hybrid and proxy conflicts, namely involving regional non-NWSs. China emphasized its capacity to inflict damage to support deterrence, be perceived as a threat, and induce cooperation (Kumar, 2007). China sought a dominating nonnuclear force and a survivable military necessary for parity and nuclear deterrence through punishment based on countervalue targeting (Kumar, 2007).

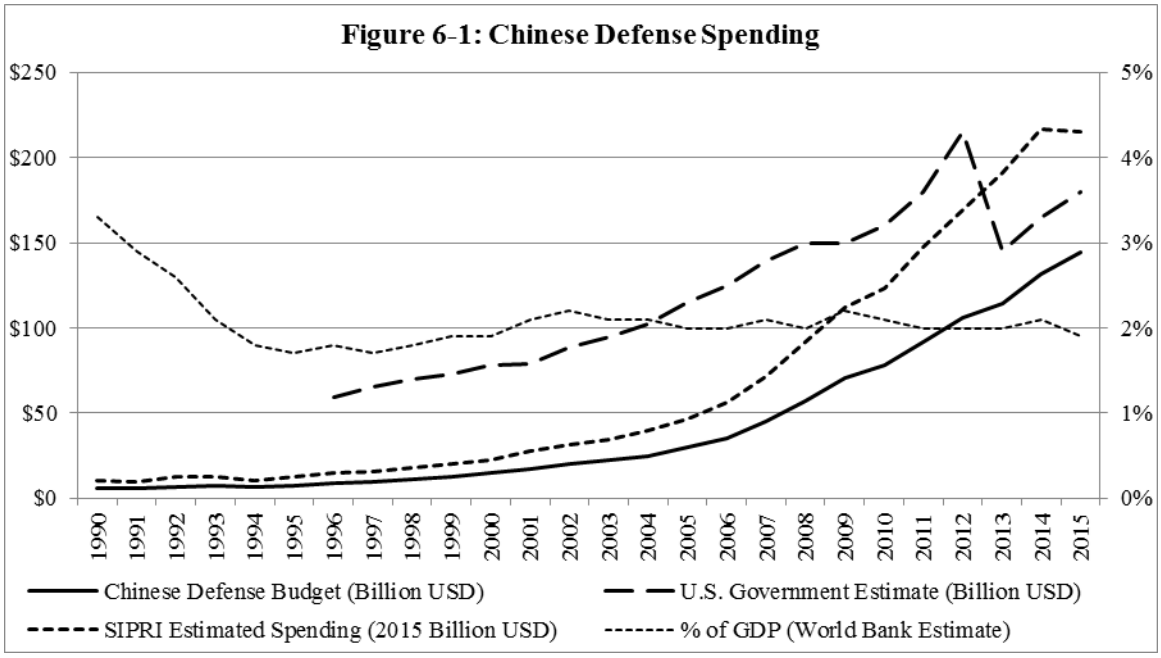
4.2 Supply: Defence Spending

States rely on their or others’ resources to advance interests and for self-help, and, thereby, manage but not eliminate threats. China’s threat matrix, defence spending, and military capabilities correlated to varying degrees, particularly with its post-millennium supply of nonnuclear forces during periods of higher spending. Though spending lacked transparency (Fish, 2014. But see Greitens, 2017 and Liff and Erickson, 2013), overall, China financed military modernization, and, therefore, military capabilities are a proxy for understanding spending and the prioritization of forces as a function of balancing. The research draws on publicly available information on spending but notes the potential for inaccuracy because of methodological differences or national security reasons.

Trends in capabilities indicate that spending prioritized qualitative modernization of nonnuclear forces to transition, as America did, to an advanced, technology-based military despite numeric reductions in ground forces. Such a military required significant spending to fund military capabilities even when economic growth tapered as of the late 2000s. The PLA focused on A2/AD challenges that would deny adversarial access to Chinese waters, and operated beyond them to solidify China as a power outside Asia despite concerns of stoking an arms race (Page, 2013; Wall and Cameron, 2016).

Despite goals to displace America as a leading power in Asia, China recognized that it could not militarily confront America until it militarily overtook it (Page, 2013). However, by guarding defence spending information, China encouraged uncertainty with neighbours and other powers, which fuelled an arms race that pulled it away from its focus on the American military. This was self-detrimental because China jeopardized the political–economic context China coveted for stability and development.

Defence spending grew exponentially as of the millennium, and China maintained a nuclear force of about 250 warheads (Kristensen and Norris, 2013). In 2013 alone, China increased spending by 10.7% to $114 billion, continuing—as Figure 6-1 shows—more than two decades of increases (DOD, 2013). Spending grew annually between 2003 and 2013 by an average of 9.7% because China had the fiscal strength and political will to sustain increases for military modernization (DOD, 2013). As Figure 6-1 illustrates, spending grew at a constant percentage of GDP as the economy grew, and the nuclear force size was constant albeit qualitatively upgrading, enabling the modernization of non-nuclear forces. China was committed to increasing spending to rank second globally as America and its allies were cutting spending (Wong and Buckley, 2015; Wan, 2014).



See, e.g., SIPRI; The World Bank; Global Security; Wong and Buckley, 2015; Stewart and Brunnstrom, 2016; Sonne, 2016; DOD, 2009, 2010, 2011, 2013, 2014, 2015, and 2016; BBC, 2008. Consider Greitens, 2017 and Liff and Erickson, 2013.

It is difficult to estimate actual spending due to lacking transparency (but see Greitens, 2017 and Liff and Erickson, 2013), an incomplete transition from a command economy,[131] and the omission of expenditures like foreign military procurements (DOD, 2013). For example, the DOD estimated Chinese spending in 2012 to be between $135 and $215 billion, a significant range (DOD, 2013). Nonetheless, Chinese spending grew with offensive strategies (e.g., by 12.2% in 2014 alone, a significant jump) (BBC, 2014). China's rise and aim to remain Asia's leading power drove spending by neighbours (e.g., between 2010 and 2014, regional defence spending grew by 23% alone) (Marcus, 2014). Despite incongruities between the articulation and implementation of policy, China's ability to materialize growing spending into advanced military capabilities depended on a rapidly modernizing DI and the import and imitation of foreign military capabilities.

131 A government–controlled economy.

4.3 Supply: DI[132]

For decades before the millennium, China's DI was inadequate. But with reforms instituted in 1998, it significantly improved competition, efficiency, and responsiveness to PLA requirements through civil-defence integration to leverage dual-use technologies (which generated revenue to support defence–related activities) and the acquisition of foreign materiel (DOD, 2013; Chase et al., 2015; Cheung, 2014). Also, Chinese research institutes focused on leading technology with military uses, and trained experts with access to foreign resources and networks to collect sensitive information and export–control technology to support modernization, including by illicit means (DOD, 2013).

The DI focused on missile and space systems, maritime assets and aircraft, and ground–force materiel (DOD, 2013). This reflected China's priorities, the growing role of missile-based nonnuclear forces and a shift to a technology-based military as America's. China relied on advanced capabilities augmented by targeted investments in capabilities based on foreign designs and reverse engineering (DOD, 2013). As the DI modernized, the PLA reduced reliance on foreign military capabilities in areas where the DI matured, albeit remaining dependent on foreign materiel for certain military capabilities despite creating a DI to meet PLA demands vis-à-vis threats (DOD, 2013).

The DI suffered from weaknesses despite modernization, including a centralized economy adapted from the USSR plagued by corruption, delays, overruns, institutional fragmentation,[133] and outdated procurement (Chase et al., 2015). The DI stood where Russia's DI did after the Cold War. However, unlike Russia, China increasingly localized production to reduce reliance on foreign capabilities. This was meant to close the military

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132 See also Chase et al., 2015; Guohui, 2012; Cheung, 2009; Mulvenon and Tyroler–Cooper, 2009; Medeiros et al., 2005.

133 See Lieberthal and Oksenberg, 1998; Lieberthal and Lampton, 1992 and 1987.

gap with America, which could be achieved between 2035 and 2045 and surpassed by 2070 (Capaccio, 2014). Like other NWSs, it saw modernization as pivotal to strategic stability and, unlike Russia, avoiding over-reliance on nuclear forces. Chinese balancing was thus more efficient than Russia's was but not as efficient as America's.

4.4 Supply: Nonnuclear Forces[134]

The utility of conventional deterrence in a nonnuclear–dominated threat context accentuated by regional power competition in the South and East China Seas, and NWSs undermining extended deterrence, is broad, despite continued nonnuclear threats and conflict, particularly for non-existential threats, and, therefore, help reduces reliance on nuclear forces and support efficient balancing. However, nonnuclear forces are a relative capability conditioned by the forces of other actors and, thus, demand a credible deterrent resulting in greater self-help by maintaining the fear of conflict and escalation with threats. This is particularly so as nuclear forces are impractical against nonnuclear threats including because of self-deterrence and even if an acute external threat exists and in the absence of ASMs. A NWS thereby increases realizable preferences with self-help and utility to power through security, and limits reliance on and escalation to nuclear use. Adversaries thus perceive superiority with adequate conventional military capabilities and strategies, meaning scarcity of interstate threats relates to deterrence effectiveness.

Proactive and reactive policies modernized nonnuclear and nuclear forces to deter superior adversarial forces and support offensive strategies. To challenge the status quo, China modernized its military and solidified the CPC's power while reassuring others about China's rise despite Chinese regional territorial claims (DOD, 2013).

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134 See also Chase et al., 2015 and Zhinyuan, 2010.

China saw adequate nonnuclear forces as pivotal to great–power status, deter and defeat threats, and nonnuclear retaliatory options (Yuan, 2015; DOD, 2014 and 2013). It prioritized nonnuclear threats and saw nonnuclear forces as more effective (Zhao, 2015; Ong–Webb, 2010). However, China struggled to coordinate nuclear and nonnuclear forces despite its dual deterrence and conflict strategy and reduced the threshold of use of nuclear forces to deter and defeat nonnuclear threats which could target its nonnuclear forces with nuclear forces that had not existed when it declared its no-first-use policy (Zhao, 2015; Ong–Webb, 2010). While territorial claims anchored articulated policy, China identified Russia, America, and India as threats at the policy implementation stage and planned scenarios employing nuclear forces (Janes, 2010; Blank, 2011b).

Incongruities in threat scenarios at the policy articulation and implementation stages accentuated by perceived threats and adversarial offensive strategies made China appear unpredictable (Zhao, 2015). While even America recognized China's growth in military capabilities, lacking transparency regarding its strategies, policymaking, and military capabilities fostered mutual distrust (DOD, 2014; Capaccio, 2014; DOD, 2013). While China saw America as a threat but a partner for development and modernization, its rise and unpredictability stoked counterbalancing in a classic security dilemma that China perceived as threatening. Uncertainty, particularly those perceived as threats, is unavoidable, and America interpreted China's military build-up as threatening (DOD, 2014; Mearsheimer, 2003) while China saw regional alliances as menacing. Rather than address such concerns, China was determined to prevail in nonnuclear conflict through offensive strategies that raised the risk of adversarial miscalculation in disputed areas, particularly in the South and East China Seas (PRC, 2013; Ranade, 2013; Page, 2015).

China's offensive strategies resulted from its military strength (Source 5, 2015). Military modernization enabled missions beyond regional disputes that China could not pursue even a few years ago as domestic structures in later years proactively advocated for offensive strategies against America and regional states (Zhao, 2015; DOD, 2013). Due to the adequacy of nonnuclear forces, China could pursue conventional strategies to leave the defender with no option and deny advantage, or achieve limited objectives with little or no kinetic engagement even against defensive strategies (CEIP, 2010). As such deterrence depends on what can be done to a threat, with a robust and flexible nonnuclear force, China could rely on conventional deterrence by punishment and denial and nuclear forces for deterrence and retaliation. China had the capacity to deter or defeat non-existential threats throughout the escalation ladder. Relative to Russia, China's balancing was more efficient, escalation was limited, nuclear forces were not over relied on and their threshold of use was higher, and allocation of resources was more efficient, but interstate stalemates driving hybrid and proxy conflicts were compounded.

As a relative military capability, the adequacy of Chinese nonnuclear forces was enhanced by inferior adversarial military capabilities and China could therefore choose to threaten punishment through offensive strategies in conventional conflict (Waltz, 2009). As China could thus pursue a nuclear-conventional deterrence and conflict strategy, China could asymptomatically substitute, and reduce reliance on, nuclear forces with nonnuclear forces. This notwithstanding sustaining strategic stability through second-strike retaliation and adversarial symmetric and asymmetric capabilities that undermined conventional deterrence. But this required ongoing modernization due to competition and non-MAD-based deterrence absent the threat or use of nuclear forces (Colby, 2010).

4.4.1 *Post-Millennium Military Modernization*

Like Russia, China pursued military modernization to improve the capacity to fight and win short-duration, high-intensity conflicts—particularly in the Taiwan Strait—by investing in military capabilities like SRBMs, MRBMs, and cyberspace systems for A2/AD missions (called counter-intervention in China), a modern nuclear force at limited force levels, and long-range strike forces for missions beyond China's territorial claims and to influence beyond its borders (DOD, 2013; Page, 2016). China's growth in defence spending sought to improve long-range projection across domains, which reflected trends in China's threat perception and military capabilities to conduct missions beyond Asia below nuclear forces (DOD, 2013 and 2006; Johnson, 2009; Lieggi, 2015).

China's military modernization pervaded every aspect of the armed forces with a focus on naval and aerial forces, augmenting the independence of military services by reducing dependence on foreign materiel despite the Army's dominance (Ranade, 2013). Institutionally, the CPC wrested control from the Army, dismantled commands through which officers wielded authority and resisted oversight, took command of operations, and trimmed troop numbers to conduct joint operations like America (Page, 2016).

The PLAN, which already had the largest force of combatants, submarines, and amphibious warfare ships in Asia, notably expanded its fleet and prioritized submarine modernization—namely SSBNs, nuclear-powered and guided-missile attack submarines, anti-submarine capabilities, and surface combatants, including guided-missile destroyers and frigates (Goldstein and Knight, 2014 and 2013; DOD, 2013). These incorporated ASCMs, LACMs, SAMs, and anti-submarine capabilities for air and sea offensive–defensive strategies to project force in the South and East China Seas, representing some

of China's A2/AD challenges to adversaries (DOD, 2014; Hunt, 2015; DOD, 2013; Goldstein, 2011). China targeted the modernization and expansion of naval forces at America, with coercive effect on neighbours (DOD, 2014; Magnusen, 2014). China conducted missions beyond its near-sea region, denied regional and extra-regional powers access to its near-sea region, and showed that it could act like America in Asia (Magnusen, 2014). Indeed, China modernized its military to deter, prepare for, and win a conflict with America in the Asia–Pacific region (Magnusen, 2014).

Central to China's regional counter-intervention strategy was information, so she relied on electronic- and information-warfare capabilities (called information blockade in China) and controlling access to its periphery, particularly through surface ships that could engage threats up to 1,000 nautical miles (DOD, 2013). China also relied on sea- and air-based electronic-warfare systems to hinder or eliminate technological advantage (DOD, 2013). An array of conventionally–armed ballistic and ground- and air-launched cruise missiles, special forces, and cyber-warfare capabilities allowed the PLA to strike regional bases and ground-based systems pivotal to adversarial projection (DOD, 2013).

The PLAAF added aerial assets focused on Taiwan through advanced jet fighters and upgraded older aircraft, in addition to having one of the largest and most advanced SAM systems as it developed large transport aircraft for support missions (DOD, 2013). Concomitantly, the PLA Ground Force invested in new military capabilities, emphasizing campaign–level forces across long distances including special operations forces equipped with advanced technology, improved aviation units, and C2 with upgraded networks (DOD, 2013). As Table 6-3 outlines, China also relied on nonnuclear long-range strike military capabilities for offensive and defensive nonnuclear counterforce targeting.

Table 6-3: Chinese Precision–Strike Military Capabilities			
Type	**Range**	**Example**	**Explanation**
SRBM	< 1,000 km.	CJ-10	The PLASAF fielded variants with improved ranges.
MRBM	1,000-3,000 km.	Various	Increased the range of precision strikes against land and naval targets (particularly aircraft carriers).
IRBM	3,000-5,000 km.	Various	Permitted near-precision strikes to distant islands.
LACM	Varied	YJ-63 KD-88	Air- and ground-launched for precision strikes.
GAM	Varied	Various	Tactical air-to-surface and precision–guided missiles.
ASBM	> 1,500 km.	DF-21D	Capacity to attack large ships carriers in the Pacific.
ASCM	Varied	YJ-62 SS-N-2	Domestically–produced, ship-based ASCMs with dozens of variants.
ARW	Varied	YJ-91	Incorporated indigenous versions of Russian and Israeli ARWs into its fighter–bomber force.
ADHPM	Varied	PHL-03 AR-3	Capable of targeting across the Taiwan Strait.

See, e.g., DOD, 2013.

China also focused on joint operations using military and commercial transport that could deploy well beyond its borders, including heavy-lift transport aerial assets like the Y-20 and stealth aircraft (DOD, 2013). Imitating U.S. network–centric warfare, China operated in "informatized" conditions that tied geographically–dispersed forces into an integrated system capable of unified action (DOD, 2013: 11). This required new, flexible, technology-based training that represented a departure from the Soviet-style conscript-dependent training of prior decades (DOD, 2013). China therefore modernized its military doctrine to train officers who could leverage technology in joint operations and various war–fighting functions (DOD, 2013).

China compensated inferior nonnuclear forces with asymmetric, unconventional military capabilities, including destabilizing cruise and ballistic missiles outlawed by the INF Treaty, but to which China was not a party (Wan, 2014; Easton, 2014). China also relied on systems to limit or prevent adversarial space-based assets (DOD, 2013). China also pursued information operations for information dominance, namely for information-dependent adversaries like America (DOD, 2013). As SAM forces offered limited

capacity to counter ballistic missiles, China also developed MD, building on its ground-based interception of a test ballistic missile at mid-course while in space (DOD, 2013).

China also relied on hypersonic, precision-guided, and boost-guided capabilities for nonnuclear and nuclear missions for long-range retaliatory and pre-emptive capacity similar to American orbit and hypersonic missiles, which the PLASAF explored using against adversarial nuclear forces for its MD and anti-satellite capabilities but which also threatened adversarial and neighbouring forces (Saalman, 2014 and 2014a). But unlike ballistic missiles, there were doubts that such precision capabilities could penetrate adversarial MD—particularly terminal versus midcourse[135] defences—because of their slower speed due to atmospheric friction, lack of decoys, and higher temperature as such defensive systems could lock onto their heat sources (Acton, 2014). America experienced similar doubts about its own military capabilities vis-à-vis adversarial MD (Acton, 2014).

China could have employed boost-glide precision capabilities to target midcourse MD as those based in Alaska and California because they could evade radars by flying at low altitudes (Acton, 2014). By then, America had not yet addressed vulnerabilities from long-range nonnuclear precision capabilities that could have been used against strategic, tactical, or MD targets like aircraft carriers and forward–deployed bases (Swaine, 2014; Acton 2014). Such military capabilities also eroded confidence states had in their (or imported) military capabilities or those allies relied on (e.g., Japan), eroding extended deterrence in Asia (Swaine, 2014). However, beyond strengthening A2/AD challenges and territorial claims, advanced Chinese nonnuclear forces were unlikely to radically alter strategic stability or negate extended deterrence in Asia (Swaine, 2014).

[135] Midcourse defences defeat missiles as they coast towards targets allowing greater opportunities for destruction outside the atmosphere. The terminal phase is short and begins once the missile re-enters the atmosphere allowing little time and margin for error. See MDA.

China's nonnuclear force modernization reduced reliance on nuclear forces for conflict—potentially with America—as the survivability of nuclear forces reduced crisis-launch incentives (Ford, 2015). But like Russia, China indirectly increased reliance with the interpenetration of nuclear–strategic and conventional–tactical military capabilities, which increased crisis–escalation risk from deterring adversarial action, with a focus on America, by targeting C3 nodes and MIRVing nuclear forces with uncertain implications and for nuclear–risk manipulation (Ford, 2015). Nonnuclear force modernization also raised the threshold of nuclear use and, like America, the predisposition for conflict.

4.4.2 *Military Inadequacies*

Despite modernization aimed at convincing threats that the PLA was an adequate force (Garnaut, 2013), the PLA suffered from inadequacies. Institutionally, the PLA did not overcome its role as the "party army"—the CPC's armed wing reminiscent of the Soviet military—to become a professional force (Easton, 2014: 1; Page, 2013). Similarly, the CPC articulated PLA policies, ensuring civilian and military leaders were merged and that the military's loyalty was to the CPC, and not the Chinese constitution or people (Easton, 2014). The PLA was also organized for risk–averse behaviour, and the CPC prioritized political indoctrination out of fear that the military may revolt against the CPC (Mattis, 2012; Easton, 2014). There were therefore inherent issues between civilian and military leaders, and a CPC desire to have more control over a smaller, less-wieldy rank and file motivated the downsizing of the Chinese military (Page, 2013; Easton, 2014).

Despite significant modernization, China saw its military as small and lacking the competence, modernization, and will of a well–trained force—its soldiers described as wimps with female characteristics, corrupt, and lacking manly, martial spirit partly due to

a one-child policy that raised a generation of little, entitled, soft emperors unfit for war (Wan, 2014: 1). Some analysts described China as weaker than how the West understood China, called for increases in defence spending, and noted that China had not seen combat since 1979 (Wan, 2014). Though such descriptions may have been calculated to depict an over-estimated military, some Western analysts agreed (see, e.g., Chase et al., 2015; Easton, 2014). The PLA suffered from institutional and combat weaknesses and an inadequate DI that made China brazen, and its lack of combat experience conflict prone because it did not have recent memory of conflict (Chase et al., 2015; Easton, 2014).

In response, America and its allies counterbalanced China's modernizing military (Easton, 2014). But despite evidence that China could have started a devastating conflict in the Asia–Pacific, some questioned the PLA's ability to prevail because of nonnuclear force inadequacies vis-à-vis threats (Easton, 2014), absent the threat or use of nuclear forces in a break at the policy implementation stage with China's no-first-use policy.

4.5 Supply: Nuclear Forces[136]

NWSs rely on nuclear forces for direct or extended deterrence and conflict though their utility is limited, including because of self-deterrence and limited deterrence of non-nuclear conflict, non-NWS aggression, and prevailing nonnuclear threats. Therefore, except for existential threats and limiting escalation to nuclear use for which only limited number of survivable warheads are needed, nuclear forces are too destructive for use, lack credibility, have diminished threat perception, shift competition to the tactical level, and reduce gains without risking devastation. Nuclear forces are impractical and add little to power through security as the types of conflicts they are useful for are rare and do not

[136] See also Zhinyuan, 2010.

require significant nuclear forces. This places a premium on nonnuclear forces. Nuclear forces, therefore, do not proffer effective self-help and reduce realizable preferences with balancing, extended deterrence, and relative gains in the balance of power.

China relied on nuclear forces to reduce uncertainty, insecurity, and relative loss perceived as a unitary actor about geographically proximate adversarial capabilities and strategies, including regionally–deployed American forces, through the threat perception of the capacity to punish if attacked. As anticipated by balance of power, China balanced with modernizing military capabilities through uncertainty and insecurity to manipulate adversarial threat perception to deter, prevent escalation, renew the balance of power, contest American power, and challenge military advantage. China reactively responded to military asymmetries with mainly offensive strategies to increase realizable preferences and relative gains in the balance of power, while mitigating the security dilemma and counterbalancing but shifting competition to hybrid and proxy conflicts (e.g., Taiwan).

China's approach to nuclear deterrence was premised on survivability—that a fraction of its small nuclear force could survive a first strike and retaliate (Kulacki, 2016). Particularly after the millennium, China pursued offensive strategies seeking to deter America and neighbours. While the modernization of survivable SNFs reinforced China's assured retaliation nuclear posture, it relied on TNWs in response to military asymmetries created by nonnuclear force inadequacies vis-à-vis America and its allies (Colby, 2016). Pursuant to China's nuclear posture, variegated nuclear forces afforded China the ability to deter and defeat nuclear threats with strategic effect at the policy implementation stage.

China's strategic deterrence posture included military and non-military tools of power but was rooted in a relatively small modernizing nuclear force (Chase et al., 2015).

Chinese doctrine consistently asserted no-first-use and stressed a "lean and effective" retaliatory nuclear force without numerical limits (Chase et al., 2015: 120; DOD, 2013; PRC, 2013; PRC, 2010; Twoney, 2006). China relied on its nuclear force for deterrence, coercive nuclear blackmail, conflict escalation control (but it was uncertain about how to employ them), and for retaliation against NWS nuclear strikes (Chase et al., 2015). Deterrence was central to ensuring China's development in the 21st century—understood as the period of strategic opportunity, particularly as China shifted toward a mobile and survivable retaliatory force (Source 5, 2015; Wortzel, 2015; Xiaosong, 2013; Ke, 2013).

For decades after it developed a nuclear force capability in 1964, China fielded a small number of vulnerable and outdated missiles. Keeping to a minimum deterrent and no-first-use policy to avoid an arms race, force modernization assured a limited, reliable, effective, and survivable retaliatory capacity (Chase et al., 2015; Zhang, 2012a). But as the PLASAF assumed nonnuclear–strike missions in the 1990s (deploying the world's largest cruise- and ballistic-missile force), China also developed a modern and survivable nuclear force anchored on SSBNs and mobile platforms capable of striking regional and transcontinental targets (Chase et al., 2015; Easton, 2015; Economist, 2015; DOD, 2013; Zhiyuan, 2010; Twomey, 2006). Torn between a peaceful posture, avoiding an arms race, and keeping a lean and effective nuclear force, it modernized its nuclear force to ensure credibility, survivability, and striking power (Chase et al., 2015; Zhao, 2015; Xiaosong, 2013; PRC, 2013; Yunzhu, 2010; Xijun, 2005). Perceived military asymmetries vis-à-vis adversarial NWSs compelled China to afford nuclear forces a role as an equalizer relative to adversaries, though China's articulated policies did not ascribe to the idea that nuclear forces were to deter superior nonnuclear forces (Saalman, 2015).

China's assured retaliation nuclear posture reflected its strategic culture due to its limited deterrence, conflict–escalation avoidance, and defence against nuclear coercion (Twomey, 2006, Saalman, 2015), eschewing reliance on nuclear forces as weapons of war in articulated policy (unlike Russia), namely against nonnuclear threats: e.g., China did not threaten Taiwan with nuclear forces but rather with nonnuclear missiles (Zhao, 2015; Saalman, 2015; Kristensen, 2015; Lieggi, 2015; Yuan, 2015). Because Taiwan or regional threats did not threaten China's existence, it was difficult to justify nuclear use (Yuan, 2015). The de-mating of stored and deployed nuclear forces supported this limited retaliatory capacity (Riqiang, 2015; Wortzel, 2015; Source 5, 2015; Kristensen, 2015).

Further, technical and C2 capabilities needed for nuclear first-strike capacity were lacking or underdeveloped (Polk; 2005; Twomey, 2006) vis-à-vis those of Russia and America. Nonetheless, China viewed its nuclear force as the main deterrent against first and second nuclear strikes and precision nonnuclear forces (BBC, 2013). However, China was uncertain about how it would employ surviving forces during nuclear war (Ford, 2015). China thus qualitatively modernized its nuclear forces and relied on counterforce targeting of geographically proximate adversarial American and its allies' forces.

Until 2006, China's only ICBMs were a small number of land-based, liquid-fuelled DF-5As vulnerable to first strike. Its reliance on nuclear forces centred on SNFs for countervalue targeting because of their inaccuracy for counterforce targeting (Zhao, 2015). The deployment of mobile nuclear forces (e.g., DF-31As) and SSBNs in later years reinforced China's assured retaliation nuclear posture and provided a first-strike use for destabilizing and escalatory tactical counterforce use. Qualitative and quantitative reliance on nuclear forces therefore increased, particularly in response to superior non-

nuclear forces (Saalman, 2015; Yuan, 2015; Lieggi, 2015). These trends were underway before America's Asia pivot, so were more of a correlative than causative relationship (Saalman, 2015) but may have been influential in America's rebalance to Asia.

Though China's nuclear force was small, it included MRBMs and IRBMs for regional and theatre nuclear missions, and silo- and mobile-based ICBMs, SSBNs, and SLBMs, including about 110 land-based warheads (of which 25 could reach America) and 60 sea- and air-based warheads (Chase et. al., 2015; Kile et. al., 2012; Zhang, 2012a; Roberts, 2008; DOD, 2013). China also prioritized SSBNs to secure a retaliatory capacity and relied on advanced capabilities to counter MD (Chase et al., 2015; Zhang, 2012 and 2012a; DOD, 2013). The survivability of its nuclear force platforms strengthened its deterrent and enhanced strike capacity despite constraints on expanding its nuclear force (DOD, 2013; Lieggi, 2015; Zhang, 2012a, 2011, and 2011a). Qualitative modernization reflected a concern for a functional deterrent despite an ongoing debate on whether to retain China's no-first-use policy (Blank, 2011b; Zhang, 2008; Wortzel, 2007).

Modernization focused on quality (Zhang, 2012a; 2010). Even so, quantitative reliance on nuclear forces increased insofar as the rate of induction due to modernization was slightly higher than natural force obsolescence despite no concerted effort to expand the force (Zhao, 2015). Indeed, China was the only NPT NWS to increase its nuclear force, particularly in terms of delivery systems rather than warheads, SLBMs, mobile missiles, and dual-use TNWs, to enhance survivability and deterrence (Yuan, 2015; Ford, 2015). The articulation and implementation of nuclear policy was thus determined by strategy rather than financial or technological constraints as China could have expanded its nuclear force if doing so were in China's interest (Zhang, 2012a).

To strengthen retaliatory capacity, China increased the survivability of its ground nuclear forces with solid-fuelled, mobile ballistic missiles while building underground missile bases (Zhang, 2012a; Blank, 2011b). But as its force modernized, its use and efficacy diverged among domestic structures, with some seeking to marginalize arms control even though it benefited from the modernization of nonnuclear missiles under its control (Source 5, 2015; Zhao, 2015). Transferring control of nuclear forces in 2015 to the PLA Rocket Force may have been a result of this institutional divergence.

The size and nature of its TNW force was also opaque, even though it did not emphasize them in strategy or recognize them at all (Zhao, 2015; Kristensen et al., 2006). This was partly because TNWs ran counter to its strategic culture, no-first-use policy, and assured retaliation nuclear posture (i.e., nuclear forces were a deterrent and not a war–fighting tool) (Riqiang, 2015; Zhang, 2012a). China had about 100–200 TNWs including MRBMs, SRBMs, and LACMs capable of delivering nuclear and nonnuclear payloads (Ong–Webb, 2010). This exemplified China's dual deterrence and combat strategy of dual-use military capabilities, whereby TNWs accomplished nuclear and nonnuclear deterrence and counterforce targeting, being cheaper and more accurate and evasive than ballistic missiles were for strategic countervalue targeting (Ong–Webb, 2010). But such reliance eroded China's conflict escalation divide between nonnuclear or limited and nuclear or general conflict (Ong–Webb, 2010) and reduced both the predictability and transparency of China's threshold of nuclear use.

Unlike SNFs, TNWs have a higher likelihood of use to supplement nonnuclear missions due to greater counterforce accuracy and damage–limiting effects, and thus are perceived to be less vertically escalatory and useful for retaliatory strikes (Zhao, 2015;

Ong-Webb, 2010). Such incongruities undercut the credibility and predictability of its nuclear posture even without ASMs and despite nonnuclear force modernization and impracticality of nuclear forces as threats which were insufficiently acute to warrant their threat or use. China perceived a relatively lower but increasing utility of nuclear forces out of concern with regional nonnuclear threats, and—like Russia—prioritized longer-range tactical and survivable nuclear forces as cost–effective measures to optimize security through deterrence, in conflict for nuclear and nonnuclear threats, and in second-strike retaliation against nuclear threats to compensate for nonnuclear force inadequacies.

4.6 Supply: ASMs

Reducing reliance on nuclear forces occurs if NWSs forsake assigned missions or pursue alternatives (Barkenbus, 1989). The absence of alternatives can increase reliance and undermine strategic stability (Sokov, 2002; Colby, 2013 and 2010; Lukasik, 2010). Despite diplomacy, China put little stock in external balancing which requires reliance on others despite viewing adversarial alliances as unreliable. China avoided dependence on others for security (i.e., ISOs played a minor role except for counterterrorism in Central Asia) and avoided the impression it was asserting itself beyond its borders in accordance with its peaceful development maxim (Zhao, 2015).

This strategy accorded with China's view of itself as a rising power that could address threats. Upon its strategic culture of self-reliance, China sought to independently deter and defeat nonnuclear threats and relied on its forces without committing to mutual defence mechanisms (Zhao, 2015; Fish, 2015). Like Russia, at least in articulated policy, it adopted neo-regionalism[137] institutionalized in the Shanghai Cooperation Organization,

[137] An understanding of interstate identity whereby a region develops as a single, integrating society.

and multilateralism perhaps even more so than America did (Kuhrt, 2014; Heath, 2014; Song, 2010; Beeson, 2009). But as with Russia, neighbours were suspicious of China's involvement in regional ISOs within which it exerted power (Fish, 2015; Kuhrt, 2014; Heath, 2014; Dormandy, 2012; Acharya, 2011).

However, as America increased its Asia presence in the late 2000s, it focused on regional alliances (Clinton, 2011), while China, relatedly, increased defence spending and modernized capabilities (Kuhrt, 2014; Xiang, 2012). This reflected China's concern with adversarial regional alliances over ISOs and neighbouring powers (Zhao, 2015; Kuhrt, 2014). Indeed, extra-regional ISOs like NATO were cautionary examples of what China avoided (i.e., Russia's experience with ISOs and a sense of encirclement were woven into policies) (Saalman, 2015). Russia and China shared similar concerns. China engaged other NWSs as levers against, to pressure, or isolate America in Asia, particularly on security issues, partly because it did not believe it could achieve deterrence and strategic stability with its nonnuclear forces, which were inferior to America's (Saalman, 2015).

5. Chinese Balancing

As China could not rely on ASMs for nonnuclear missions, and as it perceived greater nonnuclear threats driven by America and the inferiority of its nonnuclear forces, China modernized its nuclear and nonnuclear forces at the policy implementation stage despite a restrained assured retaliation nuclear posture. Moreover proactive policies to minimize reliance on nuclear forces in articulated policy, China pursued reactive policies that increased reliance on nuclear forces at the implementation stage which diminished the credibility, transparency, and predictability of China's nuclear posture while affording deterrence and use options through survivable platforms. This diminished the threshold of

nuclear use, resulting in greater destabilizing and conflict escalation effects. China's balancing was relatively inefficient, so China did not maximise self-help through conventional deterrence or conflict. While China did not threaten to impose unacceptable punishment with nuclear forces to deter or defeat state threats in articulated policy, it reserved military capabilities to do so at the implementation stage, namely with the real or perceived threat posed by America and its allies and its uncertain ability to sustain conventional deterrence absent nuclear use should conventional deterrence fail.

Reliance on nuclear forces increased in a denuclearized context despite its modernization of nonnuclear forces for nonnuclear threats. But evolving nonnuclear threats coupled with growing ambitions that drove offensive policies compelled a shift towards reliance on nonnuclear forces backed by modernizing and survivable nuclear forces. There were divergences in articulated policy and its implementation. Though it advocated peaceful coexistence and a restrained nuclear posture in articulated policy, its capabilities, rhetoric, and actions at the implementation stage proved otherwise, despite its prioritization of nonnuclear threats and the diminished acuteness of nuclear threats. Indeed, articulated policy changed little even while nuclear and nonnuclear forces rapidly modernized at the implementation stage. This presented untenable policy incongruities and undermined the credibility of China's no-first-use policy because articulated policy and military capabilities at the implementation stage are intertwined (Saalman, 2015).

Table 6-4 summarizes congruities and incongruities in Chinese types of reliance on nuclear forces over time. Despite initial convergence, incongruities over time were driven—like Russia's—by China's threat matrix, offensive strategies, and insecurities about its and increasingly geographically proximate adversarial nonnuclear forces.

Table 6-4: Chinese Reliance on Nuclear Forces						
Stage	**Articulation**		**Implementation**			
Type	**Declaratory**	**Strategic**	**Resource**	**Quantitative**	**Qualitative**	**Deployment**
1991–2001	Similar					
2002–2015			Increased	Similar	Increased	

Nuclear forces historically played a similar role in its deterrent (Wortzel, 2015), but as it modernized its nonnuclear forces (Source 5, 2015) it shifted to a more survivable retaliatory force. China recognized that nonnuclear forces were decisive in contemporary warfare but it struggled with incorporating them with its nuclear forces (Zhao, 2015). Though this dual–deterrence approach gave the impression that nuclear forces would play a role in conflict, China was committed to its no-first-use policy (Zhao, 2015). However, threats—particularly America's regional presence, MD, and precision–strike forces—undercut this posture and drove greater reliance on nuclear forces at the implementation stage to retain China's retaliatory capacity despite the risk of a nuclear first strike (Yuan, 2015). As Table 6-5 shows, the foregoing resulted in reactive and proactive policies.

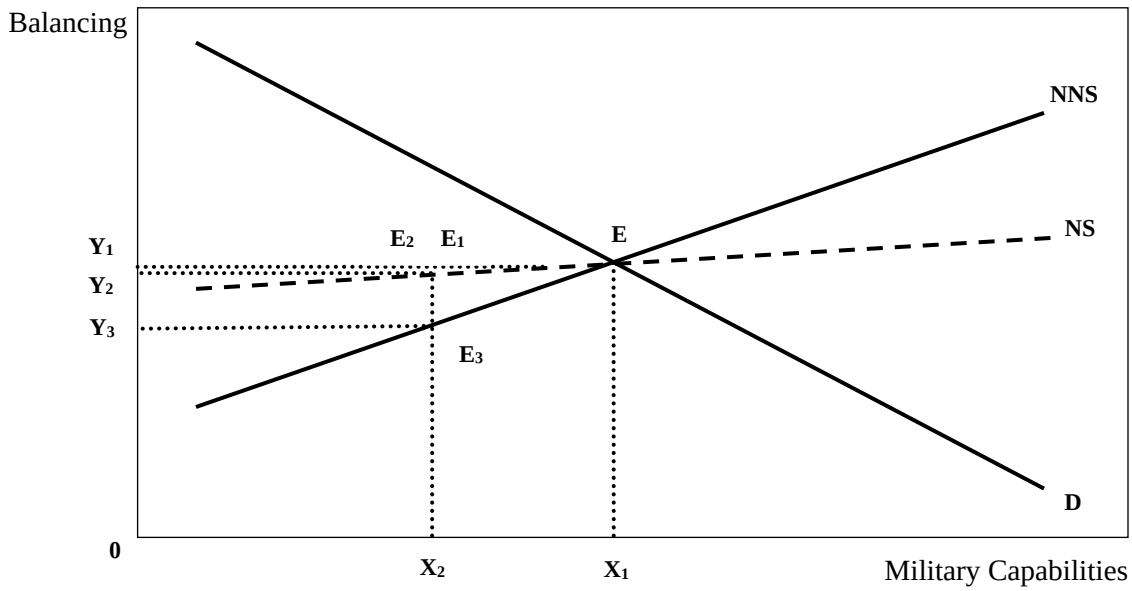
Table 6-5: Chinese Supply and Demand Policies		
Demand	**Security**	Mainly nonnuclear threats that increased with offensive strategies.
	Domestic Structures	Closed policymaking concentrated in the CPC.
Supply	**Nuclear Force Posture**	Advocated peaceful coexistence and minimal retaliatory deterrent.
	Defence Spending	Relatively inferior DI but with increasing modernization and localization driven by growth in defence spending.
	DI	
	Nuclear Forces	Modernizing deterrent anchored on survivable platforms.
	Nonnuclear Forces	Modernization driven by ambition and threat matrix.
	ASMs	Pursued ISOs for ulterior motives but not relied on for security.

Table 6-6 summarizes the policy shift in Chinese nuclear reliance.

Table 6-6: Chinese Shift in Reliance on Nuclear Forces		
Period	**Trigger**	**Reliance Shift**
1999– 2015	United States	Shift toward survivable, retaliatory nuclear force (Chase et al., 2015).

As Figure 6-2 illustrates, China relatively underbalanced. The slope of the supply curves (NS + NNS) shows a shortage (X_2) of adequate military capabilities to deter and defeat threats (D) due to inadequate nonnuclear forces. Balancing was thus anchored by nonnuclear forces backstopped by a modernizing and survivable nuclear force. But the utility to security from increasing reliance on nuclear forces (Y_2-E_2-E_1-Y_1) was smaller than from more adequate nonnuclear forces (Y_3-E_3-E_1-Y_1).

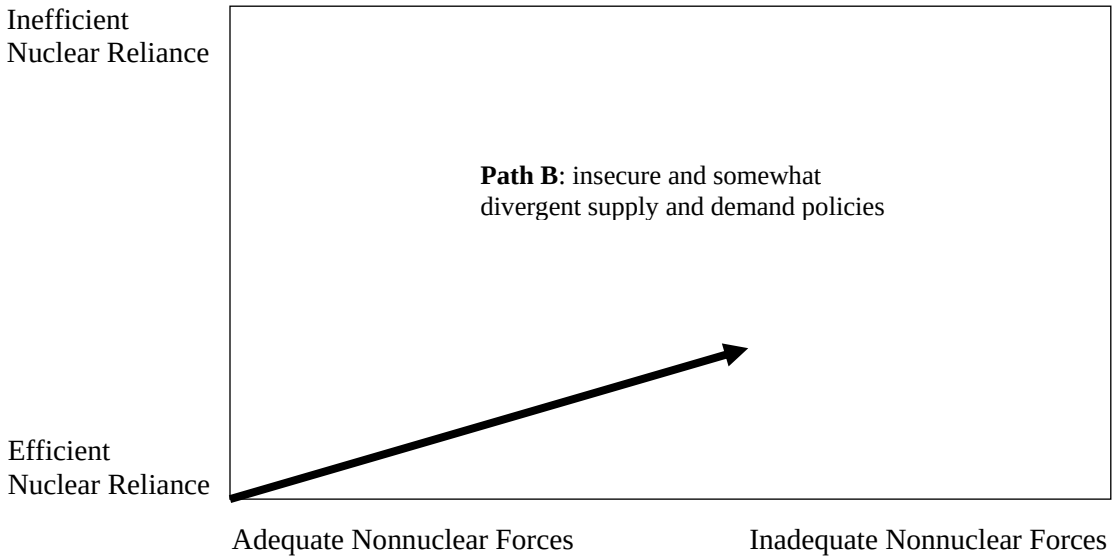
Figure 6-2: Chinese Balancing



Incongruent supply and demand policies—and thus balancing types, particularly investment (or resource balancing) (INC + INNC < 1)—undermined nuclear and non-nuclear deterrence predictability and credibility. This is due to potential adversarial gain through nonnuclear conflict absent the use of nuclear forces, though articulated policy made nuclear use unlikely absent a NWS nuclear attack. Because the damage nuclear forces can inflict is too great for the threat of their use to be credible, it had to modernize nonnuclear forces to support defensive (but increasingly offensive) counterforce targeting with lower conflict escalation effects and threshold of use.

Due to relative underbalancing, self-help from deterrence and conflict was lower than if China increased reliance on more adequate nonnuclear forces and reduced reliance on nuclear forces per its no-first-use policy. Per Path B of Figure 1-1, China transitioned to adequate nonnuclear forces despite policy incongruities and pursued no arms control relative to Russia and the United States. Figure 6-3 illustrates these trends.

Figure 6-3: Illustrated Chinese Balancing



China modernized military capabilities for power and offensive strategies. Despite qualitatively modernizing its nuclear forces, China maintained a small nuclear force but, like Russia, at a readiness known to threats and which allowed rendering unacceptable losses (Diakov, 1997). China was thus able to maintain a small and modernizing nuclear force, and its nonnuclear forces provided options below nuclear deterrence.

Military modernization had broad implications, particularly for the Asia–Pacific region, with the double–edged effect of strengthening deterrence but fomenting concerns in neighbours and other powers despite its policy of peaceful coexistence. It raised the potential for nonnuclear conflict, and, as with America, lowered China's threshold of use

of nonnuclear force in contested areas. Of concern were China's A2/AD challenges (Cronin et al., 2012), and despite internal weaknesses (Erickson and Liff, 2013) China relied on military capabilities for regional influence. But China was perceived by others as threatening, including by those states from which it had little to garner from conflict but much to gain from cooperation (Bickford et al., 2011; Galdorisi, 2014; Tellis, 2012).

Such concerns coupled with offensive strategies fomented a regional nonnuclear force arms race and a greater American presence supported by its allies that made conflict more probable and harder to deter. Hence, China's threshold for conventional deterrence diminished, but increased the capacity of nonnuclear forces vis-à-vis nonnuclear threats. China relied on asymmetric A2/AD challenges and nonnuclear forces. But like America, the military capabilities that helped assert itself and provided an edge in conventional deterrence increased the nonnuclear force inadequacies of neighbours, thereby spurning a regional arms race (see, e.g., Wall and Cameron, 2016) and reliance on ASMs.

Consequently, both options for reducing reliance on nuclear forces were open to China. It could increase the adequacy of nonnuclear forces—which China did—and there was scope for it to diminish the perceived acuteness of threats that called for the threat or use of nuclear forces. But China broke with its historic nuclear posture and increased reliance on nuclear forces, particularly through qualitative modernization despite not perceiving threats as sufficiently acute to warrant the threat to use nuclear forces.

China also modernized a nuclear force that provided nuclear options despite a negligible need to rely on them in conflict. Even so, the assurances they provided hedged against potential nuclear threats and coercive action by NWSs and facilitated nonnuclear force modernization and a focus on nonnuclear threats, largely without fear of aggression.

Indeed, China viewed the prioritization of nonnuclear threats together with nuclear forces for assured retaliation as the means to influence regionally and beyond absent ASMs.

As it is difficult to rely on strategies based on punishment, China modernized its military for advantage, conflict escalation management, and to operate below identifiable levels of punishable aggression (e.g., militarization of maritime zones in the South and East China Seas) while qualitatively modernizing its nuclear force (Mitchell, 2015). For America, restraint on the uncertainty and insecurity fomented by the threat perceived by China diminished with defensive strategies designed to deter by denying, raising the risk of failure in conventional conflict without the need to resort to punishment with nuclear forces, supporting stable deterrence and attenuating the security dilemma. But China perceived uncertainty and insecurity due to counterbalancing under anarchy compounded by geographically proximate threats. Despite no direct threat, China leveraged nonnuclear forces to deter nonnuclear threats, contest unipolarity, and balance regional influence.

China could shift the burden of conflict to an aggressor, respond to ambiguous provocation, and not lose control of strategic spaces or risk conflict, and, except for NWSs, limit adversarial response to ambiguous provocations without losing control (e.g., the South and East China Seas) and risk conflict (Mitchell, 2015). However, the resulting interstate stalemate fomented hybrid and proxy conflicts, particularly in non-NWSs (e.g., Taiwan), where limited action could be conducted without serious risk (Reynolds, 1989). China carried out such actions under the guise of peaceful development in contrast with policy. China thus relied on offensive strategies like the threat of retaliation to increase adversarial costs through punishment (however, this was perceived as MAD-based, more competitive, and aggressive), and mixed offensive and defensive strategies with non-

nuclear forces to deny adversarial objectives and impose punishment on nonnuclear threats (Bunn and Sokolsky, 2001; Glaser, 1992; Reynolds, 1989; Nguyen, 1989).

China's mixed military strategy resulted in a net gain to deterring and defeating threats due to more optimal choices that increased capacity and, thus, policies augmented efficiency and utility to security. But in doing so and in the absence of political strategies to defuse threats, China exacerbated the security dilemma, threatening defensive capacity and fomenting arms races and ASMs (Glaser, 1992). Policy incongruities thus diminished adversarial security insofar as modernization threatened their deterrent and increased the threat perception of Chinese strategies (Glaser, 1997; Jervis, 1978 and 1976).

Certain Chinese actions could have limited that perception, even if deceptively: e.g., greater transparency, conditioning military modernization, reducing offensive forces, and arms control. But domestic structures (particularly those that benefited) exaggerated adversarial, particularly American, offensive potential and imputed malign intent (Van Evera, 1998; Glaser, 1997). However, adversaries distrusted China's strategies, namely given incongruities between articulated policy and its implementation based on offensive strategies which, in a typical spiral model, drove adversarial counterbalancing to reduce uncertainty about China but which, in turn, threatened China's deterrent (Glaser, 1997).

Chinese policies fuelled the security dilemma and arms races and raised the likelihood of conflict insofar as offensive strategies to its detriment reduced its capacity to deter and defeat (Glaser, 1997). Due to the reduction in security resulting from mutual insecurity, political strategies would have helped defuse threats that induced under-balancing and limited offensive and unilateral defensive strategies (Glaser, 1997). Increasingly adequate nonnuclear forces supported more efficient reliance through

conventional deterrence by denial by denying adversarial objectives rather than through compellance (Mitchell, 2015). Doing so maintained Chinese advantage in conflict and limited its reliance on nuclear forces despite qualitative modernization through mobility, dispersion, survivability, and accuracy of offensive forces (Nguyen, 1989). This did not require that China maintain an imbalance of forces but rather those adequate to deny.

5.1 U.S. and Chinese Balancing

Assessments of the balance of military capabilities and the resolve of America and its allies to use force factored into Chinese calculations about how far it could assert itself, including over disputed territories and by undermining U.S. extended deterrence in Asia. Like Russia, distrust and hawkish domestic structures leveraged perceived threats from America and its allies to increase reliance on nuclear forces, even though they were ineffective for deterring prevailing nonnuclear threats. China emphasized theatre-range military capabilities but conflict with America or its allies would have been disastrous. Nonetheless, uncertainty as to American military capabilities and its alliances fostered Chinese insecurity and the modernization of military capabilities it perceived as just, defensive measures. More efficient Chinese balancing that was less likely to pose a threat would have prioritized nonnuclear forces and similar reliance on nuclear forces.

China's nuclear posture would have changed radically if faced with a significant deterioration in Sino–American or –Indian relations driven by a nuclear threat (Chase et al., 2015) accentuated by territorial disputes with India and America's allies. China challenged America throughout Asia as its defence spending grew and reliance shifted toward modernized, survivable second-strike nuclear forces (which are harder to locate and destroy) despite the potential for escalation over Taiwan and Japan. Undergirding

this was a misperception that American MD and advanced nonnuclear forces supported nuclear force superiority over China (Zhao, 2015). This fomented China's shift toward survivable nuclear forces. But as American concerns did not centre on China's nuclear forces, Chinese actions did not drive a similar shift in America's nuclear posture.

Maintaining stable Sino–American nuclear relations was critical to the interests of both NWSs and America's allies (Colby, 2014). Relations were stable because of nuclear forces and China's commitment to a restrained nuclear posture anchored on a lean and effective nuclear force and no-first-use policy (Colby, 2014). But the balance of non-nuclear forces in Asia, concomitant potential for conflict, and qualitative modernization of nuclear forces undermined relations (NTI, 2014; Zhong, 2012a; Colby, 2004). While American long-range, precision strike forces did not negate China's or Russia's retaliatory nuclear force capacity, they made American use of nonnuclear forces against adversarial nuclear forces possible (a concern China and Russia shared) (Saalman et al., 2013). China thus co-located its nonnuclear and nuclear forces and developed joint C2 systems as a deterrent to American nonnuclear precision strikes as it is difficult to distinguish dual use forces with potential conflict escalatory effects (Saunders, P., 2014).

Despite efforts by America to ameliorate concerns regarding its MD and long-range precision–strike capabilities, China perceived that such capabilities undermined its nuclear deterrent and counterstrike capacity (Chase et al., 2015; Xiaosong, 2013; Zhang, 2012a). Even though China made less related public statements than Russia did, U.S.-led MD posed a greater threat to China than to Russia, and China could have responded with a larger and more advanced nuclear force with counterforce and countervalue targeting and a first-strike nuclear policy (Saalman et al., 2013). Instead, it pursued a reactionary

policy of modernizing its small nuclear force, which it had shunned from doing in prior decades, shifting toward survivable platforms and nonnuclear force modernization (Chase et al., 2015; Keck, 2014). America will remain the focus on China's nuclear force, and theatre-range nuclear forces will deter regional adversaries like India (Chase et al., 2015).

5.2 Russia and Chinese Balancing

Chinese and Russian nuclear forces were incomparable in size and type (Saalman et al., 2013), and Russian nonnuclear forces were increasingly inferior vis-à-vis China's. Russia nonetheless adhered to Cold War tenets like keeping its nuclear force on nuclear–alert status, a MAD-based nuclear posture vis-a-vis America, and readiness to use nuclear forces in war–fighting (Saalman et al., 2013). This contrasted with China's nuclear posture which maintained a small force for retaliatory self-defence. China upheld its no-first-use policy, advocated for global zero (but refrained from arms control), and declared unconditional negative security assurances for non-NWSs (Saalman et al., 2013).

Despite a Soviet pledge in 1982, followed by a Sino–Russian agreement on no-first-use which Russia terminated in 1993, Russia lacked credibility because of its unpredictable nuclear force posture and significant investment in nuclear forces like ICBMs armed with MIRVs to maintain quantitative and qualitative parity with America and compensate for nonnuclear force inadequacies (Saalman et al., 2013).[138] In contrast, China learned from the U.S.–Soviet arms race and refrained from expanding its nuclear force, instead relying on a "sufficient and reliable" nuclear force which avoided the costly and politically sensitive reduction that Russia experienced (Saalman, et al., 2013: 1).

[138] Examples include Russia's relinquishment in 1993 of its no-first-use policy, declarations in 1997 and 2000 on nuclear deterrence of nonnuclear conflict and invasion, orders in 1999 for TNW expansion, and statements in 2006 and 2010 citing nuclear deterrence as a pillar. Saalman et al., 2013.

Because China and Russia perceived America to be their primary deterrent target, America remained the greatest factor binding them (Saalman, et al., 2013). However, China viewed Russia's military presence along their shared border with suspicion, which a Russian general once described as a deterrent: "despite friendly relations . . . , our army command understands that friendship is possible only with strong countries . . . who can quiet a friend down with a conventional or nuclear club" (Kipp, 2011a: 467).

5.3 India and Chinese Balancing

India was never a real threat to China. Before India developed nuclear forces, China's decisive victory in the 1962 Sino–Indian War gave it confidence that it could overwhelm India with nonnuclear forces, so it did not contemplate using nuclear forces against India absent a significant deterioration in relations (Zhao, 2015). Even after India developed a nuclear capability, China was not concerned with India's inferior nonnuclear forces. But as India modernized its nuclear force, China's concern for stable Sino–Indian relations increased (Zhao, 2015). Unlike other Asian neighbours that allied with America in response to China's regional assertiveness, nuclear forces did not play a major role in Sino–Indian relations, nor did they afford China an advantage in disputes with other Asian states, encouraging a Chinese focus on nonnuclear forces for nonnuclear threats and nuclear forces for assured retaliation (Zhao, 2015).

5.4 Arms Control and Chinese Balancing

The lack of Chinese arms control was tied to Russian and American nuclear forces (Saalman et al., 2013). While China's participation in arms control arguably would have been premature because of quantitative disparities, Russia sought to include China

(Saalman, 2015; Easton, 2015). By doing so, Russia may have also sought to stymie its own arms control with America and preserve its nuclear force by involving a third party, given the centrality of nuclear forces in Russian balancing, and to address transparency concerns over China's nuclear force and its ability to jump to strategic parity (Saalman et al., 2013). But China was reluctant because of arms control's intrusive nature. Further, China used nuclear proliferation instrumentally to advance its interests (Ford, 2015). China also believed it had minimized the size of its nuclear force, and even though its rate of nuclear force replacement with modernization was higher than force obsolescence, China did not significantly expand its nuclear force (Zhao, 2015; Wu, 2015).

China also saw arms control as a competition among superpowers (though it did not see itself as a superpower but rather sought to close military asymmetries with other powers, namely America), a means to constrain and disarm China, and undermining its retaliatory nuclear force that anchored strategic stability (Source 5, 2015; Zhao, 2015; Wortzel, 2015; Colby, 2014). While America saw arms control as an intrinsic good that existed in tension with interests, Chinese arms control—much like Russia's—was opportunistic and employed to get competitors to reduce their nuclear forces, including as a precondition for its own arms control (Wortzel, 2015; Ford, 2015; Saalman, 2015).

Until there is a tangible benefit from arms control, Chinese participation is a ways off (Saalman, 2015). CTBT implementation and intermediate nuclear force arms control could assist with moving NWSs away from nuclear forces (Lieggi, 2015). But smaller nuclear forces like China's require rigorous verification and afford advantages to NWSs with superior nonnuclear forces like America, thereby potentially undermining strategic stability (Yuan, 2015). Even so, arms control may serve China's interests as a means to

engage other NWSs, bolster its status as an arms control leader, and leverage concessions even as it expands its nuclear force to minimize vulnerability (Zhao, 2015; Yuan, 2015). While other NWSs must commit to reduce their nuclear force and reliance on them before China will pursue arms control, articulated policy will remain similar despite the modernization of nuclear and nonnuclear forces at the implementation stage (Saalman, 2015; Zhao, 2015a; Yuan, 2015; Acton, 2013b). Because policy articulation and implementation are intertwined, this incongruity in Chinese balancing policy undermines the credibility and effectiveness of its no-first-use policy (Saalman, 2015).

Mutually diminishing nuclear force retaliatory capacity could have been a basis for arms control if all parties showed they were vulnerable and avoided a nuclear arms race and nuclear escalation in conflict (Colby, 2014; Saunders, P., 2014; Saalman, 2014). However, China was unique as its small nuclear force and no-first-use policy forced it to modernize nonnuclear forces, as it was limited in compensating military inadequacies by numerically expanding its nuclear force for an assured first strike. China thus incited a regional nonnuclear arms race (see, e.g., Wall and Cameron, 2016) that increased the probability of localized conflict (Arbatov, 2013). Indeed, China constrained multilateral arms control because of its perceived need to retain nuclear forces for nonnuclear threats.

Other NWSs' military capabilities also conditioned Chinese arms control: e.g., China tracked American "bunker buster" nuclear forces, which convinced it that America was not serious about arms control but rather procured advanced, useable TNWs that—coupled with MD and advanced nonnuclear forces—discouraged Chinese arms control (Zhao, 2015; Yuan, 2015; Arbatov, 2013). As China held a deeply–rooted belief in MAD for strategic stability but saw nuclear war as improbable, China shaped its nuclear policy

around MAD, so the size of other NWSs' nuclear forces mattered to China (Zhao, 2015). Nonetheless, a larger nuclear force would not have served China militarily or politically, so China may pursue arms control if it serves its interests (e.g., to substantiate its peaceful rise) and if China can accept transparency and intrusive inspections (Source 5, 2015; Fish, 2015). Because China's nuclear force is based on survivable platforms, it can afford transparency and thereby enhance its deterrent (Zhao, 2015). In that sense and like Russia, arms control could help China be an equal with other NWSs (Zhao, 2015).

However, nuclear force modernization by Russia, China, and America will hinder qualitative constraints under arms control but may compel NWSs to negotiate (i.e., greater nuclear force survivability and insecurity driven by adversarial military forces can support arms control), though it may drive nuclear force modernization to compensate for nonnuclear force inadequacies (Saalman, 2015). Indeed, the threat of nuclear annihilation that underpinned Cold War arms control has been replaced with complacency with nuclear issues and a focus on nonnuclear modernization and threats (Saalman, 2015).

5.5 Chinese Balancing Paradigm

Table 6-7 outlines Chinese balancing driven by historical insecurities and regional and global leadership. Though there was a negligible need for nuclear forces, as evinced by China's small nuclear force, domestic structures advocated for reliance on nuclear forces at the policy implementation stage against, in particular, a growing American presence in Asia. China viewed its actions as defensive to maintain its regional leadership and assert itself vis-à-vis America. China did not rely on ASMs for its security and alienated neighbours because of its military modernization. Further, China's insular policymaking process meant that policy changes correlated with the benefits to the CPC.

Table 6-7: Chinese Balancing Paradigm	
Strategic Culture	Historically defensive and viewed force to defend interests as just.
National Interests	National sovereignty and control of disputed territories like Taiwan.
Geopolitical Goals	Maintain regional leadership and become a global power.
Pressing Threats	Domestic unrest and growing U.S. role and alliances in Asia.
Security Context	Increasingly unfavourable given regional dynamics and growing U.S. role.
Armed Forces	Rapidly modernizing military capabilities.
External Balancing	Little prioritization of—and dependence on—ASMs.
Military Reform	Continuous structural reorganization driven by new military capabilities.
Regime Type	Closed to domestic or external influence.
Domestic Structures	Divergent and relatively closed with no history of arms control
DI	Effective at supplying demand upon indigenous DI.
Nuclear Posture	Not transparent despite nuclear force qualitative modernization.
Arms Control	Potentially converging arms control with other NWSs at lower force levels.
Deterrence Goal	Maintain sufficient and effective retaliatory nuclear–strike capacity.
Nuclear Forces	Increasingly relied upon but unlike China's economic strength and modernization, not central to power, status, or foreign policy leverage.
Utility of Military Capabilities	Increasingly key deterrent, but heavy investment in nonnuclear forces central to accomplishing strategic missions.

6. Conclusion

China perceived uncertainty and insecurity under anarchy due to counterbalancing by America and its regional allies, including geographically proximate adversarial forces. Despite no direct threat, as a revisionist state, as anticipated by offensive neorealism to explain interstate tensions, China leveraged offensive capabilities and strategies to deter and counterbalance America in Asia perceived as threatening China's independence, regional hegemony, and power under multipolarity. The research adds to neorealism by examining this regional power not limited by geography but constrained by power projection capabilities and which pursued out-of-region projection to balance America. The research offers a means to distinguish such offensive strategies through policies resulting in a net loss to deterrence with an assessment of military capabilities beyond what is adequate for security vis-à-vis articulated threats driven by shifts in interstate military power. Inefficient Chinese balancing resulted from incongruent policies and

balancing types based on conventional deterrence by punishment with adequate non-nuclear forces for self-help upon offensive strategies backstopped by nuclear retaliation.

Consistent with neorealism, realizable preferences through self-help is greater with nonnuclear forces in a nonnuclear–threat dominated context with military advantage and power through security. China also shows NWSs tend to act alone or imitate and that internal balancing is the most effective means to balance even absent a direct threat. This includes by reducing uncertainty and security and contesting hegemony with deterrence with punishment and shunning external balancing. Such balancing, however, shifted competition to the tactical level with lower use thresholds and reduced relative gains, and hybrid and proxy conflicts in the South and East China Sea. Further, Chinese devaluation of Asian extended deterrence under multipolarity may compel nuclear force revaluation even without acute threats and encourage buck-passing characteristic of the Cold War.

China was ambivalent—even schizophrenic—about its role as it abandoned its "peaceful rise" while accumulating economic growth, fomenting uncertainty (including in Beijing) about its strategies: i.e., China's military modernization (though from a very low base) and actions beyond its borders fuelled regional anxiety while demanding it be treated like a major power with all rights (but not the responsibilities) and claiming to be a weak victim of past colonial abuse. Russia, America, and China engaged in a struggle for influence that strengthened regional powers like China and which China replaced Russia as the interlocutor between and balancer of the East and West (Arbatov, 2014).

Like Russia, China pursued military modernization driven by defence spending to increase the adequacy of military capabilities. While nonnuclear force modernization attenuated reliance on nuclear forces, the evolving regional security context driven by

American actions in Asia coupled with proliferating partnerships and regional arms races shifted policy toward increasing resource, qualitative, and operational balancing upon nuclear forces. This was reflected at the implementation stage by the modernization of nuclear forces and survivable platforms despite historically similar reliance on nuclear forces in articulated policy anchored on a no-first-use policy.

Modernization was a means for China to assert itself regionally and beyond, while relying on nuclear forces to deter superior nonnuclear forces (despite potential vertical conflict escalation effects) and undermine American positive nuclear assurances to allies. Military modernization and regional insecurities—especially vis-à-vis America—tested its nuclear policy rooted in deterrence of only existential nuclear and nonnuclear threats (Wu, 2015). China was confident that no adversary threatened its existence, so it could maintain a no-first-use policy and backstop nonnuclear forces with nuclear forces (Wu, 2015). But its no-first-use policy was not credible as its nuclear force was vulnerable and ineffective to launch a retaliatory strike even with warning, so it modernized its nuclear force despite adversarial nonnuclear counterforce strike capacity (Arbatov, 2014).

But while advanced nonnuclear forces could help induce reduce U.S. and Russian reliance on nuclear forces, the link was different for China. As it did not necessarily rely on nuclear forces for counterforce targeting, it did not substitute nuclear-only missions with advanced nonnuclear forces as America did (Ford, 2015). Indeed, insofar as China relied on nuclear forces for counterforce operations (e.g., A2/AD attacks on carriers), as Russia did in its near abroad, this increased its reliance on nuclear forces because the risk of vertical escalation to nuclear forces was the constraint on America and its allies against their efforts to deter Chinese coercive actions with nonnuclear forces (Ford, 2015).

Because China tended to rely on nuclear forces to deter U.S. and Russian nuclear pre-emption or a hypothesized invasion of the mainland, advanced Chinese nonnuclear forces made China reliant on nuclear forces for tactical scenarios not formerly envisioned (Ford, 2015). China could not reduce reliance on nuclear forces at the implementation stage if its nonnuclear forces did not maintain an adequacy to asymptomatically substitute with nonnuclear forces despite nuclear forces enhancing but not guaranteeing projection (Saalman, 2015). But China was unlikely to embrace nonnuclear forces as a substitute because it perceived America to have superior nonnuclear forces (Saalman, 2015).

Chinese nonnuclear force power projection increased Russian reliance on nuclear forces and Japanese and South Korean dependence on U.S. extended deterrence, inducing them to question their own nuclear non-proliferation commitments (Ford, 2015). Hence, China's growth in military capabilities made nuclear forces more relevant in Asia vis-à-vis extended deterrence and non-proliferation commitments (Ford, 2015). Nonetheless, China saw its military capabilities and strategies as defensive—but lacking transparency and verification hindered credibility and undermined security (Zhao, 2015).

America posed the least existential threat to China. However, China perceived with concern U.S. MD and nonnuclear forces, coupled with its extended deterrence in Asia, as evidenced by China's offensive strategies targeting America and its allies. China feared regional conflicts could engulf America or others requiring the use of nonnuclear forces and perhaps nuclear forces. But as China relied on a small nuclear force and was concerned with military asymmetries vis-à-vis America and other nonnuclear threats, it prioritized nonnuclear forces. Unlike Russia, China did not expressly leverage nuclear forces to position as a power, but transparency as to China's military capabilities and

reliance on nuclear forces are central to positioning China as a power, allaying mutual concerns, and encouraging U.S.–Russian arms control (Source 5, 2015; Zhao, 2015).

China is unlikely to eliminate its small nuclear force because of the assurances it provides, particularly vis-à-vis superior adversarial nonnuclear forces (which—as it does with Russia—will also hinder arms control). As with Russia (Ivanov, 2010; Sokov, 2011) and would be the case with America in the inverse, China's thinking on the threat posed by adversarial nuclear forces is driven by worst–case scenarios that will justify the supply of military capabilities to deter real and perceived threats.

Against an evolving threat context, China could rely on nuclear forces to deter conflict or use nuclear–capable conventional delivery systems to threaten nuclear use, but this is antithetical to its strategic culture and inconsistent with the size and makeup of its nuclear force. China recognizes that variegated advanced nonnuclear forces are credible deterrents and responses to nonnuclear threats. Unlike Russia and like America, China relied on nonnuclear forces to demarcate its sphere of influence, assert territorial claims, and support its latent drive for global status. Because China's threats are of a nonnuclear nature, it can reduce reliance on nuclear forces without changing its nuclear posture. But this depends on maintaining a competitive DI and generating adequate nonnuclear forces.

6.1 Prescriptive Lessons

The research yields observations relevant to China and similar NWSs. First, non-nuclear forces and qualitative nuclear force modernization at similar quantitative levels were prioritized. Second, no proactive or reactive nuclear force reliance reduction was engaged at either policy stage. The supply of military capabilities was incongruent at the

implementation stage with demand in articulated policy. Congruence coalesced around defence spending and DI modernization resulting in more domestically–sourced forces.

Third, threats drove a transition to greater reliance on nonnuclear forces—namely U.S. actions in Asia. Fourth, domestic structures marginalized arms control. Reliance was inefficient absent an existential threat despite increasingly adequate nonnuclear forces and reliance on nuclear forces to deter threats. Even so, China had no need to threaten or impose unacceptable punishment or defeat threats with nuclear forces because its non-nuclear forces were increasingly adequate across nonnuclear threats.

The chapter shows that NWSs balance despite polarity and hegemony, and that internal balancing is preferred in multipolarity with military asymmetries. But this is subject to power shifts for realizable preferences with self-help and to reduce adversarial power through the erosion of military advantage and manipulation of adversarial threat perception. As anticipated by balance of power, China counterbalanced America and other states, even if not threatened, with primarily offensive military capabilities and strategies. The analysis of policies articulated and implemented by domestic structures explains Chinese balancing, relative gains, and military asymmetries with systemic effects, compounded by geographically proximate adversarial military capabilities and strategies. This chapter also validates realism to explain balancing under anarchy through internal balancing including of distant competitors limited by the adequacy of capabilities for power through security, and addresses why balancing with adequate forces not just geography encourages offensive strategies to contest adversarial dominance.

China will continue to rely on symmetrical and asymmetrical nonnuclear forces and define threats and military capabilities based on reactive and proactive policies that

maintain reliance on qualitatively modernizing nuclear forces, marginalize arms control, and undermine strategic stability. China will continue offensive strategies—even if not overt, as it views them as defensive and just, particularly at the implementation stage—because they help justify military procurements and challenge Western power in Asia.

This chapter supports the link between adequacy of military capabilities across threats, the mediating variables, and balancing. The research posits that a NWS may pursue arms control during shifts to lower and more efficient reliance on nuclear forces. China marginalized arms control and modernized its military capabilities in the context of the mediating variables. In the case of China or NWSs like it, and during periods of insecurity about the adequacy of nonnuclear forces across nonnuclear threats, reliance on nuclear forces may increase or arms control marginalized, more adequate nonnuclear forces may help reduce reliance on nuclear forces or foment arms control, or periods of increasing reliance on nuclear forces may correlate with nonnuclear force modernization efforts or arms control marginalization.

Section III: Explaining Balancing

Section II examined the link between reliance and the adequacy of military capabilities across threats. Chapter Four showed how underbalancing—mainly due to inadequate nonnuclear forces—compels overreliance on nuclear forces and unreliable arms control. Chapter Five examined efficient balancing because of adequate nuclear and nonnuclear forces. Lastly, Chapter Six examined relatively constant articulated reliance policy but incongruity with its implementation and resultant inefficient reliance on nuclear forces despite modernization of nonnuclear forces and no arms control.

Section III compares the cases, examines the articulation and implementation of reactive and proactive supply and demand policies resulting in differing balancing, and discusses means to address incongruities between military capabilities and threats with reactive and proactive supply and demand policies, thereby reinforcing the credibility and effectiveness of balancing and capitalization of self-help. It shows that adequate non-nuclear forces can support more efficient balancing across threats. Section III summarizes the findings, analyses how the explanatory model can help explain balancing for NWSs, considers theoretical and prescriptive arguments, discusses areas for further research, and concludes by underscoring the importance of adequate nonnuclear forces for balancing.

Chapter Seven: NWS Balancing

This chapter outlines how the research relates to the conceptual discussion in Section I, comparatively applies the explanatory model to the case studies to advance descriptive and prescriptive arguments, and explains how the comparative case study analysis validates the research question and argument.

The anarchic system is fraught with evolving threats. States gradually test with uncertain implications the limits of deterrence and conflict—often in the "gray zone" between war and peace—and are undeterred below conventional deterrence. NWSs must convince a threat of the costs of aggression and maintain the burden of conflict and escalation with adversaries. NWSs, as primary securitizing actors, must provide for their and allied security and rely on their resources (or those of others) for security through military capabilities and thereby manage real and perceived threats.

As states mistrust others under anarchy, they leverage military capabilities for power through security to deter external military threats and counterbalance adversarial relative power driving insecurity and uncertainty. This is compounded by multipolarity, rewarding self-reliant states that balance efficiently absent direct threats. A threat– and capabilities–based mixed nuclear–conventional defensive deterrence by denial and counterforce targeting strategy based on military capabilities is more effective in a non-nuclear–threat dominated post-Cold War and adaptably deters and defeats and produces costs too high to a threat relative to the gain sought. That strategy permits a spectrum of use, increasing utility to security, containing escalation, limiting reliance on, and raising the threshold of, use of nuclear forces, more efficiently allocates scarce resources, and contains inter-state stalemates encouraging hybrid and proxy conflicts.

The research examines the articulation and implementation of policies to assess why NWSs underbalance by inefficiently increasing reliance on nuclear forces at the policy implementation stage with diminished utility to power through security by undermining the capacity and credibility of deterrence. NWSs do so because they are unable or unwilling to pursue policies with more efficient balancing as their military capabilities are inadequate, resulting in incongruent policies and balancing types. The choice of cases provides relevance as balancing was prominent during the period studied. The comparative approach is important to validate the argument by comparing policy articulation and implementation across cases to identify trends within and across cases to understand balancing policies, causes of underbalancing, implications for power through security, and identify which policies support efficient balancing conditioning realizable preferences with self-help determining interstate power through security. The research, therefore, provides categorizations of observed occurrences and correlates results to show balancing trends to reinforce the argument and explain underbalancing.

Balancing results from a domestic policy process vis-à-vis real and perceived external military threats that condition that process. Inadequate nonnuclear forces due to incongruities in the policy process condition the credibility and effectiveness of balancing and increase reliance on nuclear forces—with diminished utility to security—and adversarial gain through nonnuclear conflict. Within a specific time period, the research examines threats identified by NWSs relative to the adequacy of military capabilities to deter and defeat threats. To operationalize the analysis, the research identifies policies articulated and implemented by domestic structures for security and how military capabilities relate to deterrence and conflict, which can be compared across cases. The

arguments tested and validated through the research are based on an inductive analysis of the articulation and implementation of supply and demand policies as input measures and military capabilities across threats as output measures and driven by a comparison of the cases. The research thereby develops relationships within and across the cases to validate the explanatory model and show the direction of efficiency of balancing.

The analysis of the variables to explain balancing through the case comparison identifies which supply and demand policies support balancing and capitalization of self-help through deterrence and conflict in a nonnuclear–threat dominated post-Cold War context. The research also examines less rational allocation of resources to understand the causes and effects of such policies for security and helps explain why Russia and China and NWSs like them underbalanced, in particular by pursuing offensive capabilities and strategies and raising reliance on nuclear forces at the policy implementation stage with diminished utility to security despite a threat context dominated by nonnuclear threats and diminished reliance on nuclear forces in articulated policies. Section II suggests that because of the different types of balancing resulting from supply and demand policies, Russian and Chinese balancing was not as efficient as American balancing was due to inadequate nonnuclear forces, which led to uncapitalized self-help through deterrence and conflict. The effects for security were significant as balancing conditions deterrence and conflict, strategic stability, arms control, conflict escalation, and power through security.

In a nonnuclear–dominated threat context accentuated by power competition, the applicability of conventional deterrence is broad, namely for "less–than–vital" threats, and helps reduce reliance on nuclear forces and support efficient balancing. As non-nuclear forces are a relative capability, they demand a credible deterrent with self-help by

maintaining the fear of conflict and escalation with threats, namely due to self-deterrence and as nuclear forces have, except for deterring existential threats and limiting escalation to nuclear use, little utility against nonnuclear threats. A NWS thus increases realizable preferences with self-help and utility to power through security as adversaries perceive relative loss, meaning scarcity of interstate threats relates to deterrence effectiveness.

Nuclear forces, of which only a limited number of survivable warheads are needed, are too destructive for use, lack credibility, have diminished threat perception, shift competition to the tactical level, and reduce gains without risking devastation. They thus add little to power through security as the types of conflicts they are useful for are rare, placing a premium on nonnuclear forces, and, therefore, do not proffer effective self-help and reduce realizable preferences through balancing in the balance of power. This is particularly so under offensive strategies that may not deter defensive capabilities, decreasing security by communicating malign strategies, fuelling arms races, the security dilemma, and ASMs, and threatening adversarial deterrence resulting in a net loss in deterrence (Glaser, 1997, 1992, and 1990). In contrast, defensive strategies result in a net gain through denial and retaliation (Glaser, 1997; Steinbruner, 1987).

The findings substantiate a new view of deterrence and conflict that accounts for prevailing low–intensity or non-lethal threats and military modernization that increases adequacy and adversarial contact (Gartzke and Lindsay, 2016). Deterrence and targeting across operational domains and analysis of how domestic structural policies implicate balancing is needed (Gartzke and Lindsay, 2016). The research supports that analysis and posits that efficient balancing requires a spectrum of adequate military capabilities that maintain the fear of conflict and escalation with adversaries and adaptably deter and

defeat threats. That strategy is useful for maintaining advantage against threats that operate below the threshold of nuclear and conventional deterrence, particularly when nuclear forces are impractical against nonnuclear threats, even if acute or absent ASMs.

For NWSs like the cases, defensive strategies are prudent against uncertainty and stabilize strategic stability while denying adversarial goals or confidence in them. Non-nuclear deterrence and nuclear countervalue targeting raise the threshold of use of nuclear forces and diminish escalation, capitalizing on self-help and facilitating arms control due to reduced nuclear targeting. But declining utility of nuclear forces may emphasize other escalatory forms of deterrence. Hence, political strategies to defuse related threats, while communicating strategies to deter and defeat threats, are crucial to extended deterrence and limiting hybrid warfare, proxy conflicts, and nuclear proliferation. However, in their absence, military modernization for defensive strategies fuels the security dilemma, arms races, conflict, and mutual insecurity resulting in a net reduction of security.

As it is hard to rely on offensive deterrence and targeting strategies—particularly for extended deterrence—because many threats evade even conventional deterrence and operate below identifiable levels of punishable aggression, a spectrum of adequate forces retains the fear of retaliation and escalation in adversaries by responding to real and perceived threats through adversarial prudence rather than compellance (Mitchell, 2015). And as occurred with Russia, offensive capabilities and strategies based on punishment increase adversarial gain through nonnuclear conflict if conventional deterrence fails. The research substantiates that strategy due to threats that dominate the attention of powers like Russia, America, and China, which deserve special attention as they have the most leverage in the anarchic system. This questions inefficient reliance on nuclear forces

meant for interstate conflict among NWSs, and, apart from nuclear deterrence and existential threats, are less efficiently addressed through offensive nuclear forces.

None of the cases faced an existential threat or high-intensity all-out conflict and mainly engaged in hybrid or proxy low-intensity contingencies out-of-area against state and non-state actors conducting asymmetric warfare below the threshold of nuclear and often conventional deterrence. Behind the assurances afforded by nuclear forces, Russia and China in particular engaged in balancing in that lower spectrum below identifiable levels of punishable aggression and under the deceptive guise of defensive strategies. In such contingencies that do not rise to large-scale conventional, much less nuclear forces, nonnuclear forces have specific roles. Within that context, the threat or use of nuclear forces is impractical, and NWSs must rely on a spectrum of nonnuclear forces not to initiate conflict but to deter adversaries and deny their objectives and confidence in them.

1. Relevance of Balancing Typology

To structure the analysis, this section utilizes the reliance typology introduced in Chapter Three as Table 7-1 and reviews the case studies to maximise comparison.

Table 7-1: Balancing Typology

Stage	Typology	Underbalancing	Efficient Balancing
Articulation and Implementation	Balancing types reinforce efficient balancing across threats.	Policies are unable to—or do not—support efficient balancing across nuclear and/or nonnuclear threats with diminished self-help through deterrence and conflict.	Policies support efficient balancing across nuclear and/or nonnuclear threats with increased self-help through deterrence and conflict.

1.1 Articulated Policy Reinforces Efficient Balancing

Consistent with realism, security is not absolute but a spectrum—more or less external military threats including adversarial power, which can be addressed by varied

types and levels of military capabilities and includes adversarial non-military objectives to maintain or renew the power balance, contest dominance, or deter others. An effective approach to security is examining real and perceived threats and available means in a time period with policies. States identify real and perceived threats in policy by military power, geographic proximity, and offensive military capabilities and strategies. Perceived threats are a function of power asymmetry, for if a state has more power, risk is perceived under anarchy as states as unitary actors rely on self-help to balance external military threats including asymmetries driving threat perception. The cases do not threaten each other except through nuclear forces as there are no direct threats of armed conflict.

Military power can be leveraged through policies, and variation explains systemic imbalances with the anarchic system indirectly causal of balancing and policy directly causal with self-reliant states better placed to balance. Threats drive balancing motivated by avoiding relative losses and to attain power with security, and the greater the capacity to do so the less the relative power of others. Balancing depends on domestic structures determinative of military capabilities embedded in strategic cultures pursuing security vis-à-vis threats for the state as a unitary actor in the anarchic system. They account for the articulation and implementation of policies vis-à-vis threats as a unitary actor through military capabilities and strategies to explain shifts in the balance of power leveraged by policies to direct the anarchic system towards realizable preferences. Self-reliant states are better placed to erode military advantage and manipulate adversarial threat perception through balancing. But divergence because of the inability or unwillingness of domestic structures to articulate or implement efficient balancing policies results in diminished relative gains due to underbalancing through realizable preferences, and vice versa.

This explains relative gains and losses through balancing with systemic effects, not necessarily outcomes or balances of power. Through policies, domestic structures identify threats and articulate and implement balancing for security responsive to the anarchic system even when not threatened. Policy variation explains threat responses and systemic power imbalances through relative gains and losses but not necessarily balances of power or outcomes. Policy is meant to focus domestic structures on power through security with the simplifying assumption that they articulate and implement policies to maximise self-help. But absent convergence, the means may not be available to implement policy, particularly through internal balancing which is preferred under multipolarity.

Consistent with realism, domestic structures, for the state as a unitary rational actor, identify threats to security in policy and respond to threats through policy. Policy choices are based on a cost-benefit analysis with domestic structures seeking to maximise self-help through realizable preferences and costs to threats through military capabilities and strategies (Larsen and Kartchner, 2014). Defensive strategies reduce costs and adversarial benefits, and nuclear use results in the least benefits and greatest costs.

Reliance on nuclear forces in Russian policies underwent two transformations. Until the early 2000s, reliance fell sharply despite inadequate nonnuclear forces, but then it rose because of an evolved threat matrix and nonnuclear forces Russia perceived as inadequate to deter real and perceived threats (Source 1, 2015; Source 6, 2015). Russia increasingly relied on calculated uncertainty, the threat of escalatory first-strike, or mass retaliation at both policy stages to be perceived as threatening to deter and defeat superior nonnuclear forces and compensate for insecurities regarding its nonnuclear forces—

particularly vis-à-vis Western nonnuclear forces—despite the more effective deterrent capacity of adequate nonnuclear forces with reduced conflict escalation effects (Source 1, 2015; Source 2, 2015; Source 6, 2015; Barabanov, 2012; Podvig, 2015; Herspring, 2011; Feneko, 2009; Sokov, 2010, 2009, 2004, and 2002).

Russia shifted away from more to less efficient reliance through the deterrence of nuclear threats with nuclear forces through countervalue targeting, and nonnuclear threats with nonnuclear forces through counterforce targeting, by adding to its nuclear force the mission of deterring nonnuclear threats through counterforce and countervalue targeting with greater conflict escalation effects upon a strategy that it could control escalation and nuclear war if it were the initiator (though the declaratory policy of the USSR was that the use of nuclear forces should be banned and stockpiles destroyed) (RFSC, 2010; Haas, 2011; Sokov, 2010 and 2002; Larsen and Kartchner, 2014; Ullman, 1972). More efficient balancing was hindered by cost–effective security through reliance on nuclear forces that Russia perceived to have greater utility because of Russia's perception of external threats and in the absence of adequate nonnuclear forces and ASMs (Podvig, 2015; Sokov, 2009 and 2002). Russia therefore modernized its nuclear force and nuclear–retaliation capacity but at a lower threshold of nuclear use should conventional deterrence fail.

Conversely, American policies reduced reliance on nuclear forces by limiting reliance to primarily existential threats and later expressly forbidding them against non-NWSs in compliance with the NPT, further reducing missions assigned to nuclear forces. In doing so, America recognized the adequacy of its nonnuclear forces for nonnuclear threats, growing denuclearization of foreign relations, improvements in MD, and the inadequacy of nuclear forces for nonnuclear threats (DOD, 2010b). Such balancing

reflected the American understanding that nuclear conflict could not be restricted or contained, and, in contrast to Russia's strategy to nuclear conflict, escalation in nuclear conflict could not be foreseen or controlled once initiated no matter by whom.

America espoused a mixed nuclear–conventional strategy based on conventional deterrence by denial. She shifted toward more efficient reliance by deterring existential threats with nuclear forces through countervalue targeting (but reserving the counterforce option), and nonnuclear threats with nonnuclear forces through counterforce targeting (while reserving the countervalue option) with lower conflict escalation effects. America thus focused on the adequacy of its nonnuclear forces, defensive capabilities like MD, and qualitative SNF modernization at reduced force levels, thereby enhancing its nuclear deterrent and retaliation capacity but at a higher threshold of use of nuclear forces.

Lastly, nuclear forces in Chinese policies focused on a relatively small albeit sufficient and effective nuclear force able to survive an attack and retaliate to inflict unacceptable damage (DOD, 2013). In articulated policy, China would have never first threatened or used nuclear forces against a non-NWSs or nuclear force–free zone (DOD, 2013). However, China was unsure how it would use nuclear forces in conflict under its no-first-use policy (Zhao, 2015). To the extent its no-first-use policy appeared credible, China's ability to deter nonnuclear attacks with the threat of a nuclear response was reduced because it opened itself to a nonnuclear attack, which meant it had to tend to the adequacy of its nonnuclear forces. Therefore, where tensions existed (e.g., in the South or East China Seas), and where there were asymmetries in nonnuclear forces, the threat or use of nuclear forces by the weaker side (e.g., China or Russia) was the assurance against coercive pressure from a superior nonnuclear force (e.g., America) (Podvig, 2015).

The potential costs of nuclear escalation in conflict were lower than sustaining nonnuclear force aggression or—as was the case with Russia—*a priori* supplying more adequate nonnuclear forces to deter a superior or existential nonnuclear threat. As with Russia, because the creation (or perpetuation) of nonnuclear force parity with America was challenging for China, the trade-off for raising the threshold of use of nuclear forces for China—such as through a no-first-use policy—was to supply more adequate non-nuclear forces to deter nonnuclear threats. Particularly after the year 2000, China thus focused on modernizing its nonnuclear forces through exponential growth in defence spending and the transformation of its DI, while modernizing a survivable nuclear force.

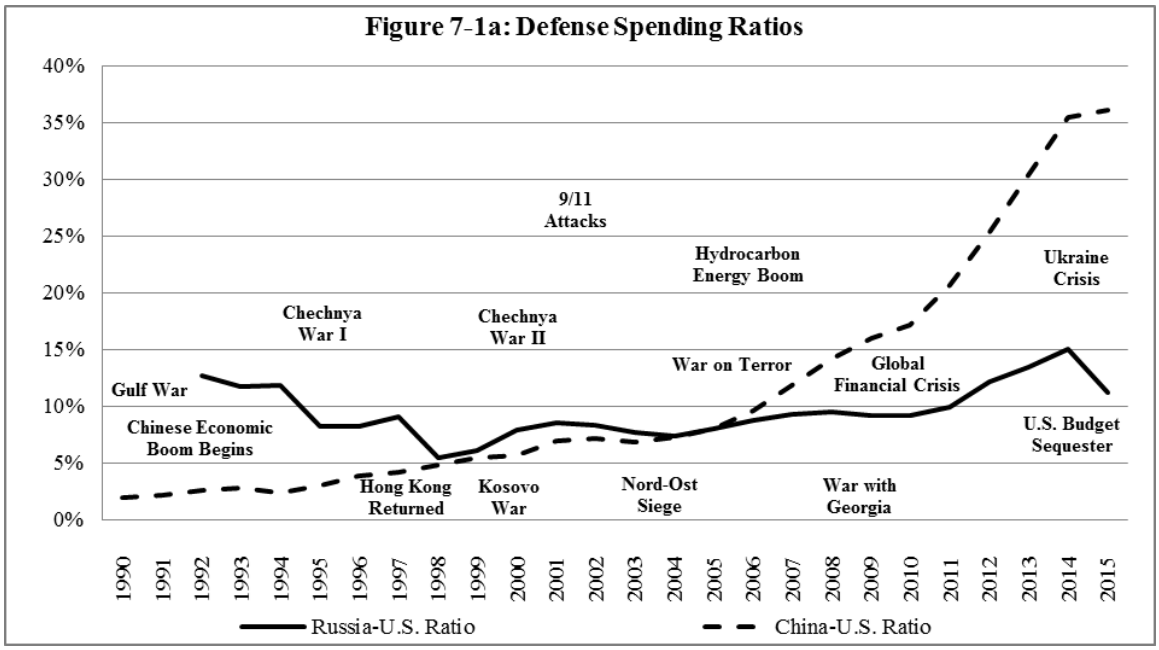
As China's threats evolved with its ambitions, it recognized the prevalence of nonnuclear threats in a de-nuclearized context and, therefore, increasingly focused on modernizing its nonnuclear forces. It shifted toward more efficient reliance involving the deterrence of nuclear threats through retaliatory countervalue targeting, and nonnuclear threats through counterforce targeting with lower conflict escalation effects, despite its no-first-use policy and uncertainty as to how it would use nuclear forces in conflict. China thus focused on modernizing its nonnuclear forces and SNFs, enhancing its nuclear deterrent and retaliation but at a threshold of use of nuclear forces higher than Russia's.

1.2 Policy Implementation Reinforces Efficient Balancing

The way NWSs implement policy reinforces efficient balancing. Investment, military capabilities, and deployment configuration is how NWSs articulate, materialize, and communicate deterrence and conflict strategies. While articulated policy and military capabilities are the more visible balancing types, they are not the most determinative, and there may be incongruities among balancing types resulting in un-capitalized self-help.

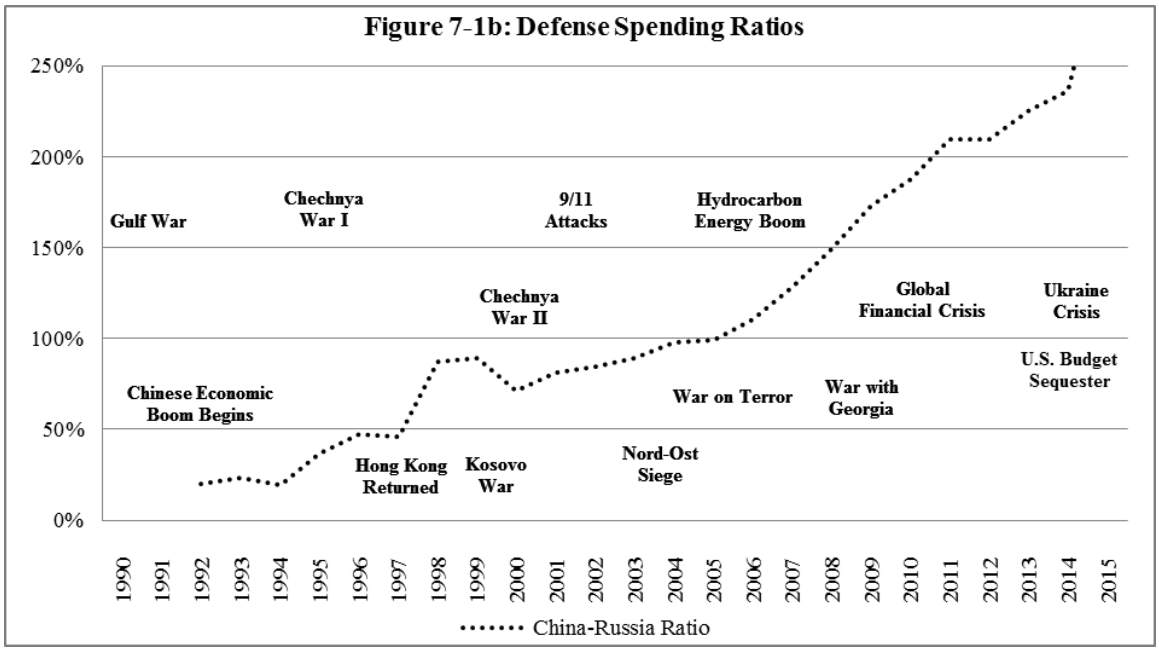
1.2.1 *Resource Balancing*

Defence spending reflects strategy (Clover, 2015). As military capabilities are a function of past and present spending, spending trends indicate military capabilities the NWS may rely on. Section II discussed how pivotal the DI is to efficient balancing (i.e., the ability to furnish the military capabilities demanded, in the context of the mediating variables). The DI—a correlative of defence spending—is the main domestic structure that drives supply. If the DI is unable to supply adequate nonnuclear forces across non-nuclear threats absent the import of military capabilities, inefficient nuclear reliance may increase by assuming missions otherwise assigned to nonnuclear forces, particularly with the perception of an acute external military threat, absence of ASMs, high utility of nuclear forces, or cost–effective security with nuclear forces (Sokov, 2002; Ford, 2010; Colby, 2010). Defence spending and the DI, therefore, play a pivotal role in adequacy.



Reliable publicly available defence spending data to draw certain comparative analyses was limited. For example, lacking data on nuclear force spending or variation

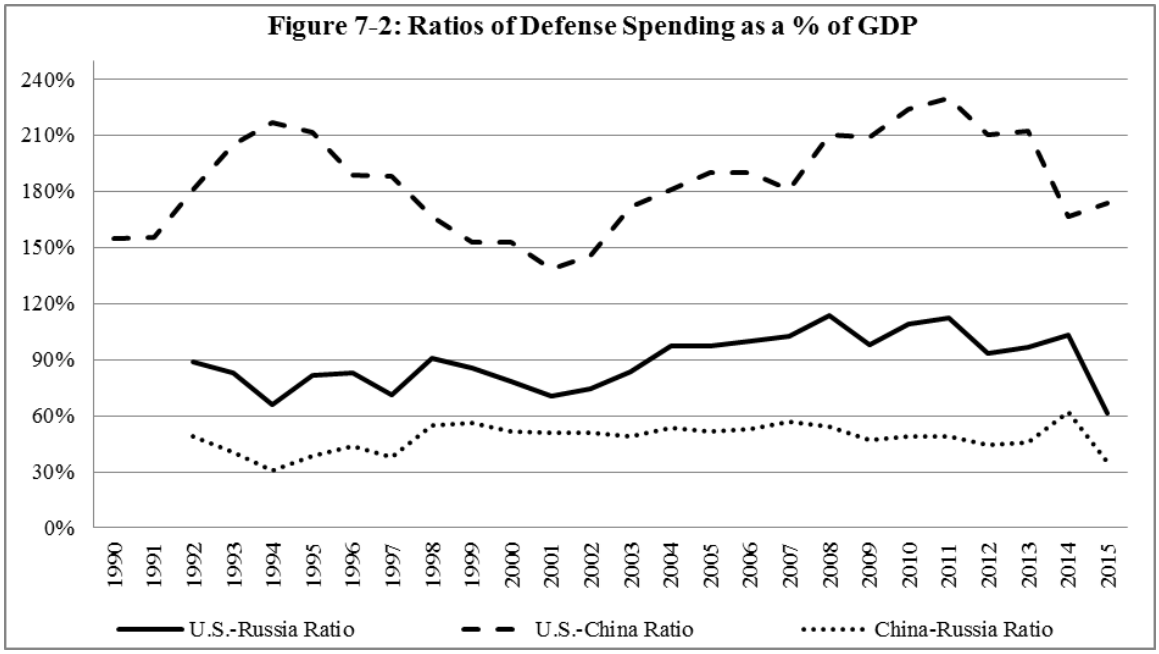
between sources made it challenging to draw comparative ratios. Nevertheless, publicly available data was used to draw ratios on which to compare defence spending trends across the cases, as shown in Figures 7-1a to 7-3b (which denote salient events), but the underlying data is inevitably uncertain (but see Section 7.6 of Chapter 3).



As Figure 7-1a illustrates, while the Russia–United States defence spending ratio diminished through the late 1990s, it increased after 2001 with U.S. spending for the War on Terror. As the solid curve shows, U.S. and Russian spending fell (Russia's more) in the first post-Cold War decade, but Russia then nearly tripled spending between 2000 to 2014 and notably so with reform in 2008, while America doubled spending between 2001 and 2010 and then decreased it because of congressional budget limitations between 2011 and 2015. As the dashed black curve shows, Chinese spending grew nearly tenfold, while the China–United States ratio fell nearly eightfold due to diminished U.S. spending. The line in Figure 7-1b shows how Russian and Chinese spending grew as of the year 2000 before approximating one another due to increased Russian defence spending.

These trends are reflected in relative defence spending as a percentage of GDP, as Figure 7-2 illustrates. Following the Cold War, Russian spending fell but represented a significant percentage of GDP. It then grew after the millennium (increasingly so with military reform as of 2008) but represented a smaller but growing percentage of a GDP enlarged by a windfall from higher energy prices. But lower spending restricted military modernization, particularly for America, which steadily decreased defence spending as a percentage of a larger GDP, and then increased it as of 2001 but as part of a reduced GDP percentage. Meanwhile, Chinese spending grew significantly but at a smaller and then similar percentage of GDP as its economy grew exponentially. Though Chinese spending was a significant part of its economy, it was small relative to other NWSs as a percentage of GDP (and defence spending was lower than many of its neighbours') (Clover, 2015).

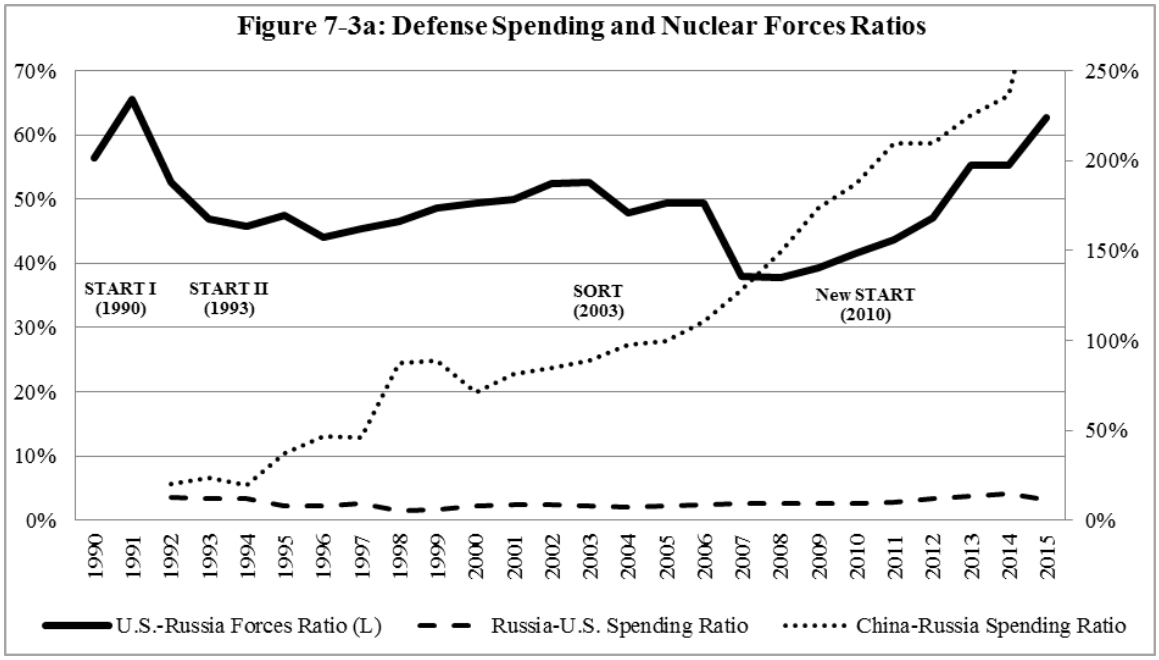
The research relies on the supply policies examined as a proxy for extrapolating and understanding the demand policies as the mediating variables in the explanatory model. The research therefore uses trends in nuclear and nonnuclear forces over time, namely defence spending and the size of nuclear forces (as Figure 7-3a illustrates by the right and left (L) Y-axes, respectively), to infer defence spending on military capabilities and draw trends regarding demand policies articulated and implemented by domestic structures to understand balancing across threats at both policy stages. Data illustrated in Figures 7-3a and 7-3b (which also denote arms control) show American and later Russian and Chinese prioritization of nonnuclear forces while modernizing nuclear forces. Despite China's and Russia's interest in adequate military capabilities, namely vis-à-vis America, Russia was unable to supply adequate military capabilities in line with demand policies and defence spending as effectively as America and China were.



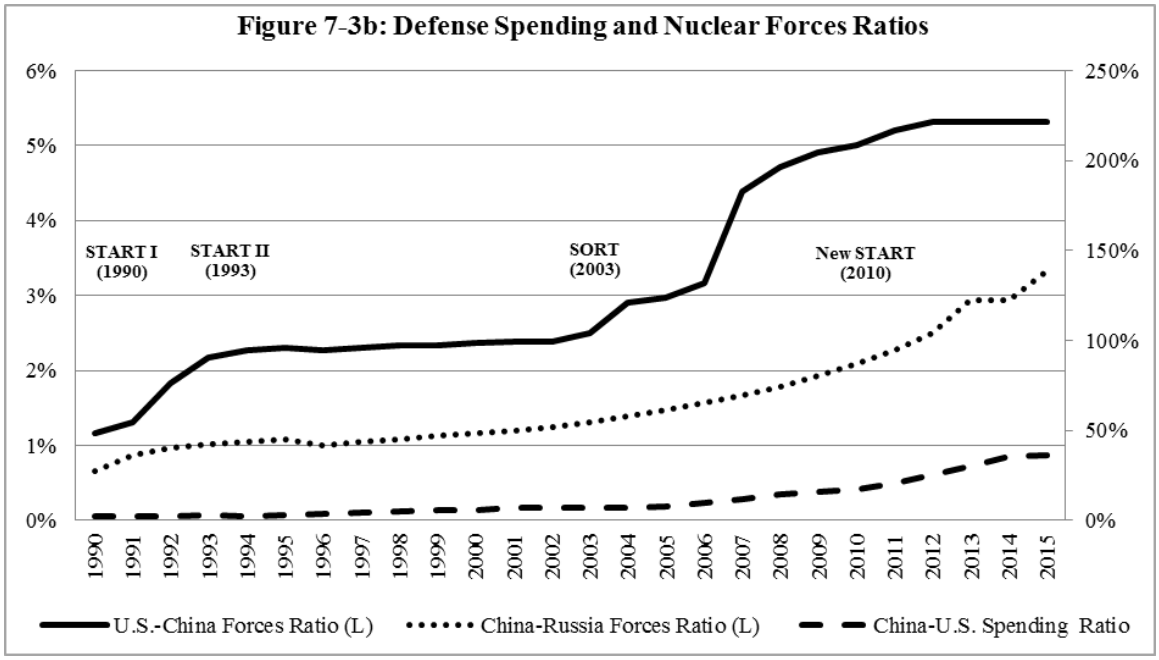
As the black lines in Figure 7-3a show, America and Russia reduced their nuclear forces due to arms control, natural force obsolescence, and, for America, greater reliance on nonnuclear forces. Indeed, as Figure 5-1 above shows, America allocated a marginal and decreasing percentage of spending to procuring nuclear forces but rather to operating and maintaining nonnuclear forces. While America maintained superior nonnuclear forces, its advantage eroded as spending on procurement decreased, other defence–related costs increased, and competitors modernized and imitated. This also resulted from threat trends and budgetary tensions between Congress and the executive, as appropriations are under the Congress's purview. Nonetheless, American defence spending trends indicate significant appropriations toward the prioritization of—and reliance on—nonnuclear forces and the modernization of nuclear forces at reduced force levels.

Implementing balancing strategies through military capabilities requires a DI possibly supplemented by the import of military capabilities. As the solid black lines in Figures 7-3a and 7-3b illustrate, American nuclear force reductions slowed as of 2008

vis-à-vis Russia (despite already significant disarmament) due to Russian reluctance for further arms control. Indeed, the U.S.–Russian nuclear force ratio troughed in 2008 and then rose by 2013 above immediate post-Cold War levels as America and Russia increasingly invested in maintaining qualitatively robust albeit smaller nuclear forces. America thus translated significant defence spending to adequate military capabilities because of its unparalleled DI despite inefficiencies.



However, the significant military asymmetries vis-à-vis other powers compelled adversaries to counterbalance America, namely through greater reliance on nuclear forces (despite its measured nuclear posture), asymmetric capabilities, and offensive strategies. For example, Russia and China responded by modernizing their nonnuclear forces and qualitative aspects of their nuclear forces with varying success. America did not restrain its modernization of military capabilities in response but rather pursued policies to better align procurement with threats, even though this approach at times came into tension with congressional spending cuts (see, e.g., Macgregor, 2014 and Ratnam, 2013).



As Figure 4-1 above illustrates, Russian defence spending precipitously declined throughout the 1990s and then increased as of the early 2000s but remained far below Cold War levels. Russia thus attempted to catch up, particularly vis-à-vis America and after it initiated military reform in 2008 following several unsuccessful efforts. Because of an inability to supply adequate nonnuclear forces, trends in defence spending indicate significant appropriations towards the prioritization of—and reliance on—nuclear forces at reduced force levels. Russian military inadequacies and inefficient reliance were attributable to the challenges discussed in Chapter Four, particularly an inadequate DI. While modernizing the DI and increasing the domestic supply of capabilities were pillars of modernization, misplaced demand for nuclear forces stemmed from an inadequate DI that exacerbated underbalancing and worsened insecurities regarding its nonnuclear forces (particularly as competitors widened military asymmetries).

As Figures 7-3a and 7-3b illustrate, China had a small albeit modernizing nuclear force while increasing defence spending toward nonnuclear forces. As Figure 6-1 above

illustrates, Chinese spending remained low throughout the 1990s and then exponentially grew well past Cold War levels in the 2000s. China was similarly catching up vis-à-vis America. Trends in spending indicate appropriations toward the prioritization of—and reliance on—nonnuclear forces while maintaining a constant albeit rapidly modernizing nuclear force. China's DI was inferior, reflecting a low bar for military capabilities despite maintaining a small nuclear deterrent. But China's DI underwent dramatic change with military reform in the late 1990s, modernizing nonnuclear forces while retaining a small albeit adequate and largely strategic retaliatory nuclear force and reducing reliance on foreign military capabilities on which it had heavily depended on for decades.

1.2.2 *Quantitative, Qualitative, and Deployment Balancing*

Trends in defence spending and the DI were reflected in the military capabilities available over time, with implications for balancing. America oversupplied adequate non-nuclear forces across nonnuclear threats and could maintain a modern but smaller nuclear force and pursue arms control though tied to concurrent Russian arms control. While America averted nuclear conflict, superior nonnuclear forces allowed it to deter most nonnuclear threats through more efficient balancing by primarily relying on nonnuclear counterforce targeting and variegated nuclear countervalue targeting with a higher threshold of use of nuclear force and lower conflict escalation probability.

Russian military capabilities remained inadequate despite several unsuccessful reform efforts. Russia's concerted reform of its nonnuclear forces as of 2008 in particular buttressed offensive strategies, backstopped by the qualitative modernization of nuclear force at reduced force levels, which enhanced its first- and second-strike deterrence and countervalue and counterforce targeting and compensated for nonnuclear force

inadequacies and insecurities, particularly vis-à-vis Western MD and advanced non-nuclear forces. Though Russia averted nuclear conflict, inadequate nonnuclear forces limited its counterforce targeting and ability to deter and defeat nonnuclear threats. This compelled greater and more inefficient reliance on nuclear counterforce and countervalue targeting at varied yields, anchored by the modernization of variegated nuclear forces and a lower threshold of use of nuclear forces in the event of conventional deterrence failure but with higher conflict escalation probability and resulting underbalancing.

Because of an inferior DI and military asymmetries vis-à-vis America, Chinese military capabilities remained inadequate but assured by a small nuclear force. Military reform correlated with exponential defence spending growth and the modernization of the DI. China leveraged more adequate nonnuclear forces to—like Russia did—shift focus from fighting a defensive land war to projecting power regionally (Clover, 2015), shrink military asymmetries vis-à-vis America, and temper its reliance on nuclear forces. While China averted nuclear conflict, modernizing nonnuclear forces (and thus more efficient balancing) facilitated more offensive strategies and the prioritization of counterforce deterrence and targeting against nonnuclear threats with lower escalation effects. It also facilitated nuclear force modernization based on penetrating and survivable platforms[139] (and thus underbalancing), resulting in higher countervalue targeting escalation effects but at a lower threshold of use in the event of conventional deterrence failure.

The modernization of military capabilities to varying degrees and success under-pinned American, Russian, and Chinese balancing. But in a classic security dilemma,

[139] Survivable SLBMs increasingly ensured nuclear deterrence against the improbability of nuclear use, reducing first-use and launch-on-warning postures typically anchored by land- and air-based platforms, which are more vulnerable to first strike and/or neutralization such as through MD. See Savelyev, 2014; Dvorkin, 2014; Zagorsky, 2014.

modernization also induced adversarial offsetting defensive, collective action, symmetric, or asymmetric counterbalancing (e.g., MD, A2/AD challenges, and positive assurances) perceived as threatening and driven by worst–case scenario planning and uncertainty about adversarial forces and strategies. Such balancing reduced military advantage and conflict management, undermined stability, and increased reliance on offensive strategies and destabilizing forces while encouraging arms races and hybrid and proxy conflicts.

1.3 Evolution of Reliance on Nuclear Forces

Nuclear forces are ill-suited post-Cold War, placing a premium on nonnuclear forces to address prevailing nonnuclear threats and, thus, are a necessary but insufficient condition of balancing. Nonetheless, nuclear forces are relied upon to balance adversarial relative gains because inadequate nonnuclear forces drive insecurity, uncertainty, and relative loss under anarchy and, thus, risk, power asymmetry, and the security dilemma from adversarial military capabilities even in the absence of direct or existential threats. This drives counterbalancing nuclear force offensive strategies that reduce adversarial security and certainty and increase relative loss under anarchy—and thus risk and power asymmetry—with the threat perception of the capacity to punish, namely at the tactical level, and reduce adversarial military advantage disproportionate to means to also renew the balance of power. Such threat perception is heightened by adversarial offensive capabilities and strategies and geographic proximity, including forward–deployed forces. NWSs thereby balance threatening relative power as anticipated by balance of power moreover inter-NWS polarity resulting from the stability-instability paradox and military asymmetries that shift competition to hybrid and proxy conflicts, particularly vis-à-vis non-NWSs where limited action can be conducted without serious risk to the NWS.

As discussed in Chapter Three, supply and demand policies fall into six balancing types that coalesce to determine balancing. As Table 7-2 summarizes, the cases' types of reliance on nuclear forces varied and were at times incongruent. Most Russian types of reliance on nuclear forces increased as the perceived acuteness of external military threats grew—but for which nonnuclear forces were inadequate, substantiating a more offensive nuclear posture with higher conflict escalation effects but diminished self-help through deterrence and conflict. Russian reliance on nuclear forces increased, particularly as the cost effective utility of nuclear forces grew despite the absence of reliable ASMs.

<table>
<tr><th colspan="8">Table 7-2: Evolution of Types of Reliance on Nuclear Forces</th></tr>
<tr><th>Stage</th><th colspan="2">Articulation</th><th colspan="4">Implementation</th><th rowspan="2">NWS</th></tr>
<tr><th>Type</th><th>Declaratory</th><th>Strategic</th><th>Resource</th><th>Quantitative</th><th>Qualitative</th><th>Deployment</th></tr>
<tr><td rowspan="3">1991–2001</td><td>Decreased</td><td>Increased</td><td colspan="4">Decreased</td><td>Russia</td></tr>
<tr><td colspan="4">Decreased</td><td>Increased</td><td>Decreased</td><td>America</td></tr>
<tr><td colspan="6">Similar</td><td>China</td></tr>
<tr><td rowspan="3">2002–2015</td><td colspan="3">Increased</td><td rowspan="2">Decreased</td><td colspan="2">Increased</td><td>Russia</td></tr>
<tr><td colspan="2">Decreased</td><td rowspan="2">Increased</td><td>Increased</td><td>Decreased</td><td>America</td></tr>
<tr><td colspan="2">Similar</td><td>Similar</td><td colspan="2">Increased</td><td>China</td></tr>
</table>

American types of reliance on nuclear forces decreased, but they increased with investment in—and modernization of—variegated nuclear forces increasingly based on survivable platforms. Reliance decreased in articulated policy, which was dominated by the executive, but increased at the implementation stage. Unlike autocratic regimes like China's and Russia's, American reliance increases were driven by concerns with force obsolescence, episodic concern with HDBTs, and congressional issue linkage of force modernization with arms control. These trends occurred with less offensive strategies set by the executive with lower conflict escalation probability. Thus, American reliance on nuclear forces at the implementation stage was incongruent with articulated policy during episodic periods despite the adequacy of its nonnuclear forces and the reliability of military and non-military ASMs like NATO and economic sanctions.

Chinese types of reliance initially remained similar, signalling predictable and non-offensive reliance on nuclear forces in articulated policy with diminished conflict escalation effects. But as of the turn of the millennium, and in contrast with articulated policy, Chinese reliance on nuclear forces at the implementation stage increased as China exponentially invested in modernizing its nuclear force increasingly based on penetrating and survivable platforms. Chinese policies at the implementation stage were, therefore, incongruent with articulated policy as China prioritized the cost–effective utility of nuclear forces in the absence of ASMs against Chinese perceptions of an American-led threat to its regional position and power projection, despite notable investment in, and improvement of, the adequacy of China's nonnuclear forces.

As Section II discussed, the adequacy of nonnuclear forces was consequential to the cases' reliance on nuclear forces. During the research period, America—in line with Path C of Figure 1-1 above—shifted to adequate nonnuclear forces, reduced reliance on nuclear forces, and pursued arms control. During this period and in line with Path A, Russian nonnuclear forces remained inadequate, and despite a significant reduction in the size of its nuclear force, Russia diminished and then increased reliance on nuclear forces moreover efforts to modernize its nonnuclear forces. Indeed, nuclear forces maintained a central role in its policies as it prioritized the qualitative modernization of its nuclear forces in response to advanced American nonnuclear forces. Russia therefore only partly espoused arms control, particularly because it suited natural nuclear force obsolescence.

Lastly, China made significant post-millennium strides to increase the adequacy of its nonnuclear forces and qualitatively modernize its nuclear force, albeit at a much smaller size than Russia's or America's nuclear forces. China's shift in reliance on

nuclear forces at the implementation stage was qualitative, and it sought technology to maintain a retaliatory nuclear force that—like Russia's did—compensated for symmetric and asymmetric adversarial (particularly American) nonnuclear forces, despite significant Chinese nonnuclear force modernization supported by exponential growth in defence spending and DI modernization. In line with Path B of Figure 1-1 above, China therefore increased the adequacy of its nonnuclear forces but maintained relatively inefficient reliance on its nuclear force primarily because of military modernization, a perception of acute external military threats, and marginalization of arms control.

1.4 Military Capabilities and Arms Control

Table 7-3: Military Capabilities and Arms Control

Period	Russia	United States	China
1991–2001	- Inadequate nonnuclear forces - Adequate nuclear forces - Unreliable arms control	- Adequate nonnuclear forces - Adequate nuclear forces - Bilateral and unilateral arms control	- Inadequate nonnuclear forces - Adequate nuclear forces - No arms control
2002–2015			- Modernizing nonnuclear forces - Modernizing nuclear forces - No arms control

Balancing implicates predisposition for arms control. Partly due to its superior nonnuclear forces and the assurances they provided, America pursued arms control at the policy articulation and implementation stages. In turn, nonnuclear force inadequacies and insecurities about nonnuclear threats constrained Russian arms control by inefficiently inducing greater reliance on nuclear forces. This shift was compounded by financial constraints, an inadequate DI, natural nuclear force obsolescence, and Russian issue linkage—particularly with America offensive–defensive nonnuclear forces like MD, which Russia had little ability to deter or counter militarily or contain politically (other than through issue linkage such as with arms control with America). Meanwhile, despite an evolution in Chinese military capabilities, China shunned arms control largely because

of its small nuclear force and the intrusive nature of arms control, though this could change if it were politically expedient and as China's confidence in its nonnuclear forces grows. Table 7-3 above summarizes trends in the cases' capabilities and arms control.

Because interest in arms control was a low, it depended on demand policies (or the mediating variables) in that, moreover tangible security interests, arms control was subject to domestic structures. The NWSs valued arms control more for its political utility and to serve as a cover for nuclear force reductions that would occur independently due to natural force obsolescence while imposing legally–binding limits (Sueldo, 2011).

2. Balancing Postures

Table 7-4: Balancing Postures

Balancing Posture	Catalytic	Assured Retaliation	Asymmetric Escalation	Defensive Last Resort
Objective	Compel third-party intervention.	Deter nuclear use and coercion.	Deter nonnuclear conflict and nuclear use.	Deter nuclear use.
Nuclear Posture	Coercion and survival.	Survivable second-strike nuclear forces.	First-use nuclear forces.	Survivable second-strike nuclear forces.
Nuclear Force	Few and limited use. Demands time to deploy and retaliate.		Relied on as a war-fighting tool and to absorb retaliation.	Defensive last resort in first or retaliatory use.
Nuclear Force Management	Recessed, opaque.	Assertive civilian control.	Delegated authority in military forces and in nuclear doctrine.	Concentrated civilian authority.
Nuclear Force Transparency	Ambiguous capability and deployment.	Unambiguous capability but ambiguous deployment.	Unambiguous capability and transparent deployment.	
Nonnuclear Forces	Adequate to deter and defeat at least limited nonnuclear threats.	Adequate to deter and defeat nonnuclear threats.	Inadequate to deter and defeat nonnuclear threats.	Adequate to deter and defeat nonnuclear threats.
Nuclear Reliance	Medium		High	Low
NWS Example	Israel	China, India	Pakistan, Russia	United States

See generally Narang, 2009.

A balancing posture results from a policy process that determines reliance on forces, depending on those available to deter and defeat varied levels and types of threats (Narang, 2009). Incongruities between the articulation and implementation of policies implicate the forces available and the effectiveness of a NWS's capacity to deter threats and use force. Table 7-4 outlines four types of balancing postures. The objective of each and how it is implemented varies by available capabilities and how NWSs rely on them.

2.1 *Israel: Catalytic*

Catalytic balancing relies on an ambiguous nuclear force and aims to catalyse third-party political and/or military intervention without the use of nuclear forces (particularly by a NWS patron) by threatening nuclear use and escalating conflict if intervention is not provided (Narang, 2009). The nuclear deterrent signal is not for the threat (unlike existential deterrence)[140] but rather for a third party (Narang, 2009). But the posture may not have a deterrent effect—namely against superior nonnuclear forces—as adversaries may calculate that they can achieve limited nonnuclear force objectives before nuclear use or third-party intervention (or possibly without catalysing a third party at all) (Narang, 2009). Israel's balancing was catalytic because it relied on nuclear forces for deterrence and to catalyse American intervention, so it did not induce a nuclear–arms race. But because the posture's targeting strategy is ambiguous, its potential conflict escalation effects and threshold of nuclear use are uncertain, though the posture seeks to coercively induce the pre-crisis *status quo ante*.

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[140] The existence of nuclear forces—even ambiguous or non-weaponized forces—induce caution and deter aggression because conflict involving nuclear forces would be fraught with terrible and unavoidable uncertainties, particularly under opacity. Deterrence depends on the adversary's perception of military capabilities. See Kumar, 2007; Trachtenberg, 1985. Existential deterrence is sub-optimal for regional NWSs because of weak deterrent effects, particularly if third-party intervention augments conventional deterrence or impacts de-escalation. See Narang, 2009.

2.2 *China: Assured Retaliation*

Assured retaliation deters a nuclear strike and coercion with transparency of forces to show retaliatory capacity, but nuclear force deployment can be ambiguous to enhance survivability without sacrificing control over nuclear forces because retaliation need be assured but not immediate (Narang, 2009). But this posture may be incapable of deterring nonnuclear threats because of the potential delay in deploying and retaliating, or nuclear threats because of the stability-instability paradox (Narang, 2009; Snyder, 1965).

Assured retaliation suits NWSs with territorial or nonnuclear force advantages to deter nuclear threats or to rely on a small but survivable nuclear force against strategic and/or counterforce targets (Narang, 2009). The pre-nuclear–use escalation effects are lower but rise to uncertain levels because of its retaliatory nature through counterforce or countervalue nuclear force targeting to coercively induce the pre-crisis *status quo ante*. The self-help from this posture is inferior to defensive last resort because of its uncertain deterrent capacity against nonnuclear threats and potentially greater conflict escalation effects in the event of conventional deterrence failure.

China's balancing exemplified assured retaliation because it relied on a credible minimal nuclear force for retaliation through the modernization of survivable platforms while modernizing nonnuclear forces for nonnuclear threats, partly because of the delay in nuclear retaliation. China's posture was effective in leveraging its territorial and non-nuclear force advantages—particularly vis-à-vis regional threats—while deterring nuclear threats through a small retaliatory nuclear force. As China's targeting strategy was ambiguous, Chinese balancing sought to deter, coercively induce the *status quo ante*, and retaliate against nuclear use with higher conflict escalation effects but at a threshold of

use of nuclear forces higher than Russia's. Because of its small nuclear force, Chinese arms control also depended on its ability to maintain adequate nonnuclear forces.

As anticipated by offensive neorealism, Chinese balancing focused on contesting American power in Asia with the locus of potential contact in the South and East China Seas, and delaying, frustrating, and undermining American power despite a context non-nuclear threat–dominated context. Most threats were perceived vis-à-vis adversarial forces and strategies as an extension of balance of power, explaining Chinese policy responses advancing Chinese independence and regional power under multipolarity.

China relied on nuclear forces to reduce uncertainty, insecurity, and relative loss perceived as a unitary actor about geographically proximate adversarial capabilities and strategies, including forward–deployed American forces, through the threat perception of the capacity to punish. China balanced as anticipated by balance of power to manipulate adversarial threat perception with uncertainty and insecurity to deter, prevent escalation, renew the balance of power, and contest American military power. China thus reactively balanced primarily through offensive strategies with a net loss in deterrence.

2.3 *Russia: Asymmetric Escalation*

Asymmetric escalation centres on the rapid first use of nuclear forces to deter nonnuclear threats, operationalizing nuclear forces—particularly tactical and survivable forces—as war–fighting tools and to absorb retaliation (Narang, 2009). This posture deters all levels of conflict but advances a costly signal of nuclear first use even against nonnuclear threats (Narang, 2009). As the posture envisions nuclear counterforce or countervalue targeting even in first use to deter all levels of conflict, the escalation effects are high but self-help is low. The posture is suboptimal because it proffers a costly signal

to adversaries about potential gain through nonnuclear conflict (in the absence of the defender's threat or use of nuclear forces) because of the inadequacy of the NWS's non-nuclear forces driving inefficient reliance on nuclear forces. The posture assumes that for superior adversarial nonnuclear forces, the defender NWS's reliance on nuclear forces increases as they have deterrent value against such threats—but only if the NWS is resolved to use them and regardless of whether the threat perceives such resolve.

Russian balancing exemplified asymmetric escalation because, though it pursued unreliable arms control, it dispersed tactical and second-strike nuclear forces to absorb retaliation and enabled battlefield release to deter and defeat nuclear and nonnuclear threats, possibly through first use. Russia sought to deter nuclear and nonnuclear conflict at all types and levels of intensity, despite nonnuclear threats falling below the threshold of nuclear use. As Russia envisioned nuclear counterforce or countervalue targeting, possibly in first use, the potential conflict escalation effects were high.

Russia relied on nuclear forces to reduce uncertainty, insecurity, and relative loss perceived as a unitary actor about geographically proximate adversarial capabilities and strategies through the threat perception of the capacity to exact punishment, particularly at the tactical level, even if not threatened. Russia thereby sought power disproportionate to means to balance, as anticipated by balance of power and offensive neorealism, by manipulating adversarial threat perception through uncertainty and insecurity to deter, prevent escalation, de-escalate, renew the balance of power, and contest dominance and military advantage. In doing so, however, Russia reacted to military asymmetries and risked disadvantage as offensive balancing with a net loss to deterrence is impractical against nonnuclear threats and NWSs, shifting competition to hybrid and proxy conflicts.

While this posture was a cost–effective deterrent against threats and varied types and levels of conflicts, it was a costly signal to adversaries about inadequate nonnuclear forces across nonnuclear threats, Russia's intended use of nuclear forces, potentially in first use, and its inability to deter and defeat nonnuclear threats absent the threat or use of nuclear forces. When balancing prioritizes nuclear forces, as Russia did, it strengthens the adversaries' perception of potential gain through nonnuclear use of force (Daalder and Lodal, 2008; Blechman and Fisher, 1994). Despite underbalancing, Russia focused on contesting American dominance in Europe, and delaying, frustrating, and undermining America with nuclear forces. This despite a nonnuclear–threat dominated context as she perceived threats vis-à-vis geographically proximate adversarial military capabilities and strategies as an extension of balance of power, explaining policies advancing her regional hegemony and power under multipolarity. As anticipated by offensive neorealism, as a revisionist state, Russia leveraged offensive military capabilities and strategies for power to balance American dominance but constrained by power projection capacity.

2.4 *America: Defensive Last Resort*

Defensive last resort[141] deters, limits, or negates nonnuclear threats below the threshold of use of nuclear forces or without third–party intervention, capitalizes on self-help through deterrence and conflict, and reduces nuclear–related threats such as through arms control. The posture does not employ nuclear forces against nonnuclear threats unless the NWS or its allies are existentially threatened, relies on adequate nonnuclear forces for nonnuclear threats, and assigns nuclear forces limited, transparent, and largely strategic deterrent and retaliation missions. It extends deterrence to allies by allowing

[141] See also Sagan, 2009; Mendelsen, 1999; Bundy, Crowe, and Drell, 1993.

first or retaliatory nuclear use without encouraging their use early in conflict, prioritizing nonnuclear forces but not taking nonnuclear forces for granted in every contingency or as threats evolve (Colby, 2015; Cimbala, 2010; Drell, 2007).

America's posture was characteristic of defensive last resort as it deterred nuclear use, saw nuclear forces as a deterrent against, and last resort to, existential threats against itself or allies[142] (Perry, Schlesinger et al., 2009) upon limited, transparent, and largely strategic and retaliatory missions. The posture prioritized nonnuclear force modernization for prevailing nonnuclear threats. As reliance on nuclear forces was relatively low, particularly because of superior nonnuclear forces, America could pursue arms control.

Defensive last resort is more optimal as a NWS does not have to rely on nuclear forces for non-existential nonnuclear threats, primarily because of adequate nonnuclear forces. Indeed, the posture is more deterrent optimal because it proffers a signal to adversaries about the adequacy of nonnuclear forces and, thus, diminishes the threat's potential gain through nonnuclear conflict even absent the threat or use of nuclear forces as the need to rely on nuclear forces diminishes because of conventional–deterrence assurances (Daalder and Lodal, 2008; Smith, 2006; Blechman and Fisher, 1994; Betts, 1985). And because the damage nuclear forces can inflict is too great for the threat of their use to be credible, they can support a defensive strategy but are not needed for an offensive one (Sokov, 2014; Bergman, 2010; Smith, 2006; Paul 1995; McNamara, 1983).

Nuclear deterrence is more effective when the conventional balance of forces ranges from a clear advantage to approximate equality between the attacker and defender, but nuclear forces have little deterrent value when the defender boasts superiority in non-

[142] Proponents posit that, for example, there is no vital interest except deterring nuclear attacks or a large defeat that cannot be met by nonnuclear forces. See, e.g., Bundy, 1993.

nuclear forces (Huth, 1990). Adequate nonnuclear forces and the limited and transparent defensive last resort use of nuclear forces help mutually reduce reliance on nuclear forces—particularly if relied on for defensive strategies—and support arms control. The resultant self-help of defensive last resort is superior to other postures because of lower conflict escalation effects through nuclear counterforce or countervalue targeting.

American balancing focused on out-of-region power projection in support of allies, to maintain the status quo, and arrest and reverse competitors and its declining power vis-à-vis adversarial military capabilities and strategies, explaining its policies advancing American and allied independence and security, American hegemony, and limiting nuclear forces. America did not have to rely on nuclear forces to reduce uncertainty, insecurity, or relative loss perceived about adversarial military capabilities and strategies geographically proximate to allies through the perception of the capacity to punish, particularly if not threatened. America thus balanced primarily with nonnuclear forces to manipulate adversarial threat perception to reduce uncertainty and insecurity to deter, de-escalate, prevent escalation, preserve the status quo, arrest and reverse competitors, and challenge military advantage. America proactively reacted to military asymmetries and risk with primarily defensive strategies against nonnuclear threats, increasing realizable preferences and relative gains through counterbalancing but shifting competition to hybrid and proxy conflicts and encouraging adversarial imitation.

America leveraged defensive capabilities and strategies as expected by defensive neorealism, including out-of-region (but limited by projection capacity), to stabilize the power balance and reduce uncertainty and insecurity, signal benign strategies, and temper counterbalancing, by limiting adversarial offensive forces and strategies.

2.5 *Deterrence and Use of Force*

Incongruent supply and demand policies at the articulation and implementation stages implicate a NWS's ability to deter and defeat varied threats and levels of conflict. The adequacy of military capabilities across threats is central to the capacity to do so, with implications for missions assigned. The adequacy of nonnuclear forces is significant due to the prevalence of nonnuclear threats. Adequacy of military capabilities is assessed across threats (however valued), the chance of them materializing, and the degree of harm if they succeed (Smith, 2006). The debate during this analysis is on the military's role, what it is expected to do, how the military objective can be achieved, and the policy goal attained with military success (Smith, 2006). There is no perfect balancing. While past balancing influences the supply of military capabilities, NWSs cannot anticipate future needs (Fordham, 2004). Balancing is fluid and nonlinear. Investment is key to implementing balancing with forces, thereby weighing funding and capacity to supply from current and future resources, the actual or anticipated purpose of forces, and the costs to society (immediate and over time), with the inflexion being where deterrence (including extended deterrence) and use of force is cheapest to attain (Smith, 2006).

Military capabilities influence policies about deterrence and conflict because they provide options and increase the chance of deterring or defeating threats (Fordham, 2004). They also limit options or make some options more attractive than others (Most and Starr, 1989). More adequate nonnuclear forces for nonnuclear threats provide options and make nonnuclear use of force more attractive than more destructive and escalatory nuclear forces against nonnuclear threats or if conventional deterrence fails. Additionally, nonnuclear forces are an invariable factor of becoming and remaining a power, with or

without nuclear forces. But other opportunities like rising prosperity can create optimism making use of force more attractive (Most and Starr, 1989; Blainey, 1988) (e.g., China's and Russia's offensive balancing or U.S. post-9/11 actions).

Military advantage can also encourage the threat or use of force as the perceived probability of success increases, or as domestic structures more willing to threaten or use force are empowered (Fordham, 2004; Cederman, 2003; Reiter and Stam, 2002; Gelpi and Feaver, 2002; Mearsheimer, 2003; Rasler and Thompson, 1999; Gartner and Siverson, 1996; Vazquez, 1993; Bueno de Mesquita, 1988; Gilpin, 1981; Headrick, 1981; Betts, 1977). Military capabilities influence choices about small-scale threats or use of force more than they do policies about war that invoke broader issues that may trump the immediate availability of military capabilities (Fordham, 2004). Because prevailing post-Cold War threats are nonnuclear, the threat or use of nonnuclear force is more likely.

However, symmetric or asymmetric measures like China's A2/AD challenges can hinder or negate military advantage, and smaller deterrents or inferior forces can induce adventurism or aggressive action out of fear of losing forces if not used pre-emptively (Shanker and Cooper, 2014; Fordham, 2004). While adequate military capabilities may increase the frequency with which NWSs threaten or use force, they do not necessarily lead to an arms race or conflict as NWSs may choose to avoid conflict with superior forces, military capabilities are developed long before NWSs use them for threats that evolve, NWSs may threaten force but may not use force, and most uses of force—such as against non-state actors or with the consent of a state—do not necessarily result in interstate conflict (Fordham, 2004; Fearon, 1994). Restraint on uncertainty and insecurity fomented by perceived threats diminish with defensive strategies designed to deter by

denying, raising the risk of failure in nonnuclear conflict without resorting to punishment with nuclear forces, fomenting stable deterrence and attenuating the security dilemma.

Inter-NWS conflict is avoided regardless of the relative adequacy of their military capabilities due to the stability–instability paradox, assuming the resolve to use nuclear forces. While perceptions of adversarial forces drive the security dilemma, arms control, political strategies, and transparency measures that raise the threshold and predictability of deterrence and conflict help attenuate threats. For example, America's posture was transparent and anchored by lower reliance on nuclear forces to reassure others, while China's posture characterized by lacking transparency and secretive nuclear force and Russia's that prioritized nuclear forces fuelled suspicion, insecurity, and uncertainty.

3. Reactive and Proactive Supply and Demand Policies

Balancing is articulated and implemented through reactive and proactive supply and demand policies. Efficient balancing assumes policies that support adequate nuclear and nonnuclear forces for nuclear and nonnuclear threats, respectively. Reactive and proactive policies determine which military capabilities are available and how NWSs rely on them across threats. Reactive policies react to domestic and/or external factors such as threats and can materialize faster than proactive policies that seek to contain or anticipate such factors as they are challenging to articulate and implement and demand time and resources. Per Table 7-5, Russian policies were more reactive in response to perceived threats and domestic insecurities about its and adversarial nonnuclear forces. In contrast, America pursued more proactive reliance policies to more efficiently rely on nonnuclear forces for prevailing nonnuclear threats, and China did the same but also pursued reactive policies in response to perceived regional threats driven by America.

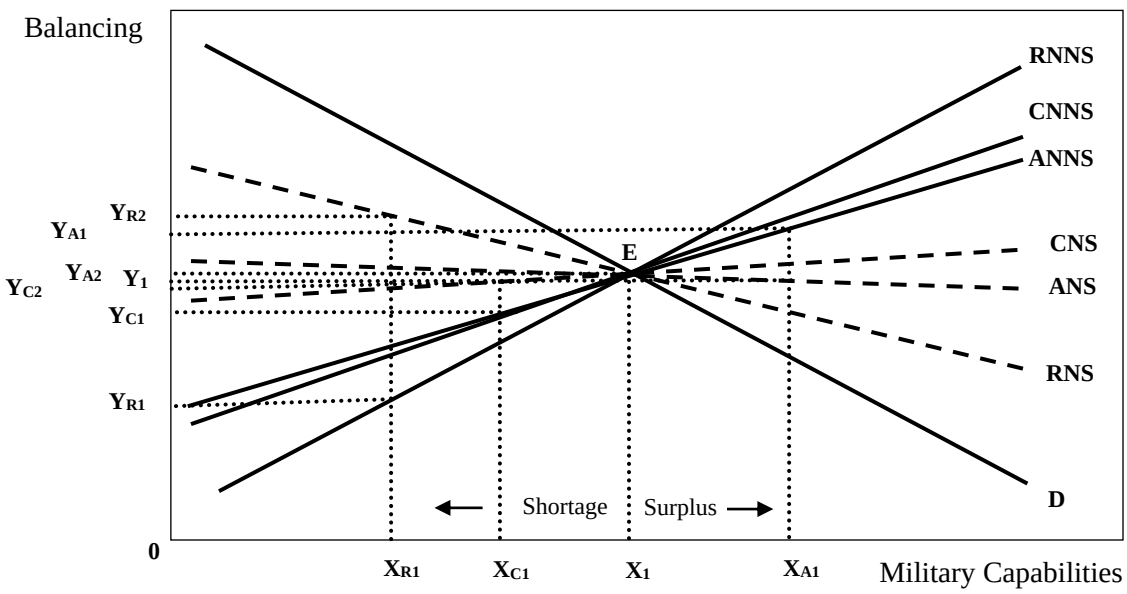
<table>
<tr><th colspan="4">Table 7-5: Reactive and Proactive Supply and Demand Policies</th></tr>
<tr><th colspan="2">Policy</th><th>Russia</th><th>China</th><th>United States</th></tr>
<tr><td rowspan="2">Demand</td><td>Security</td><td colspan="2">Nuclear and nonnuclear policies reactive to insecurity.</td><td>Proactive and reactive nuclear and nonnuclear security policies.</td></tr>
<tr><td>Domestic Institutions</td><td colspan="2">Unreliable coalescence toward adequate military capabilities.</td><td>Relative coalescence toward adequate military capabilities.</td></tr>
<tr><td rowspan="6">Supply</td><td>Nuclear Posture</td><td>First-use survivable nuclear force.</td><td colspan="2">Survivable nuclear force.</td></tr>
<tr><td>Defence Spending</td><td colspan="3">Progressive increases in spending on nuclear and nonnuclear forces.</td></tr>
<tr><td>DI</td><td colspan="2" rowspan="2">Increasing reliance on rapid yet unreliable military modernization.</td><td rowspan="2">Increasing reliance on rapid and reliable military modernization.</td></tr>
<tr><td>Nonnuclear Forces</td></tr>
<tr><td>Nuclear Forces</td><td colspan="2">Decreasing then increasing reliance.</td><td>Decreasing and episodic reliance.</td></tr>
<tr><td>ASMs</td><td colspan="2">Unavailable or unreliable.</td><td>Did not solely depend on ASMs.</td></tr>
</table>

Policies determine balancing. Efficient balancing is contingent on the credibility of conventional deterrence and thus the adequacy of nonnuclear forces. Deterrence is less credible when policies are incongruent. Section II discussed Russian challenges with reducing reliance on nuclear forces, diminishing American reliance on nuclear forces driven by adequate nonnuclear forces and reduced acuteness of nuclear threats, and greater Chinese reliance on nonnuclear forces but growing reliance on nuclear forces resulting in underbalancing. Figure 7-4 below illustrates these balancing trends.

The slopes of Russia's supply curves (RNS and RNNS) illustrate a shortage of adequate military capabilities (X_1 to X_{R1}) across nuclear and nonnuclear threats because of inadequate nonnuclear forces. Balancing was inefficient across military capabilities (Y_{R1} and Y_{R2}), and incongruities among policies—particularly inadequate investment (INC + INNC < 1)—undermined the credibility of conventional deterrence because of

potential adversarial gain through nonnuclear conflict absent the threat or use of nuclear forces because at the policy articulation and implementation stages, and assuming resolve to use nuclear forces, a nuclear strike with greater escalation effects could have followed a nuclear attack or superior nonnuclear threat resulting in conventional deterrence failure. An adversary may have attacked—particularly if its motives were defensive—as the alternative could be severe losses, underscoring the importance of adequate nonnuclear forces to support conventional deterrence by denial instead of punishment (Betts, 1985).

Figure 7-4: Comparative Balancing



R Russian **A** American **C** Chinese **NS** Supply of Nuclear Forces **NNS** Supply of Nonnuclear Forces

Russian nuclear forces could best support offensive but not defensive strategies against nonnuclear threats but with greater escalation effects. Self-help to Russia through deterrence and conflict from inefficient asymmetric escalation balancing was inferior to the scenario in which Russia supplied more adequate nonnuclear forces across threats.

The slopes of America's supply curves (ANS and ANNS) illustrate a surplus of adequate military capabilities (X_1 to X_{A1}) across nuclear and nonnuclear threats because

of adequate nonnuclear forces. Balancing was thus relatively efficient across military capabilities (Y_{A1} and Y_{A2}) because it could over-rely on nonnuclear forces and efficiently rely on nuclear forces. Relative congruence among policies, particularly surplus investment and a superior DI (INC + INNC ≥ 1), increased the credibility of conventional deterrence because of adversarial perceived loss through nonnuclear conflict even absent the threat or use of nuclear forces because at the articulation and implementation stages an American nuclear strike with greater conflict escalation effects was unlikely to follow except against an existential threat against America or an ally.

Notably, nuclear forces did not resurge in American articulated policy. At the implementation stage, nonnuclear forces asymptomatically assumed conflict missions with lower escalation effects and a higher threshold of use previously assigned to nuclear forces during the Cold War with higher escalation effects and a lower threshold of use to deter a Soviet Union with robust nonnuclear forces. American post-Cold War nuclear forces therefore supported defensive strategies against nuclear threats with lower conflict escalation effects but were not necessarily relied on for offensive strategies. Self-help to America through deterrence and conflict from defensive last resort balancing was superior to the scenario in which America increased reliance on nuclear forces.

The slopes of Chinese supply curves (CNS and CNNS) illustrate a shortage of adequate military capabilities (X_1 to X_{C1}) across nuclear and nonnuclear threats because of inferior nonnuclear forces. Reliance was inefficient across military capabilities (Y_{C1} and Y_{C2}), and incongruity among policies—namely, inadequate investment (INC + INNC < 1)—undermined the credibility of conventional deterrence of a more assertive China because of the adversaries' potential gain through nonnuclear conflict absent the threat or

use of nuclear forces, assuming resolve to use nuclear forces, with greater escalation effects. In articulated policy but not necessarily at the implementation stage, a nuclear strike may not have followed conventional deterrence failure, pursuant to its no-first-use policy, but incongruities with its implementation undermined articulated nuclear policy.

Chinese nuclear forces could thus support a defensive strategy against nuclear threats with lower conflict escalation effects because of modernizing Chinese nonnuclear forces but were not necessarily relied on for an offensive strategy. Self-help to China through deterrence and conflict from its assured retaliation balancing was superior during periods in which China supplied more adequate nonnuclear forces.

4. Mediating Variables

Balancing results from the balancing types outlined in Table 3-2 above resulting from reactive and proactive supply and demand policies. Demand policies, which are the mediating variables in the explanatory model, provide the context in which supply policies are articulated and implemented and thus how NWSs balance across threats. To also address research challenges, the explanatory model leverages supply policies to contextualize and understand the mediating variables underlying demand policies.

4.1 Security-Based Mediating Variable

As states mistrust others under anarchy, they leverage military capabilities for power through security to deter external military threats and counterbalance adversarial relative power driving insecurity and uncertainty accentuated by multipolarity, rewarding states that balance efficiently even in the absence of direct threats. Security relates to real and perceived adversarial military power addressed by different levels of force. Section II

shows how threats and adequacy of military capabilities—and thus the NWS's perception of security or insecurity—implicated policies. The cases were sensitive to adversarial relative gains in military power diminishing systemic positions due to erosion of military advantage vis-à-vis one another, particularly in Eastern Europe and the South China Sea.

The research shows American balancing focused on power projection even when not directly threatened to ensure its dominance and deter challengers, including to contain Russian and Chinese offensive strategies in Europe and Asia, respectively, vis-à-vis allies. Chinese and Russian balancing focused on contesting American power in Asia and Europe, respectively, and delaying, frustrating, and undermining her despite a context dominated by nonnuclear threats. The locus of potential contact between their militaries was the South China Sea and Eastern Europe—which for China and Russia, respectively, formed part of their core interests, whereas for America these regions were a matter of international security and military asymmetries vis-à-vis allies. Hence, within a post-Cold War context dominated by nonnuclear threats and despite diminished reliance on nuclear forces in the articulated policies of NWSs, NWSs may underbalance, particularly by increasing reliance on nuclear forces at the policy implementation stage despite their impracticality vis-à-vis prevailing nonnuclear threats, with diminished security, to manipulate adversarial insecurity and uncertainty for power.

Threat perception under anarchy mediated by domestic structures was driven by asymmetries vis-à-vis geographically proximate adversarial military capabilities and strategies perceived as offensive even if defensive, fomenting hybrid and proxy conflicts, particularly in Eastern Europe and the South and East China Seas, to counterbalance adversarial relative gain. Even when not directly threatened, the cases internally balanced

as anticipated by balance of power with defensive and offensive strategies to challenge or preserve the status quo, avoid relative losses, and attain or maintain power under multi-polarity. Self-reliant states more efficiently balanced military asymmetries through deterrence and conflict with self-help and relative gains to security.

For example, NATO enlargement, a beleaguered economy, and inadequate non-nuclear forces during the 1990s compounded Russia's perceived acuteness of threats and inadequate nonnuclear forces, driving Russia to inefficiently increase reliance on nuclear forces despite a denuclearized context (particularly vis-à-vis America) and nuclear arms control, with resultant diminished self-help. But Russia saw this shift as temporary until it increased the adequacy of its nonnuclear forces (Sokov, 2002). Nonetheless, Russia's and America's SNFs and nuclear postures had little to do with each other's nuclear forces but rather inadequate nonnuclear forces and insecurities for Russia and extended deterrence and HDBTs for America (Source 6, 2015).

Conversely, proactive supply and demand reliance policies may more efficiently allocate reliance with resultant self-help. For example, in the same de-nuclearized context defined by nonnuclear threats, America relied on an oversupply of adequate or superior nonnuclear forces and reduced reliance on nuclear forces. China similarly and proactively modernized nonnuclear forces, particularly in response to nonnuclear force inadequacies with its rise and U.S.-led post-millennium balancing in the Asia-Pacific region, while reactively increasing reliance on modernizing and survivable nuclear forces to hedge against nuclear threats and regional and extra-regional superior nonnuclear threats.

Table 7-6: Mediating Security Contexts

Period	Russia	China	United States
1991–2001	Domestic and external insecurity.		Domestic and somewhat external security.
2002–2015			Domestic security and external insecurity.

NWSs will deploy symmetric and asymmetric capabilities to balance the military advantages of adversaries and their allies: e.g., China deployed A2/AD challenges and Russia introduced escalate–to–de-escalate for deterrence and pursued military exercises featuring simulations of pre-emptive TNW nuclear strikes against U.S.–NATO forces (Sonne, 2015a; Economist, 2015a). But TNW reliance—namely for limited scenarios—is concerning and unlikely to remain limited if employed. Though NWSs rely on nuclear forces to deter nuclear coercion, nuclear attacks, power war, and certain nonnuclear strategic or tactical threats, if NWSs begin to see nuclear forces as more useful in tactical roles, it could result in reliance that is unnecessary, escalatory, and destabilizing (Chase et al., 2015). If NWSs perceive the declining strategic utility of nuclear forces, they may emphasize nonnuclear forms of deterrence such as cyber-warfare (Chase et al., 2015). Conventional arms control will focus on advanced nonnuclear forces, while nuclear arms control will have to address destabilizing and conflict escalatory TNWs.

Whereas during the Cold War nuclear forces were a means to preserve strategic stability, many NWSs use nuclear forces post-Cold War to both bolster and challenge strategic stability (Rubin and Stulberg, 2018; Economist, 2015 and 2015a). Indeed, there are fewer nuclear forces but more NWSs and a higher probability of use—particularly in limited threat scenarios, fuelling reliance, instability, and insecurity (Thomas-Noone, 2016; Economist, 2015a). But eliminating nuclear forces will not prevent nuclear use unless nuclear deterrence is forsworn, and, thus, nuclear uncertainty remains a threat and a saviour in an anarchic system absent trust among NWSs (Betts, 1985).

Whereas the Cold War was defined by possible existential nuclear war warranting high reliance on nuclear forces, low-intensity post-Cold War threats can be sufficiently

acute to induce reliance, with even perceptions of threats doing so (Sokov, 2002). This was so with China and Russia because of their perception of geographically proximate adversarial forces vis-à-vis their own. Accordingly, military capabilities evolve with and must be assessed across the threats against which they are relied on to deter and defeat (e.g., Chinese and Russian military capabilities evolved with their post-millennium regional assertiveness and long-held perceptions of regional leadership, encirclement, and insecurity exacerbated by tumultuous histories as conqueror and conquered) (Thicknesse, 2015; Johnson, 2009; Zhao, 2005 and 2004; Gries, 2004; Kane, 2004; Young, 2000). If NWSs perceive insecurity, domestic structures are consequential to policies that support adequate forces resulting in security. But even acting rationally, domestic structures may be unable or unwilling to do so (Bueno de Mesquita, 1998), and avoiding offensive strategies can mutually induce more efficient balancing.

But while the reliance afforded to nuclear forces that imbued Russia's strategic culture since Soviet times was to guarantee influence, independence, and security, nuclear forces for China were not as great of a priority or to be used in escalation control vis-à-vis nonnuclear forces (Cimbala, 2013; Podvig, 2011; Sokov, 2011; Twomey, 2006; Lieggi, 2005; Morgan, 2003; McConnell, 1985; Booth, 1981; Snyder, 1977). Conversely, within American strategic culture nuclear forces were a deterrent—albeit an abhorrent, unacceptable, uncontrollable, and illimitable military capability once used (Mahnken, 2006; Schelling, 2006; Tannenwald, 2005; Botti, 1996; Gray, 1981; McWylie, 1967; Lippmann, 1952). America therefore viewed the threat or use of nuclear forces for power as illegitimate, whereas Russia relied on nuclear forces for coercion and envisioned their threat or use as legitimate and controllable (Mahnken, 2006; Butler, 1998 and 1996).

4.1.1 *ASMs*

As NWSs cannot control threats, NWSs may pursue ASMs if nonnuclear forces are inadequate to capitalize on self-help. However, domestic and foreign ASMs differ. Adequate nonnuclear forces are a necessary but insufficient condition of efficient balancing upon which domestic ASMs may or may not exist or be relied on while foreign ASMs like security commitments, positive assurances, or the import of capabilities are neither a necessary nor a sufficient condition of efficient balancing. Though NWSs may rely on nuclear forces even if ASMs exist, the implications and high escalation limit their utility (Sokov, 2014 and 2002; Bergman, 2010) despite their use for ASMs like extended deterrence. Hence, domestic nonnuclear force-based ASMs are more balancing optimal than over and less efficient reliance on nuclear forces or nuclear force-based ASMs (particularly for nonnuclear threats), with or without adequate nonnuclear forces.

Despite diplomacy, the cases placed little stock in external balancing for security which requires reliance on others despite unavailable or unreliable adversarial alliances. But America did rely on external balancing in Asia and Europe to balance adversaries out-of-region by enhancing allied security vis-à-vis geographically proximate threats but which were limited commitments because of the potential for escalation against NWSs and which encouraged adversarial TNW reliance and hybrid and proxy conflicts. But this also encouraged allied buck-passing characteristic of the Cold War and allowed allies to ignore the adequacy of their forces, raising the bar for America to deter aggression through extended deterrence and projection proximate to aggressors. Further, adversarial devaluation of extended deterrence encouraged revaluation of nuclear forces even absent an acute threat to preserve the status quo and reduce insecurity and uncertainty.

For example, nuclear forces were central to American extended deterrence and constraining nuclear proliferation, limiting the number of NWSs and reducing allied reliance on nuclear forces—particularly considering Russian exercises simulating nuclear strikes on NATO, threats against NATO MD, deployment of short-range nuclear forces near Europe, and modernization of nuclear forces in violation of the INF (Sonne, 2015a; Scowcroft et al., 2014; Gordon, 2014; Barnes, 2014; Day, 2009; De Quetteville and Pierce, 2008. But see Reif, 2014). Indeed, American extended deterrence could not be undermined as it underpinned deterrence of aggression within the context of diminishing European defence spending (Scowcroft et al., 2014; Economist, 2015b).

ASMs played a negligible role in Chinese and Russian balancing. Though both pursued greater political–military cooperation with each other and regional states to show independence from the West, there were limits to cooperation—namely, that China was not interested in military alliances and Sino-Russian interests largely did not overlap (Kucera, 2014; Popukshkin, 2014). As they engaged in low-intensity tailored coercion,[143] they required variegated military capabilities to control escalation, reduce the probability of use of nuclear forces, and protect non-NWS allies from adversarial coercion because the threat or use of nuclear forces by China or Russia in response was not credible against anything short of an existential threat (Meyerle, 2014; Larsen and Kartchner, 2014).

4.2 Domestic Structural-Based Mediating Variables

Domestic-level factors explain behaviour (but not outcomes) within the anarchic system with interstate power distribution subject to domestic constraints determinative of the articulation and implementation of policy for military capabilities and strategies vis-à-

[143] Calibrated action to induce answers without catalyzing coordinated responses. See Cronin, 2014.

vis threats. Unitary states thereby react to threats including relative power in the anarchic system in different ways through balancing for power through security. Self-reliant states are better placed to direct the anarchic system towards their goals through deterrence and conflict with policies explaining underbalancing, bandwagoning, and buck-passing. Thus, policies make realism determinate with convergence resulting in more efficient balancing and divergence due to the inability or unwillingness of domestic structures embedded in a strategic culture resulting in underbalancing for power through security. The similar cases pursue balancing with differing domestic structures resulting in dissimilar policies which indicates their domestic structures explain balancing policy including underbalancing.

States in competition under anarchy face a security dilemma and leverage power for self-help to maintain order through balancing power with interstate military power conditioning state policy and the balance of power. Domestic structures explain state behaviour conditioned by the anarchic system with the articulation and implementation of policy vis-à-vis real and perceived threats with implications for relative military power with systemic effects. The research examines power through security policy determined by domestic structures pursuing security as an derivative of power, and domestic structural explanations of policy for power through security with systemic effects because of shifts in military capabilities and strategies conditioning the balance of power vis-à-vis real and perceived threats. The research thus provides predictive capacity and explanation as NWSs react under anarchy differently through balancing due to mediating domestic structures that identify and respond to threats with policy. The anarchic system and threats are thus indirectly causal of balancing while policy explains underbalancing and is directly causal of behaviour to direct the anarchic system towards realizable preference.

State–level domestic structures explain threat identification and balancing policy determinative of military capabilities and strategies for power through security responsive to the anarchic system even when not threatened. The unitary state leverages policy for self-help to direct the anarchic system towards realizable preferences through policies with self-reliant states better placed to balance. Policy is a benchmark to assess balancing with strategies being deduced at the implementation stage (supply policies), with policy implementation by the cases reflecting a nuanced balancing story conditioned by capacity to accomplish missions. Policy divergence because of the unwillingness or inability of domestic structures in a strategic culture to articulate and implement efficient balancing policies results in diminished relative gains due to underbalancing and reduced utility to power through security, and vice versa with convergent policy.

In Russia, policy was concentrated in the Kremlin, coordinated by the RFSC, and implemented by domestic structures (Source 1, 2015; Source 6, 2015) but which were unable to effectively implement articulated policy, namely adequate nonnuclear forces at the implementation stage. Policy indicates divergences between articulation and its implementation, prioritizing nuclear forces to compensate for insecurities regarding inadequate nonnuclear forces, to offset real and perceived adversarial nonnuclear forces (Podvig, 2015; Source 1, 2015; Source 2, 2015) and offensive deterrence and conflict strategies. Because policymaking was concentrated, internal and external actors could not effectively challenge underbalancing. This resulted from incongruent policies and balancing types combining conventional deterrence by punishment and threats of nuclear use if conventional deterrence fails because capacity gaps between nonnuclear forces and articulated threats caused less credible deterrence due to adversarial gain absent the threat

or use of nuclear forces. Self-help was thereby inferior in a nonnuclear–threat dominated context due to reduced military advantage and power through security.

For America, policy articulation and implementation was concentrated in the executive and in Congress (Hook, 2005). Despite divergences over defence spending between the executive and Congress, relative congruence in policy articulation and its implementation prioritized nonnuclear forces and defensive strategies while hedging nuclear threats through modernizing nuclear forces despite congressional budgetary constraints, particularly during periods of arms control (Shanker and Cooper, 2014). As policymaking was concentrated, outsiders had limited ability to influence.

Efficient American balancing resulted from congruent policies and balancing types combining conventional deterrence by denial with adequate nonnuclear forces for self-help mainly in defensive strategies as nuclear forces (namely in offensive strategies) are impractical. Adequate nonnuclear forces supported balancing with conventional deterrence by denial and raised the risk of failure in conventional conflict without the need to threaten or use nuclear forces including through asymptomatic assumption of missions with lower conflict escalation effects and higher threshold of nuclear use.

Chinese policy articulation and implementation was focussed in CPC domestic structures (Source 5, 2015; Zhao, 2015). Articulated policy and implementation indicate divergences, at times within and among institutions, prioritizing nuclear and especially nonnuclear forces to support offensive regional strategies in later years while hedging existential threats with modernizing nuclear forces. Because Chinese policymaking was similarly concentrated, outsiders had limited ability to influence. Chinese underbalancing resulted from incongruent policies and types of balancing, combining conventional

deterrence by punishment and nuclear retaliation supported by modernizing nuclear and nonnuclear forces causing less credible deterrence due to adversarial gain absent the threat or use of nuclear forces. Self-help is thus inferior in a nonnuclear–threat dominated context due to reduced military advantage and power through security.

Table 7-7: Mediating Domestic Structures		
Russia	**China**	**United States**
Divergence in policies articulated and implemented by domestic structures.	Somewhat divergence in policies articulated and implemented by domestic structures.	Relative convergence in policies articulated and implemented by domestic structures.

Consistent with neorealism, realizable preferences with self-help are greater in a nonnuclear–threat dominated context with adequate nonnuclear forces. The cases show NWSs tend to act alone and that internal balancing proffers more effective balancing and thus power through security even if disproportionate to means and without a direct threat.

4.2.1 *Regime Type*

How domestic structures perceive threats and rely on military capabilities depends on the regime type. Generally, the executive or equivalent considers interests centred in and among domestic structures in closed, centralized regimes: e.g., while Soviet leaders were constrained by the Politburo, in kleptocratic authoritarian Russia, policies centred in the Kremlin (Schulte, 2013; Economist, 2015b). Conversely, in America—a democratic superpower guarantor of the status quo and alliances, a president was constrained by a Congress that had legislative discretion over arms control and defence spending. And China's regime type was similar to the USSR, characteristic of a single–party politburo leading a rising power (Schulte, 2013). Despite the more open nature of democracies, policies concerning military capabilities are often concentrated. A common aspect across

the cases was centralized policymaking despite divergence or convergence in and among domestic structures and between the articulation of policy and its implementation.

Domestic structures also link balancing with domestic and/or foreign issues to persuade or coerce policy changes. Issue linkage serves as a negotiating ploy, persuading mechanism, and means to maximise the gains of domestic structures by connecting disparate issues and encouraging bargaining to enhance cooperation or obtain advantages (Martin, 1993; Haas, 1980). Issue linkage is dispositive for the analysis of military capabilities as domestic structures pursue policies to compensate for domestic or external weaknesses in one area for strength in others (Art and Waltz, 2009).

Powerful states better engage in issue linkage than weak ones as they are strong in more areas and can utilize leverage to compensate for deficits and shift resources to build bargaining power: e.g., generate military power when needed through linkage to non-military issues to enhance advantages and boost force fungibility by enabling cross–domain use (Art and Waltz, 2009). Open regime types are susceptible to issue linkage because of their more compromising nature. But domestic or foreign issue linkage is less necessary when domestic structures converge. As Table 7-8 notes, Section II observed issue linkage implicating balancing because of domestic and/or foreign issues.

Table 7-8: Issue Linkage

NWSs	Domestic	External
United States–Russia	U.S. Senate passage of arms control treaties linked to the executive's modernization of the nuclear force.	Russian linkage of arms control to American offensive–defensive military capabilities.

Issue linkage among NWSs is more likely with military asymmetries, divergent interests, or animosity (regardless of shared goals), and when domestic structures diverge, such as in America with legislators who saw nuclear force modernization as pivotal

versus a burden (see, e.g., Feinstein, 2014; Wolfsthal et al., 2014). Balancing shifts will therefore be constrained by issue linkage, particularly with arms control, MD, TNWs, and advanced nonnuclear forces (Pifer, 2015; Source 6, 2015; Dvorkin, 2014).

4.3 Reliance, Arms Control, Strategic Stability, and Deterrence

Arms control supports strategic stability, transparency, and security though MD poses a threat and limits arms control (Dvorkin, 2014). While domestic structures may frame arms control as a threat (as in China or in America with New START) or nuclear forces as valuable (as Russia), a NWS may pursue arms control (unilaterally, bilaterally, or multilaterally) (as Russia and America did) or avoid arms control (as China did).

Despite the denuclearization of international relations, because the threat of state nuclear forces is minimal, arms control is marginalized without incentives or when ties are strained. But nuclear force modernization may benefit from arms control because of or in spite of its impact on nuclear reliance. U.S.-Russian arms control was facilitated by natural force obsolesce and its institutionalization (despite higher reliance on nuclear forces), whereas China shunned arms control, particularly because of its intrusive nature, with which China had no prior institutional experience. A quantitative approach to arms control has diminished applicability due to size disparities, so a qualitative approach is more applicable, but reductions will also foment reliance on second-strike nuclear forces (Source 1, 2015; Savelyev, 2014) and a focus on transparency and confidence-building—particularly for deployed nonnuclear and stored nuclear forces. Russia and China will issue link arms control to MD, TNWs, and advanced nonnuclear forces (Podvig, 2015).

Deterrence can be accomplished with strategic sea-based systems, which are the least vulnerable to first strike and serve as sufficient leverage and a guarantee under

defensive last resort postures in the improbable case of nuclear use (Zagorsky, 2014). Indeed, instability increases if a NWS does not have them—particularly SSBNs—which are spreading and strengthen deterrence and strategic stability by reducing the "use them or lose them" dilemma (particularly for NWSs with a small or vulnerable nuclear force) (e.g., India developed SSBNs and Russia and China put theirs out to sea frequently and increasingly relied on survivable platforms due to concerns with potential American counterforce strikes, even though America's capacity for such strikes was imperfect and justifiable against only existential threats) (Colby, 2016a; Economist, 2015a).

Augmented retaliatory capacity anchored on second-strike systems help reduce reliance on nuclear forces and support arms control through mutual vulnerability and limit escalation to the threat or use of nuclear forces. Resulting nuclear force reductions also incentivize multilateral arms control, strengthen the NPT, and mitigate concerns with adversarial MD and advanced nonnuclear forces as ICBMs vulnerable to first strike are minimized (Zagorsky, 2014). But new NWSs like North Korea will constrain reduction in reliance on nuclear forces and arms control as they are less risk averse than established NWSs are and thus susceptible to perceptions of internal or external threats that increase the danger of nuclear proliferation or unauthorized nuclear use (particularly during crisis) (Harshaw, 2019). While America and the USSR were risk averse toward nuclear forces and committed to stability through nuclear forces (namely second-strike nuclear forces) despite associated risks, post-Cold War nuclear forces—though fewer in number—are relied on by certain NWSs to challenge the status quo and for possible use in conflict at lower yields, which fuels instability and insecurity and undermines strategic stability.

The research does not provide a final approach to balancing but rather advances concepts to facilitate insights to balancing with deterrence and conflict may integrate. An evolved understanding of deterrence should focus on more overt deterrence commitments to attenuate the threat of emerging NWSs and new nuclear programs, and a shift toward defensive last resort balancing. But unstable interstate relations, unresolved rivalries, and rogue states that see nuclear forces as a way to coerce mean that global zero is unlikely and would not make the world safer, particularly if a former NWS can restore its nuclear force (i.e., there are incentives to cheat such as by caching weapons-grade nuclear force material). In that regard, the number of post-Cold War NWSs increased as reliance on nuclear forces by new NWSs became more unstable. As technological developments increase the adequacy of military capabilities and multiply their interaction (Gartzke and Lindsay, 2016), new approaches to deterrence are ever more pressing.

5. Balancing

Balancing (the dependent variable) results from quantitative and qualitative reactive and proactive supply (determining the adequacy of military capabilities across threats, or the independent variable) and demand policies (or the mediating variables). Quantifiable policies expand or constrain options but do not determine balancing because they do not alone account for qualitative phenomena like threats (Betts, 1985).

As anticipated by balance of power, the research shows NWSs balance despite polarity and hegemony, and that internal balancing is preferred in multipolarity with uneven military capabilities subject to power shifts for realizable preferences with self-help. States seek to reduce adversarial power through the erosion of military advantage and manipulation of adversarial threat perception. Consistent with neorealism, realizable

preferences with self-help are greater through nonnuclear forces in a nonnuclear–threat context even if not directly threatened because of military advantage and power through security. Policies articulated and implemented by domestic structures explain balancing with offensive and defensive military capabilities and strategies compounded by geographic proximity and, thus, military asymmetries because of relative gains and losses with systemic implications. The research validates realism to explain balancing under anarchy through internal balancing (including of distant competitors constrained by the adequacy of military capabilities for power through security), and explains why capabilities not just geography condition differing strategies to maintain or contest power.

Balancing is neither monolithic nor just a measure of missions assigned, nor should Cold War logic be applied given an evolved post-Cold War context that has since eclipsed it. Further, it is important to not overlook the domestic nature of balancing, or that what NWSs do with military capabilities matters more than what they say they will do with them. While the declaratory and quantitative balancing types are the more visible types and receive greater scrutiny, they are a limited form of analysis with incomplete prescriptive value. Balancing results from policy that determines how a state signals to friends and foes offensive and/or defensive strategies and articulates, materializes, and communicates strategies with the greatest gains and lowest cost, capitalizing on self-help.

Given the improbability of nuclear war and the use of nuclear forces against an all-out attack or unconventional nonnuclear threats, cross-domain scenarios between peace and war but below the threshold of use of nuclear forces are more prevalent, so more and targeted defence spending on nonnuclear forces for nonnuclear threats is central to effective deterrence and conflict (Barnes et al., 2017; Chambers, 2016). But military

asymmetries accentuate threats and condition balancing (see, e.g., Brzoska et al., 2011). If domestic structures articulate and implement incongruent policies, then constraints on proactive policies undermine deterrence and encourage underbalancing.

To be sure, incongruities may be deliberate in that they may be used for deception or to allay adversarial concerns with the implementation of non-articulated policy, and, thus, may be characteristically coordinated despite apparent incongruities. For example, China's articulated policy advocated peaceful intentions though its actions, particularly in its near–sea region, were anything but and despite viewing them as defensive in nature. In that case, incongruities may be tied to underlying strategies, and therefore what NWSs do with their military capabilities matters more than what they say they do with them.

NWSs can make nuclear force reliance excessive by increasing the adequacy of nonnuclear forces to asymptomatically assume nuclear force missions against nonnuclear threats because NWSs cannot control threats but can lower their perceived acuteness. The NWS can thereby reduce the utility of nuclear forces or reliance on ASMs (assuming they exist) even when the utility of nuclear forces is low (as America did). But this assumes NWSs do not rely on them for cost–effective security as Russia did (Sokov, 2002).

Nuclear force reliance increases with missions that cannot be achieved at all or effectively without them (i.e., the presence or absence of their perceived indispensability to achieve missions at an acceptable cost) (Sokov, 2002). Adequate nonnuclear forces are thus a necessary but insufficient condition of efficient balancing because they can assume nonnuclear threat missions but do not assure efficient reliance on nuclear forces. Indeed, whereas conventional deterrence by denial (preventing adversarial objectives) absent the threat to use nuclear forces is a necessary but insufficient condition of deterring non-

nuclear threats, conventional deterrence by punishment (imposing unacceptable costs) is a sufficient but unnecessary condition to deter nonnuclear threats if the threat to use nuclear forces is retained, assuming the resolve to do so. Correlatively, absent the threat to use nuclear forces, an adversary may lean towards attacking (Betts, 1985).

Underbalancing combines conventional deterrence by punishment and threats of use of nuclear forces should conventional deterrence fail. Adequate nonnuclear forces support efficient balancing with conventional deterrence by denial and raise the risk of failure in conventional conflict without threatening or using nuclear forces, particularly in the absence of ASMs or the cost-effective security through nuclear forces (as Russia did) or if the perceived utility of nuclear forces is low (as occurred with America).

Substantial nuclear forces are needed to deter nuclear or superior nonnuclear threats, while fewer forces are sufficient for peers (e.g., India and Pakistan), even though in either case nuclear forces are impractical in conflict (Lukasik, 2010). Nonetheless, nuclear forces are the ultimate hedge against uncertainty and insecurity because they raise adversarial risk of pursuing conflict—particularly against a superior nonnuclear threat—but present the highest probability of conflict escalation, possibly to use of nuclear forces.

Reliance on nuclear forces increases with capacity gaps between the adequacy of nonnuclear forces and threats, namely if their perceived utility is higher or the DI cannot supply adequate nonnuclear forces with or without ASMs. Even despite their substitution of inadequate nonnuclear forces (Sokov, 2002; McDermott, 2011a), nuclear forces are ineffective deterrents against nonnuclear threats, dangerously conflict escalatory, and ever less consequential for power, status, and leverage (Moisseyev et al., 2010). Because NWSs seek to achieve missions with the greatest probability of success and lowest costs,

nuclear forces are increasingly impractical post-Cold War. Balancing that capitalizes on self-help asymptomatically assigns nonnuclear missions to nonnuclear forces and nuclear forces to nuclear deterrence and existential missions. The shift is nonlinear, not least because of the time and resources required to supply adequate nonnuclear forces, adversarial balancing of military advantage, and the unique deterrent capacity of nuclear forces. More efficient balancing thus produces a paradoxical dilemma. If conventional deterrence cannot be sustained due to inadequacies in military capabilities or for other reasons, revaluation of nuclear forces may occur.

Nonetheless, the research does not ascribe to the idea of global zero. There are costly and destabilizing effects of under-reliance on nuclear forces that may generate insecurity for NWSs and their allies (Schulte, 2013; Economist, 2015a), not least through potential adversarial gain through coercion or conflict in the absence of deterrent nuclear forces. NWSs are unlikely to relinquish nuclear forces that can coerce, compel caution, and extract zero-sum advantages for concessions below the threat or use of nuclear forces without trust in the reliability of effective transparency, reciprocal restraint, verification, and confidence-building measures or the assurance of no new unpredictable NWSs that—unlike established NWSs—view WMDs as useable in an age demanding new deterrence strategies because of proliferation, blackmail, and military modernization (Schulte, 2013; Bracken, 2012 and 2012a; Delpech, 1992). In the final analysis, the possibility of nuclear use will remain as long as nuclear forces exist. That risk is not constant but increases or decreases depending on conditions the research attempts to inform, the knowledge of which can help reduce the risk of nuclear use (Sokov, 2002).

While nonnuclear forces help reduce reliance on nuclear forces, there are limits to how they replace them. While they help make nuclear forces less necessary and attractive for NWSs that rely on them for nonnuclear threats, nonnuclear forces are a supplement but not a replacement for all nuclear force missions, particularly countervalue targeting (Ford, 2010; Zarate and Sokolski, 2009; Perry and Schlesinger, 2009; DOD, 2002; Krepinevich and Kosiak, 1998; Nitze, 1994; Blair, 1993). Additionally, arms control may induce a shift toward escalatory countervalue targeting because of the diminished number of warheads to expend on counterforce targets but which may hinder arms control as multiple warheads are needed, particularly when their perceived utility or cost-effective security through nuclear forces is high (Ford, 2010; Sokov, 2002). This is particularly challenging for NWSs like China with relatively small nuclear forces.

Though a small nuclear force retains the ability to retaliate, it has limited effect for counterforce first strikes or conflict escalation dominance[144] and may be relied on for more conflict escalatory countervalue targeting but with a higher threshold of use because of the immorality and illegality of nuclear forces (Moxley et al., 2011; Lukasik, 2010; Cimbala, 1995; Shamai, 2015), thereby shifting reliance to nonnuclear forces. But this shift varies by NWS and its domestic structures and real and perceived threats. Because nuclear and nonnuclear forces have different advantages and disadvantages, NWSs must consider other trade-offs in supplement and replacement decisions. For example, (i) despite qualitative nuclear force modernization, reductions by Russia and America will require arms control with other NWSs, (ii) complex assessments related to threats, the lower collateral damage of nonnuclear forces, and the number of targets needed to

[144] The ability to contain conflict and avoid escalation if dominant at each escalation step to the use of nuclear forces. See Wilkening, 1995.

achieve military effects, (iii) not all NWSs deploy adequate military capabilities across threats that evolve (as the research shows), and (iv) nuclear forces can provide reliable options in certain cases for deterrence and conflict (Lukasik, 2010).

If a NWS thinks it can control escalation through nuclear forces then the threshold of nuclear use decreases and the shift toward reliance on nonnuclear forces is constrained. For example, Russia's escalate–to–de-escalate policy was based on escalation control rooted in coercion by threatening a limited nuclear strike to compel the *status quo ante* by imposing unacceptable damage on adversarial forces (Sokov, 2014). Table 2-1 above outlined factors that drive reliance on nuclear forces. The research delved into trends underlying these factors and identified that incongruities in supply and demand policies foment them. Further, adequate defence spending and an effective DI (see, e.g., Medeiros et al., 2005; Gholz and Sapolsky, 1999; Gansler, 1980) that supply adequate nonnuclear forces attenuate the indispensability of nuclear forces, even with the acute perception of a threat or in the absence of ASMs (or preclude the need for ASMs altogether).

Variations in the adequacy of nonnuclear forces results in disparity in the ability to deter different types of threats and levels of conflict, with implications for balancing. Nonnuclear force modernization tends to be prosecuted during periods of insecurity or increasing reliance on nuclear forces or arms control marginalization, while decreasing nuclear force reliance and arms control engagement tends to occur during periods of adequate nonnuclear forces and security within the context of the mediating variables. The research finds that because nuclear forces do not necessarily deter or defeat non-nuclear threats, there are implications for how NWS leaders rely on military capabilities, particularly for threats below the threat or use of nuclear or even nonnuclear forces.

The research limits the utility of nuclear forces, namely for nonnuclear threats. While the objective should be to achieve missions without nuclear forces that could otherwise only be accomplished with nuclear forces, substitution can undermine strategic stability because nonnuclear forces can substitute for counterforce nuclear targeting but not second-strike retaliation or countervalue targeting, and it demands constant military modernization, a new non-MAD-based conception of strategic stability, and political strategies to defuse threats that induce reliance on nuclear forces (Podvig, 2015; Blank, 2011b; Kipp, 2011; Colby, 2010). Military capabilities alone cannot deliver military victory, proxy forces will not necessarily win a conflict, and deterring use of force by showing the presence, strength, and capacity to defeat a threat is vital (McMaster, 2003).

Decades after the advent of nuclear forces, scholars and practitioners need to acknowledge an evolved context and accord it the attention it demands. Different threats and new NWSs require novel approaches to balancing, particularly approaches not rooted in a Cold War prism and that account for non-Western contexts. The growing gray area in the uncertain limits between war and peace is particularly concerning. The research aims to help inform that discussion. Indeed, in an increasingly multi-nucleic world dominated by low-intensity nonnuclear threats, NWSs rely on forces for new, destabilizing roles with broad implications. Balancing matters not least because it implies questions of security and power projection, thereby testing the essence of national and international security. How a NWS reconciles these issues through military capabilities rouses the often-contentious area in which the two realms intersect. However, we must not forget that what unites national and international security is often far greater than what divides these two realms, even when they seem incompatible.

6. Summary of Findings

A NWS's balancing is more efficient during shifts to more adequate nonnuclear forces for nonnuclear threats, thereby increasing self-help through deterrence and conflict and affording assurances to pursue arms control but which may not result. In arriving at these findings, the research linked the adequacy of military capabilities and balancing in the context of the mediating variables. The research rejects the null argument that there is no link between the explanatory model variables. Table 7-9 outlines the findings across the cases during the research time period.

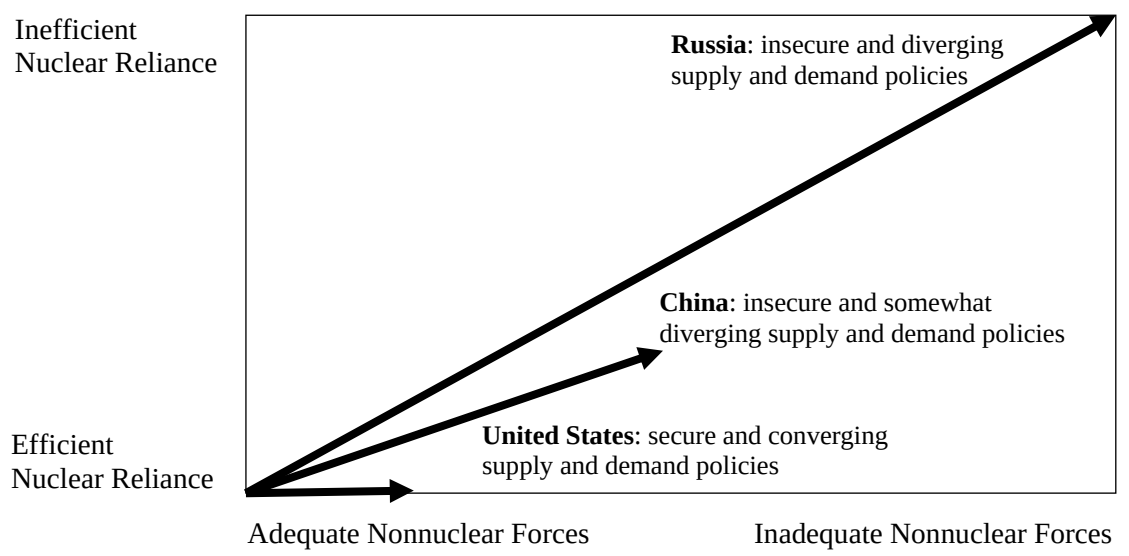
Table 7-9: Summary of Findings

Variable		Russia	China	United States
Adequacy Across Threats (Independent Variable)	**Nuclear Forces**	Adequate		
	Nonnuclear Forces	Inadequate		Adequate
Mediating Variables	**Security**	Insecure		Secure
	Institutions	Divergent	Somewhat Divergent	Convergent
	Interests			
Balancing (Dependent Variable)	**Nuclear Forces**	Increasing		Decreasing
	Nonnuclear Forces			Increasing

During the research time period, American adequacy of military capabilities across threats increased—particularly its nonnuclear forces following the 9/11 attacks—while Russian and Chinese nonnuclear forces were inadequate albeit improving despite the adequacies of their modernizing nuclear forces. American reliance on nonnuclear forces increased and decreased on nuclear forces in a denuclearized context, while Russian and Chinese nuclear force reliance increased with regional insecurities despite the adequacies of their modernizing nonnuclear forces. Correlatively and pursuant to the balancing typology introduced in Chapter Three, American supply and demand policies (and therefore balancing types) more efficiently relied on military capabilities across threats, while Russian and Chinese policies did not with relatively reduced self-help.

Because supply and demand policies are the research proxy for balancing, American balancing remained relatively efficient with shifts to more adequate military capabilities. In turn, Russian reliance on nuclear forces remained inefficient because of inadequate nonnuclear forces, whereas Chinese reliance on nuclear forces was relatively inefficient despite increasingly adequate nonnuclear forces. Figure 7-5 illustrates this.

Figure 7-5: Completed Explanatory Model Illustration



As Figure 7-5 illustrates, even in the case of a NWS with a low utility of nuclear forces, adequate nonnuclear forces may preclude the need to increase reliance on nuclear forces or pursue ASMs, and conversely when nonnuclear forces are inadequate. Reliance on nuclear forces can thus increase if nonnuclear forces are inadequate across nonnuclear threats, particularly when threat perceptions increase. Correlatively, when the perceived utility of nuclear forces is low and nonnuclear forces are inadequate, the need to pursue ASMs increases. Adequate individual or collective nonnuclear forces are thus a necessary but insufficient condition of efficient balancing.

The research contributes to balancing literature and validates realism to explain relational differentiation of states by military capabilities for self-help through policies mediated by domestic structures undergirding threat perception, the security dilemma, interstate competition, and realizable preferences determining interstate power through security as a national interest, with self-reliant states better placed to balance. The research contributes to neoclassical realism by identifying mediating domestic structures and policies to explain balancing that imbue realism with predictive and explanatory capacity with the DI identified as the most consequential. The research thus posits a domestic structural explanation of balancing by referring to variations in policies to support realist arguments that powers internally balance vis-à-vis external military threats and shifts in military power to identify and respond to threats with military capabilities to reduce adversarial military advantage and manipulate adversarial threat perception.

The research contributes to understanding balancing that is relevant to security studies by showing that the relative distribution of military capabilities through self-help conditions realizable preferences determining interstate power through security, and that policies through mediating domestic structures condition threat perception and relative military capabilities to produce balancing with systemic effects, with self-reliant states better placed to balance. The research reinforces neoclassical realism by advancing an explanatory framework of balancing and identifying domestic structures to explain balancing that imbue realism with explanatory and predictive capacity by analysing balancing efficiency (which can be assessed by policy changes) through the convergence and divergence in the articulation and implementation of policies. The research supports neorealism by helping understand which balancing posture a NWS may adopt through

policies (but not necessarily power balances or outcomes). The research provides a means to identify and assess strategies with policies, validates the reduced deterrent value of offensive strategies, and shows the limited utility of NWS direct and external balancing and that arms control had no moderating effect on nuclear forces.

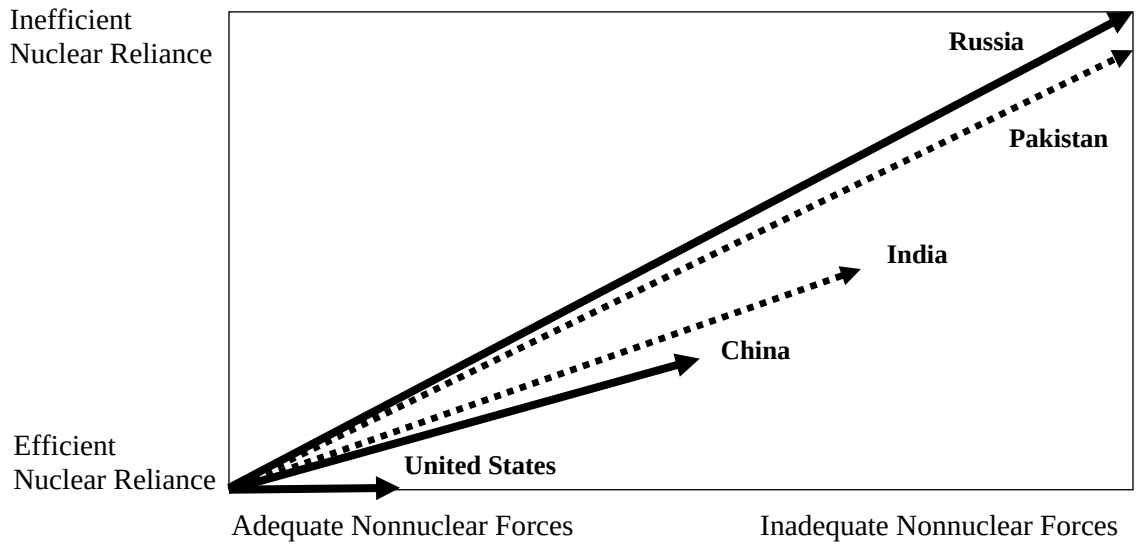
As anticipated by balance of power, the research shows NWSs counterbalanced one another, even if not directly threatened, with capabilities and strategies, including out-of-region. The research accounts for underbalancing because of sub-optimal policies that foment asymmetries and advances a methodology to assess and calibrate balancing with policies undergirding relative gains and losses through military capabilities and strategies, including because of nuclear force revaluation even if not threatened, due to inadequate nonnuclear forces, despite their impracticality with diminished security (and, thus, power) and greater hybrid and proxy conflicts. The research provides a means to identify and assess strategies with policies, validates the limited military value of nuclear forces and offensive strategies, and explains why Russia and China underbalanced.

7. Generalizability of the Explanatory Model

This section evaluates the research's external validity. The research examined existing NWSs but not those that seek nuclear forces as the acquisition of a nuclear device does not constitute a nuclear force or have deterrent effect (Narang, 2009; Lieber and Press, 2009). The explanatory model is applicable to other NWSs like Pakistan and India, which experienced varying balancing in the context of the mediating variables. Figure 7-6 shows the generalizability of the explanatory model to other NWSs in non-Western contexts, and begins at efficient reliance on nuclear forces ($y = 0$) and adequate nonnuclear forces ($x = 0$). Like Russia, Pakistan relied on the first use of nuclear forces to

deter nonnuclear threats with asymmetric escalation balancing, thereby operationalizing nuclear forces as war–fighting tools and to absorb nuclear retaliation (Narang, 2009). Pakistan's fast-growing nuclear force was anchored by TNWs for early use against Indian nonnuclear forces (Ahmed, 2016; Shapoo, 2016; Economist, 2015a). Pakistan recognized that this threat deterred India's superior nonnuclear forces by manipulating adversarial threat perception (Ahmed, 2016; Shapoo, 2016; Economist, 2015a; The Hindu, 2009).

Figure 7-6: Illustration of Explanatory Model Generalizability



To compensate for nonnuclear force inadequacies, Pakistan, like Russia, amassed battlefield nuclear forces and espoused escalation control—or the termination of non-nuclear conflict with nuclear forces, increasing reliance on, and potential use of, nuclear forces to compel the pre-crisis *status quo ante*, whereas India, like China, relied on nuclear forces to deter China and Pakistani nuclear use (Kristensen and Norris, 2017; Sokov, 2002; Economist, 2015). An offensive strategy with unpredictable conflict escalation effects, the cost effective deterrent impact of Pakistan's asymmetric escalation was counterbalanced by the costly signal to India about the adequacy of its nonnuclear

forces and intended use of nuclear forces, implying India's gain through nonnuclear conflict absent Pakistan's threat or use of nuclear forces (Narang, 2009; Daalder and Lodal, 2008; Blechman and Fischer, 1994). Like Russia, Pakistan's nuclear forces could support an offensive but not a defensive strategy with greater instability and escalation effects, diminished threshold of use of nuclear forces and self-help, and greater costs, like Russia, because of inadequate nonnuclear forces (Glaser, 1992).

As Russia did with its so-called "near abroad," nuclear forces enabled Pakistan to pursue offensive strategies, namely vis-à-vis India, with little fear of retaliation (Narang, 2009). Notably, Pakistan evolved from catalytic (programmed to catalyse American intervention) to asymmetric escalation when the Asian subcontinent turned nuclear, which was a reactive policy to real and perceived inadequacies of Pakistani nonnuclear forces, namely vis-à-vis India and lacking American patronage to defuse crises (Narang, 2009). But Pakistani threats of TNW use against Indian nonnuclear forces undermined Indian justifications for strategic nuclear use against Pakistan (Narang, 2009).

Conversely, more adequate nonnuclear forces and lacking existential nonnuclear threats allowed India to pursue assured retaliation like China did (Narang, 2009). India thereby deterred a nuclear attack and coercion with nuclear forces, in particular by Pakistan, but not necessarily limited nonnuclear threats (which need, as with asymmetric escalation, immediate release of pre-delegated nuclear forces), as exemplified by India's failed deterrence of Pakistan and decision not to use nuclear forces during the Kargil War despite prevailing (Narang, 2009; Snyder, 1965). Like China and due to the assurances its nonnuclear forces provided, India did not adopt more offensive strategies or notably expand its nuclear force despite the capacity to do so, and abided by its no-first-use

policy (Narang, 2009; Subrahmanyam, 2009). Like China did, India also focused on the adequacy of its nonnuclear forces (particularly for Pakistan) and could espouse offensive or defensive strategies against nonnuclear threats with reduced instability and conflict escalation effects and higher threshold of use and self-help through balancing.

Lastly, America stood alone in its balancing. But this does not mean that findings relative to America are not replicable but rather that they are unique because of the adequacy of its nonnuclear forces. For example, NWSs such as France espoused a restrained nuclear posture akin to defensive last resort despite the inadequacies of its non-nuclear forces supported by the assurances provided by ASMs, specifically U.S.–NATO security guarantees. But in the absence of such ASMs, France may have likely espoused more offensive balancing (like assured retaliation) to deter a nuclear strike and coercion (but not limited nonnuclear threats) with higher instability and escalation effects.

Table 7-10: Prospect for Substitution of Nuclear Forces

<table>
<tr><th>NWS</th><th>Deter Nuclear Threats by</th><th>Deter Nonnuclear Threats by</th><th>Political Nuclear Utility to Gain Influence</th><th>Utility of Nonnuclear Forces Versus Nuclear Forces</th></tr>
<tr><td>United States</td><td colspan="2">Russia, China, Iran, and North Korea</td><td rowspan="5">Global</td><td rowspan="5">Delay theatre nuclear use.</td></tr>
<tr><td>Russia</td><td colspan="2">United States, NATO, and China</td></tr>
<tr><td>China</td><td colspan="2">United States and Russia</td></tr>
<tr><td>France</td><td rowspan="2">Aggressor</td><td rowspan="2">Russia</td></tr>
<tr><td>UK</td></tr>
<tr><td>India</td><td colspan="2">Pakistan and China</td><td rowspan="2">Bilateral</td><td>Deter Pakistan; delay nuclear use.</td></tr>
<tr><td>Pakistan</td><td colspan="2">India</td><td>Deter India; delay nuclear use.</td></tr>
<tr><td>Israel</td><td>Iran</td><td colspan="2" rowspan="2">United States and Neighbours</td><td>Immediately useful capability.</td></tr>
<tr><td>North Korea</td><td>United States</td><td>Little utility.</td></tr>
</table>

See generally Lukasik, 2010.

As Table 7-10 outlines, nonnuclear forces have utility in delaying nuclear use—particularly in theatre conflicts. But complete substitution is unlikely due to uncertainty over indigenous and adversarial nonnuclear forces. For NWSs that face geographically

limited threats (like India, Pakistan, and Israel), nuclear forces offer necessary deterrence regardless of the adequacy of nonnuclear forces (Lukasik, 2010). But when nonnuclear forces have little utility vis-à-vis nuclear forces—as occurred with North Korea—reliance on nuclear forces increases under offensive balancing like asymmetric escalation.

8. Further Research

While the explanatory model helps understand NWS balancing, it is not absolute. NWSs misread one another despite efforts to understand each other. Indeed, NWSs often only have mistrust as a guide. Further study of the balancing of other NWSs is needed, particularly in non-Western contexts. The choice of cases and comparative research helps remedy this deficit, and the explanatory model can be applied to other NWSs. Second, a more nuanced understanding of the factors underlying the supply and demand policies to improve the explanatory model. As noted, state secrecy and differences in methodology in particular complicate the study of the policies. But doing so would require analysis of customarily confidential data. Third, better data on how limited nonnuclear and offensive or defensive nuclear force missions can also induce an arms race or adversarial reliance on nuclear forces and undermine strategic stability is needed. Further research can benefit from data that helps test the link between balancing and real or perceived threats.

Fourth, a greater understanding of how the import of foreign military capabilities or the prohibition to do so (e.g., sanctions) implies balancing is needed. Lastly, a better understanding of the substitutability between nuclear and nonnuclear forces is needed as NWSs judge the capacity of nuclear and nonnuclear forces differently with implications for deterrence, conflict, escalation, strategic stability, and arms control.

9. Conclusion

Nuclear forces are impractical in a post-Cold War nonnuclear–threat context but deter existential threats that threaten NWSs or their allies. However, until such time that state and non-state actors do not pursue or possess nuclear forces to attack or defend, the incantation that nuclear forces are not useful is incorrect. Hence, reliance on adequate nonnuclear forces below the threshold of nuclear deterrence is pressing. The research shows that as the adequacy of a NWS's nonnuclear forces increases, and while it retains an adequate nuclear force, its reliance on nuclear forces is more efficient. The supply and demand policies examined help explain balancing shifts.

Military modernization can induce an arms race or increase the predisposition for conflict. While NWSs pursue direct and extended nuclear deterrence, nuclear forces have limited deterrent effect against non-NWSs (because the threat to use nuclear forces is not credible or disproportionate) or NWSs (because of the stability–instability paradox). As nuclear forces are ill-equipped to address most threats, more efficient reliance on non-nuclear forces diminishes the nuclear deterrence aspect of interstate relations (Arbatov and Dvorkin, 2006). While the Cold War has passed despite enduring similarities with post-Cold War rivalries among certain NWSs, nuclear threats remain and have evolved with new, more conflict–escalatory uses for nuclear forces in a context marked by more NWSs and the threats of nuclear proliferation and nuclear terrorism. In other words, nuclear forces are in relatively greater demand by state and non-state actors but of limited military utility. By advancing an explanatory model that helps understand how NWSs balance with military capabilities across threats over time, the research is concerned with efficient balancing that more effectively deters and defeats threats and strengthens

deterrence, arms control, and strategic stability by increasing the adequacy of nonnuclear forces in lieu of nuclear forces with or in the absence of ASMs.

A sustainable approach to efficient balancing demands cooperative polices, and, as America showed, proactive unilateral supply and demand policies can be as or more effective because of, or with, bilateral or multilateral efforts. Attention must be given to the qualitative and deployment aspects of, and the offensive–defensive link, between military capabilities. But as Section II examined, NWSs tend to address inefficiencies in balancing through reactive unilateral policies particularly at the implementation stage that accentuate inefficiencies and increase the probability of conflict even when the NWS, like China did, limits reliance on nuclear forces in articulated policy.

The comparative research indicates causes and effects of balancing and identifies sources of instability and insecurity. Balancing is both malleable and reversible. NWSs can pursue proactive policies that make balancing efficient without sacrificing deterrence, induce arms control, and strengthen strategic stability. But military modernization may be insufficient to encourage other NWSs to follow suit and may rather foment arms races and adversarial reliance on nuclear forces. Political strategies to defuse threats that induce reliance on nuclear forces are thus necessary. The causes and effects of balancing demand more attention and must be examined in the context of each NWS because changes in balancing are central to defining the conditions for war and peace.

Appendices

Russian Defence Spending and Nuclear Forces

Metric	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Defence Spending (Billion USD)	291.08	176.66	62.24	54.41	51.44	33.84	31.96	34.94	20.78	23.07	31.14	33.66	37.28
Defence Spending (% of GDP)	-	-	5.30	5.20	5.90	4.40	4.10	4.50	3.30	3.40	3.70	4.10	4.30
Nuclear Force Budget (Billion RUR)	-	-	-	-	-	-	-	-	-	-	-	-	-
Nuclear Forces (Thousands)	38.00	29.00	26.00	24.50	24.00	23.00	25.00	24.00	23.00	22.00	21.50	21.00	20.00

Note: "-" denotes unavailable reliable data.

Metric	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Defence Spending (Billion USD)	39.09	40.87	46.44	51.40	55.95	61.48	64.50	65.80	70.23	80.99	84.84	91.69	66.40
Defence Spending (% of GDP)	4.30	3.90	3.90	3.80	3.70	3.70	4.70	4.30	4.10	4.50	4.40	4.20	5.40
Nuclear Force Budget (Billion RUR)	-	-	8.70	11.40	12.10	17.10	19.10	18.80	27.00	27.48	29.28	33.34	38.57
Nuclear Forces (Thousands)	19.00	18.00	17.00	16.00	15.00	14.00	13.00	12.00	11.00	10.00	8.50	8.50	7.50

U.S. Defence Spending and Nuclear Forces

Metric	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Defence Spending (Billion 2011 USD)	527	463	489	463	435	411	389	387	378	379	394	397	446
Defence Spending (% of GDP)	5.10	4.50	4.70	4.30	3.90	3.60	3.40	3.20	3.00	2.90	2.90	2.90	3.20
% of Spending (Operations and Maintenance)	30.00	37.50	31.00	32.00	31.00	34.00	34.50	35.00	35.50	36.00	36.50	37.00	37.50
% of Spending (Military Personnel)	26.00	30.00	28.00	27.00	27.00	27.00	26.00	27.00	27.00	25.00	27.00	25.00	26.00
% of Spending (Procurement)	27.00	30.00	25.00	24.50	22.25	20.00	17.50	17.75	18.00	17.75	17.50	17.75	17.75
Nuclear Force Budget (Billion USD)	19.50	19.00	18.00	14.00	12.00	13.00	14.00	14.50	15.00	15.00	15.75	16.50	17.50

Metric	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Defence Spending (Billion 2011 USD)	507	553	578	588	604	649	701	720	711	668	630	610	596
Defence Spending (% of GDP)	3.60	3.80	3.80	3.80	3.80	4.20	4.60	4.70	4.60	4.20	4.25	3.50	3.30
% of Spending (Operations and Maintenance)	37.00	38.00	37.50	39.00	39.50	40.00	39.50	40.00	41.00	41.50	41.00	-	-
% of Spending (Military Personnel)	28.00	27.00	27.50	25.25	23.00	22.50	22.00	23.00	23.25	23.00	24.50	-	-
% of Spending (Procurement)	16.00	15.75	16.56	17.37	18.18	19.00	19.40	19.80	18.50	19.00	18.50	-	-
Nuclear Force Budget (Billion USD)	18.25	18.50	19.50	18.00	17.50	17.00	17.25	17.00	17.50	18.00	17.50	23.00	23.9

Note: "-" denotes unavailable reliable data.

Chinese Defence Spending

Metric	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Chinese Defence Budget (Billion USD)	6.10	6.20	6.90	7.40	6.60	7.60	8.60	9.80	11.30	13.0	14.60	17.00	20.00
U.S. Government Estimate (Billion USD)	-	-	-	-	-	-	59	65	70	73	78	79	89
SIPRI Estimated Spending (2015 Billion USD)	10.24	10.01	12.49	12.70	10.08	12.53	15.02	16.04	18.09	20.56	22.19	27.41	31.64
World Bank Estimate (% of GDP)	3.30	2.90	2.60	2.10	1.80	1.70	1.80	1.70	1.80	1.90	1.90	2.10	2.20

Note: "-" denotes unavailable reliable data.

Metric	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Chinese Defence Budget (Billion USD)	22.40	25.00	29.90	35.30	45.00	57.20	70.30	77.90	91.50	106.40	114.30	131.30	144.20
U.S. Government Estimate (Billion USD)	95	102	115	125	139	150	150	160	180	215	145	165	180
SIPRI Estimated Spending (2015 Billion USD)	34.77	40.02	46.29	56.66	71.75	91.66	111.78	123.33	147.26	169.60	191.23	216.37	215.00
World Bank Estimate (% of GDP)	2.10	2.10	2.00	2.00	2.10	2.00	2.20	2.10	2.00	2.00	2.00	2.10	1.90

Defence Spending Ratio

Metric	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Russia-U.S. Defence Spending Ratio (%)	-	-	12.73	11.75	11.83	8.24	8.22	9.03	5.50	6.09	7.90	8.48	8.36
China-U.S. Defence Spending Ratio (%)	1.94	2.16	2.56	2.74	2.32	3.05	3.86	4.15	4.79	5.42	5.63	6.91	7.09
China-Russia Defence Spending Ratio (%)	-	-	20.07	23.35	19.60	37.01	47.00	45.92	87.07	89.09	71.25	81.44	84.86

Note: "-" denotes unavailable reliable data.

Metric	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Russia-U.S. Defence Spending Ratio (%)	7.71	7.39	8.04	8.74	9.26	9.47	9.20	9.14	9.88	12.13	13.47	15.03	11.14
China-U.S. Defence Spending Ratio (%)	6.86	7.24	8.00	9.64	11.88	14.12	15.95	17.13	20.71	25.39	30.55	35.47	36.07
China-Russia Defence Spending Ratio (%)	88.94	97.91	99.53	110.23	128.22	149.08	173.29	187.41	209.66	209.40	225.40	235.97	323.80

Ratios of Defence Spending as a % of GDP

Metric	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
U.S.-Russia Ratio (%)	-	-	88.68	82.69	66.10	81.82	82.93	71.11	90.91	85.29	78.38	70.73	74.42
U.S.-China Ratio (%)	154.55	155.17	180.77	204.76	216.67	211.76	188.89	188.24	166.67	152.63	152.63	138.10	145.45
China-Russia Ratio (%)	-	-	49.06	40.38	30.51	38.64	43.90	37.78	54.55	55.88	51.35	51.22	51.16

Note: "-" denotes unavailable reliable data.

Metric	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
U.S.-Russia Ratio (%)	83.72	97.44	97.44	100.00	102.70	113.51	97.87	109.30	112.20	93.33	96.59	102.94	61.11
U.S.-China Ratio (%)	171.43	180.95	190.00	190.00	180.95	210.00	209.09	223.81	230.00	210.00	212.50	166.67	173.68
China-Russia Ratio (%)	48.84	53.85	51.28	52.63	56.76	54.05	46.81	48.84	48.78	44.44	45.45	61.76	35.19

Defence Spending and Nuclear Forces Ratios

Metric	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
U.S.-Russia Nuclear Forces Ratio (%)	56.32	65.52	52.69	46.94	45.83	47.39	44.00	45.42	46.52	48.64	49.30	50.00	52.50
U.S.-China Nuclear Forces Ratio (%)	1.17	1.32	1.82	2.17	2.27	2.29	2.27	2.29	2.34	2.34	2.36	2.38	2.38
China-Russia Nuclear Forces Ratio (%)	0.66	0.86	0.96	1.02	1.04	1.09	1.00	1.04	1.09	1.14	1.16	1.19	1.25

Metric	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
U.S.-Russia Nuclear Forces Ratio (%)	52.63	47.78	49.41	49.38	38.00	37.86	39.23	41.67	43.64	47.00	55.29	55.29	62.67
U.S.-China Nuclear Forces Ratio (%)	2.50	2.91	2.98	3.16	4.39	4.72	4.90	5.00	5.21	5.32	5.32	5.32	5.32
China-Russia Nuclear Forces Ratio (%)	1.32	1.39	1.47	1.56	1.67	1.79	1.92	2.08	2.27	2.50	2.94	2.94	3.33

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[145] The views expressed by Dr. Lora Saalman, associate professor at the Daniel K. Inouye Asia–Pacific Centre for Security Studies (DKI APCSS), do not reflect the official policy or position of DKI APCSS, the U.S. Pacific Command, the U.S. Department of Defence, or the U.S. Government.

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