Comparison of Defense Acquisition Efficiency in the United States and China

Naval Postgraduate School

Abstract

- Since the 1950s, China has pursued economic and military dominance, leveraging alliances, intellectual property theft, and rapid technological advancements to strengthen its defense capabilities. Meanwhile, the United States has faced defense industrial base consolidation, bureaucratic stagnation, and prolonged conflicts in the Middle East, challenging its ability to maintain a technological edge. If current trends persist, China could surpass the United States in defense acquisitions. This thesis evaluates the extent to which China is more efficient than the United States in defense acquisition and identifies areas where U.S. acquisition efficiency can improve. Using a framework developed in a Naval Postgraduate School thesis, this thesis assigns efficiency scores to both countries across ten acquisition categories. A hypothetical weighting scenario examines how acquisition efficiency might shift in the event of an imminent U.S.-China conflict.

Methods

- The literature review examined existing research on the techno-security state concept, the Chinese defense industrial base, Chinese defense acquisitions, acquisition system comparisons between countries, and DOD measures of efficiency.
- An existing framework was applied to qualitative and quantitative acquisition efficiency data.
- A hypothetical weighting scenario was applied to determine if and how acquisition efficiency scores would change in the event of imminent conflict.

List of Efficiency Factors. Adapted from Lorge (2018)

Acquisition Efficiency Factor	Description of Scoring Metric
Cost	Cost to produce selected systems
Schedule	Rate of production of selected systems
Performance	Operational effectiveness and suitability of selected systems
Acquisition Workforce	Accessibility of training and organization of the workforce
Contracting	Contractor incentivization and accountability
Resource Allocation	Consideration of affordability and reaching maximum value
Innovation	Original and indigenous production
Industrial Base	Capability and capacity to meet objectives
Requirements System	Generated requirements meet strategic goals
Operations and Support (O&S) Costs	Consideration of and planning for O&S cost management for acquisitions

Quantitative Scoring Example: Platform Cost

Ship (CY2025$M)		Aircraft (CY2025$M)		Missile (CY2025$M)	
DDG-51	052D/DL	F-35	J-20	LRHW	DF-26
$1,711.2	$899.6	$118.7	$112.4	$43.0	$20.4

Results & Impact

- The United States remains more efficient overall, but China outperforms in cost efficiency. The Luyang III, J-20, and DF-26 are all less expensive to procure than the comparable U.S. platforms.
- Based on framework application results, areas in which the United States can improve include cost, acquisition workforce, resource allocation, and the defense industrial base.

Raw Score and Weighted Score Comparison

Efficiency Factors	Raw Score		Weight	Adjusted Score	
	U.S.	China		U.S.	China
Cost	0	4	2	0	8
Schedule	4	2	5	20	10
Performance	4	2	4	16	8
Acquisition Workforce	2	0	2	4	0
Contracting	4	0	1	4	0
Resource Allocation	2	0	4	8	0
Innovation	4	2	3	12	6
Industrial Base	2	2	5	10	10
Requirements System	4	4	1	4	4
O&S Costs	4	2	1	4	2
Score	30	18		82	48
Difference	12			34	

Future Research

- Within scope: Quantify all efficiency factors; apply classified data; apply framework to countries at war
- Outside of scope: Can China at once be innovative and authoritative?; How does China's force development and acquisition strategy differ from the U.S.?; Case study of missile capability gaps in the United States; Does China possess systemic capacity to fulfill Xi's rejuvenation by 2049?

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