

Modern Military-Industrial Strategy

Issues and Cases from the United States in 2024

James Michael Hasik PhD

Introduction

At the end of 2024, the United States, its allies, and its friends faced serious military threats from four brutal autocratic regimes—in Russia, China, North Korea, and Iran—and the lingering threat of jihadist terrorism. However, despite having fought almost continuously around the world, at different times more or less intensely, for roughly three decades since the end of 20th-Century Cold War, U.S. military forces had not been supported by a wartime economy. Two years after the full-scale Russian invasion of Ukraine, the U.S. system for acquiring the armaments and other means of provisioning its military forces were just shifting towards a wartime footing. Ominously, in modern industrialized warfare, the consequences of inadequate preparation can be severe.

Upon the American entry into the First World War 1917, the U.S. Navy was ready to send a battleship squadron to Scapa Flow to reinforce the British Home Fleet. Its efforts to procure submarine-chasing destroyers, the real currency of the war at sea, in time for useful effect in the real Battle of the Atlantic were much less impressive. The U.S. Army and U.S. Marine Corps similarly lacked tanks and aircraft needed for the Western Front. After a year-and-a-half of botched industrial mobilization, the U.S. ground forces exited the war almost entirely flying French aircraft and driving French tanks. The much-ballyhooed industrial might of the United States was much less important than its million troops who reached the front in time for the last offensives of 1918.

In a sense, the arrangement was even economically efficient. British and French industrial capacity continued to draw on American raw materials, as they had since 1914. Troop ships could transport more troops when laden only with their small arms, and the U.S. divisions could finish equipping upon arrival. The arrangement was dissatisfying, however, for Americans who knew that the country could shoulder a greater burden, and to planners who might not have France available in the same way in a subsequent round.

Much of the mobilization faltered on the War Department's close mismanagement of the wartime economy. In 1921, the U.S. Army established its Army Industrial School, which would teach the business of war to 1,000 officers over the next two decades. In 1946, the school would become the Industrial College of the Armed Forces, and in 2012, would be renamed after its most famous graduate—Dwight D. Eisenhower, class of 1933. The school's actual impact on American thinking remains unclear, but many in government understood the problem. The Roosevelt Administration and the Congress actually launched the U.S. mobilization for the inevitable war in 1938, whatever the public messaging of peacenik ambitions. Most of the weapons with which U.S. forces fought the Second World War were designed in those years and months preceding December 1941. At that point, industry hit the ground running.

Whether or not America's public-and-private system for military-industrial supply was appropriate for the hot peace of the post-Cold War, it frankly faces renewed challenges. This book grapples with the present problem. Nine substantive chapters explore the present state of the U.S. system,

across the military and industry, for developing and procuring military materiel, in the face of heightened military threats but industrial under-preparation. Each chapter addresses an important issue by applying general theories from political economy to specific case studies. It is not a book about how to tinker around the margins of the Pentagon's problematic procurement system, but rather, about thinking through the strategic issues that make business-as-usual dangerous.

The chapters of the book recurrently address three lines of analysis: the technologies of modern warfare, the supply chains that bring those technologies to the war-fighting forces, and the finances that underpin the supply. A series of three modules (see below) sequentially addresses those issues of technologies, supply chains, and finance in supplying the means for providing security, repeatedly asking three questions formulated by the noted equities analyst Byron Callan:

1. *Does the system design, build, and support world-class armaments?* (Technologies)
2. *Does the system balance global access with autarkic assurance?* (Supply Chains)
3. *Does the system provide competitive returns to labor and capital?* (Finance)

This book does not assume answers to these questions. It does not uncritically assume the validity of the questions themselves. Rather, this book asks readers to consider and challenge them throughout, with a battery of questions at the end of each substantive chapter. That is, the book tackles issues both *positively* and *normatively*, seeking to ascertain what is working (or not), and what should be working (or not). Knowing what questions to ask is sometimes more important than actually having the answers.

At a higher level, the book is organized through the *Structure–Conduct–Performance* (SCP) framework. Developed initially in the 1930s by economists at Chicago, Harvard, and Cambridge, this notion holds that the structure of systems, whether markets or hierarchies, strongly influences the conduct of the actors working within those systems, and that their strategic interactions in turn strongly influence each actor's performance against goals. The framework was initially developed for antitrust analysis (and on that point, see Chapter 8). However, beginning in the 1980s, SCP inspired strategic management theorists to study how firms and whole nations could improve their performance with attention to the structures of their economic and political systems. The book also asks military-industrial strategists to contemplate how SCP interacts with other common frameworks for strategic analysis—specifically those of the more recent *Ends–Ways–Means* (EWM) paradigm and the *Resource-Based View* (RBV) of organizations.

Each of these three modules addresses in sequence the technologies, supply chains, and finances needed to support this system, but in the reverse order of the SCP framework (that is, as P-C-S).

The first module addresses the military and commercial *performance* of the procurement system, asking whether the U.S. military is getting the right stuff, from the right people, over the short and long run. Each of its three chapters considers problems along the three aforementioned lines of analysis:

Chapter 2—Technology: Replacing the Bradley Fighting Vehicle (on change in modern warfare)
Chapter 3—Supply Chains: Semiconductors at War (economic globalization & disintegration)
Chapter 4—Finances: The Raider and the Sentinel (financial performance in the military & industry)

The second module investigates patterns of specific *conduct* by actors in government and business in pursuit of what they consider better performance, and along the same three lines. Each of these three chapters closely studies the activities of a well-known individual in the business—former Assistant Secretary of the Air Force Will Roper, long-time legislative aide and analyst Bill Greenwalt, and recent Secretary of the Navy Carlos Del Toro:

Chapter 5—Technology: Will Roper at Istari Digital (digital engineering & intellectual property)
Chapter 6—Supply Chains: Bill Greenwalt and the NTIB (sourcing nationally or internationally)
Chapter 7—Finance: Carlos Del Toro's War on Cash Flow (on the question of share buybacks)

The third module considers how structure, in both constraints and supports, has shaped outcomes, and particularly of late. Each chapter asks readers to consider how industry and the military can navigate those constraints, enable the supports, and ultimately change the system for the better:

Chapter 8—Technology: Vertical Integration in the Solid Rocket Industry (the new antitrust concern)
Chapter 9—Supply Chains: Austal & Philly Ship (domestic discontent and foreign direct investment)
Chapter 10—Finance: Anduril and “No Fair Competition” (venture capital in national security)

Readers can thus work through these stages of analysis in reverse order (P-C-S), first evaluating performance, and then asking how conduct and then structure can and should change to support better performance. Each chapter ends with a set of key questions to consider, and a list of suggested further reading. The book thus lends itself to classroom use in graduate courses in the areas of public procurement, military innovation, and international security.

To begin, however, must define what we mean by *strategy*—military, industrial, or otherwise. Thus, on to the introduction.

Contents

Introduction	2
1: Integrating Military and Industrial Strategy	6
2. Replacing the Bradley	15
3. Semiconductors at War	37
4. The Raider and the Sentinel	45
5. Will Roper at Istari Digital	65
6. Bill Greenwalt and the NTIB	78
7. Carlos Del Toro's War on Cash Flow	94
8. Vertical Integration in Solid Rocketry	125
9. What to do about Austal and Philly Ship?	147
10. Anduril and 'No Fair Competition'	158
Conclusions on Strategy Today	172
Notes and References	174