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**Shipbuilding Procurement:
An International Analysis of Source Selection Processes**

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Shipbuilding Procurement: An International Analysis of Source Selection Processes

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Abstract

Naval shipbuilding procurement accounts for a significant portion of discretionary budgets worldwide. With high initial costs and long-term sustainment expenses, an effective source selection strategy is crucial in the contracting process for these critical weapon systems. This research examines the shipbuilding procurement source selection strategies of the United States, Egypt, Japan, and Taiwan, comparing these countries' source selection basis for award, source selection team composition, and proposal evaluation criteria. Using government acquisition regulations, laws, and publicly available solicitation/tender data, a comparative analysis is conducted to identify opportunities for improvement in the contract source selection process.

Introduction

Naval warships and support vessels are indispensable to the United States' ability to project power, maintain freedom of navigation, deter adversaries, and respond to crises worldwide. The U.S. Navy's maritime mission depends on a capable, ready, and technologically advanced fleet. However, despite significant and sustained investment in shipbuilding, the Navy has experienced persistent acquisition challenges that have limited fleet growth and readiness outcomes. Congressional testimony has highlighted that while the Navy's shipbuilding budget has increased substantially over the past two decades, systemic acquisition challenges continue to result in cost growth, schedule delays, and performance shortfalls (GAO, 2025a). These challenges underscore the strategic importance of improving shipbuilding procurement and contract management, specifically source selection processes, to ensure that delivered ships meet operational requirements.

The U.S. shipbuilding industrial base plays a central role in achieving cost, schedule and performance objectives. Private shipyard contractors and their subcontractors are responsible for constructing highly complex naval platforms within demanding cost and schedule constraints. Yet the industrial base faces structural limitations, including workforce shortages, aging infrastructure, and uneven workload distribution. The GAO has reported that the U.S. Navy lacks a fully integrated, strategic approach to private-sector shipyard investment, which introduces risk to planned fleet expansion goals (GAO, 2025b). Without a stable and capable industrial base, even well-designed acquisition strategies may fail to deliver ships on budget, on time, and in compliance with performance specifications.

The Navy shipbuilding contracting process serves as the formal mechanism linking Navy requirements with industry capability. Governed by the Federal Acquisition Regulation (FAR) and Department of Defense (DoD) FAR Supplement, this process is designed to promote competition, ensure fairness, and achieve best value for the government (FAR, 2026). Nevertheless, oversight findings indicate recurring weaknesses in the contracting life cycle pre-award, award, and post award phases. For example, the GAO has found that shipbuilding programs often begin construction with incomplete or unstable designs, contributing significantly



to cost escalation and delayed delivery (GAO, 2024). Such systemic acquisition practices elevate the importance of rigorous source selection processes during the contracting life cycle award phase.

At the core of DoD contract management is the source selection process, which includes evaluating proposals, conducting cost or price analysis, negotiating contract terms, and selecting the contractor for award (NCMA, 2022). Decisions made in planning for source selection, as well as during source selection, have enduring implications for contract performance and ship delivery outcomes. Weaknesses in proposal evaluation or insufficient negotiation rigor can propagate risk into production, sustainment, and life cycle cost management. Auditability theory establishes the importance of capable processes, as well as competent people and effective internal controls for organizational success (Rendon & Rendon, 2015). Additionally, oversight bodies have emphasized that disciplined contracting practices are essential to achieving fair and reasonable pricing and effective contract performance (DoD OIG, 2025). Accordingly, understanding the Navy's ship contract source selection process is critical to evaluating broader acquisition success and fleet readiness outcomes.

This research examines the shipbuilding procurement source selection approaches of the United States, Egypt, Japan, and Taiwan, comparing these countries' source selection basis for award, source selection team composition, and proposal evaluation criteria. Using government acquisition regulations, laws, and publicly available solicitation/tender data, a comparative analysis is conducted to identify opportunities for improvement in the contract source selection process. While all four countries share similarities in their source selection process, their source selection basis for award, team composition, and proposal criteria differ in certain respects. Recommendations based on our findings are provided to improve efficiency and transparency in contract source selections, and long-term sustainability across multiple nations.

Background

The U.S. Office of the Secretary of the Navy released the FY2025 30-year shipbuilding plan, which calls for 381 crewed ships and 134 large, unmanned surface and underwater vessels as part of the optimal mix of ships in the U.S. arsenal (O'Rourke, 2024). The U.S. Navy maintains 296 battle force ships in its inventory, showing a significant disparity between the current and desired end state.

Egypt's tension in the Mediterranean Sea, geopolitical events, disputes over maritime borders, territorial waters, and gas reserves need a powerful Egyptian naval presence. Moreover, the Egyptian location at the intersection of the Red Sea, the Mediterranean Sea, and the Suez Canal is regarded as one of the most critical maritime corridors in the world. For these reasons, the Egyptian Ministry of Defense (EMOD) provides strategy that supports Navy forces to secure the country's interests and national security (EMOD, 2010).

In Japan, according to the National Defense Strategy, the Defense Buildup Program was announced in December 2022, which set out the level of defense capabilities that Japan should possess, the total expected cost of achieving this, and the quantity of major equipment to procure (Japanese Ministry of Defense [JMOD], 2024). According to this Defense Buildup Program, the plan is to procure two Aegis System-equipped vessels, 12 destroyers, five submarines, and 10 patrol vessels (PV) by March 2028 (JMOD, 2024).

In 2016, the Taiwan Ministry of National Defense (MND) announced 12 shipbuilding programs with a timeline from 2017 to 2040 at roughly \$14.7 billion to enhance military power



and support the self-reliant military establishment (Minnick, 2016). According to the National Defense Report from the Republic of China (ROC) in 2021 (Ministry of National Defense [MND], Taiwan, 2021), Taiwan's Navy had started shipbuilding construction for the Indigenous Defensive Submarine (IDS) program, High-Speed Minelayers, a new Landing Platform Dock (LPD), High-Performance Vessel (HPV) follow-up ships, as well as a new rescue and salvage ship. These plans demonstrated that Taiwan's shipbuilding procurement is committed to indigenous production instead of foreign ship purchases (Global Taiwan Institute, 2022). Thus, with increasing demands on indigenous shipbuilding in Taiwan, the procurement strategy for shipbuilding would be critical to select the most advantageous tenders and maximize the overall benefit for Taiwan's Navy.

Each country, driven by its unique motivations, national doctrines, and geopolitical climates, recognizes the strategic importance of naval procurement to secure national interests. The United States, Egypt, Japan, and Taiwan each demonstrate distinct objectives but share a common emphasis on bolstering naval forces to ensure maritime security. As allies and strategic partners, these nations might benefit from standardized or aligned procurement practices that potentially create efficiencies and identify areas for improvement. The purpose of this research is to analyze the source selection approaches of each country to assess whether adopting common source selection policies and practices could enhance their procurement efforts.

Problem Statement

The problem that motivated this research is that each country's source selection approaches related to shipbuilding are different in policy and practice. These disparities complicate the general understanding and potential international standardization in this field. By examining the source selection approaches used by other countries, especially in areas such as shipbuilding, nations can gain insights that may enhance their approaches to source selection and bridge a gap in cross-border cooperation.

Purpose Statement

In the global defense industry, procurement strategies play a central role in determining the overall success of maritime projects. The United States, Egypt, Japan, and Taiwan each employ distinct approaches to source selection in shipbuilding procurement, reflecting differences in priorities and regulatory environments. Despite this industry's importance, limited comparative research analyzes and compares source selection approaches among these nations. This apparent lack of analysis creates a significant gap in understanding how these countries address common challenges in contract management processes.

This research aims to clarify the differences in source selection approaches based on comparative analysis of the source selection evaluation processes, source selection team composition, and proposal evaluation criteria of the U.S. Navy, the Egyptian Navy, the Japan Maritime Self-Defense Force (JMSDF), and the Taiwan Navy. By drawing a meaningful connection between the different source selection approaches, this study aims to identify potential implications and areas for improvement and to contribute to the academic literature promoting standardization in international policy that could streamline further collaborative or individual efforts.



Research Questions

This research addresses the following questions:

1. How does the source selection approach (basis for award, source selection team composition, and proposal evaluation criteria) differ among the U.S. Navy, Egyptian Navy, JMSDF, and Taiwan Navy?
2. Based on the comparison and analysis, what implications for process improvement could be presented to the U.S. Navy, Egyptian Navy, JMSDF, and Taiwanese Navy?

Methodology

The methodology used in this research included a comprehensive review of the laws, regulations, and guidelines related to each country's contracting process, compared to the Contract Management Standard contract life cycle phases and related activities. Next, recent, real-world shipbuilding procurement solicitations, consisting of Request for Proposals (RFPs) and Request for Tenders (RFTs) from the United States, Egypt, Japan, and Taiwan, were analyzed to identify the source selection basis for award, source selection team composition, and proposal evaluation factors used in those shipbuilding procurements. Finally, the implications of the findings are discussed in terms of innovation, and flexibility in shipbuilding procurement. This paper is based on the graduate theses by Si-yun Yang (Yang, 2023) and Shinya Matsuda, Andrew C. Peters, and Amr A. Aboutaleb (Matsuda et al., 2025).

Findings

The research findings are discussed in terms of source selection basis for award approach, source selection team composition, and proposal evaluation factors for each country as reflected below.

Source Selection Basis for Award

Of the 30 United States shipbuilding solicitations analyzed, 17 used a Trade Off approach and 13 used the Lowest Priced, Technically Acceptable (LPTA) approach. Of the procurements that used the Trade Off approach, the technical factors were weighted more important than price (Matsuda et al., 2025).

Of the one Egyptian solicitation for shipbuilding that was analyzed, the sealed-bidding solicitation for four submarines used a point-based evaluation system basis for award (Matsuda et al., 2025).

Of the three JMSDF solicitations analyzed, two solicitations used the proposal-based competition method (similar to FAR-based Trade Off) and one solicitation used the open solicitation method (similar to FAR-based LPTA; Matsuda et al., 2025).

Of the four Taiwan Navy solicitations analyzed, all four used a Most Advantageous Tender approach, similar to the Trade Off approach discussed in the U.S. FAR. In addition, it should be noted that Taiwan Navy solicitations also include the budget amount of the procurement within the solicitation (Yang, 2023).

Source Selection Team Composition

In the U.S. solicitations analyzed, although the source selection team was not specified in the solicitation, the source selection team composition reflected the policy in the DoD FAR Supplement (DFARS) concerning source selection procedures. This included having a formal Source Selection Authority (SSA), Advisory Council (SSAC), and Evaluation Board (SSEB). It should be noted that FAR policy states that participating as a voting member on any source selection board is considered an inherently government function and must be performed by



federal government employees. There are no other limitations on number of SST members or the positions (Matsuda et al., 2025).

Although the Egyptian solicitations did not include the source selection team member names, the source selection structure as reflected in the EMOD policy consist of three entities involved in the source selection: the Technical Specifications Committee, Market Research Committee, and the Technical Evaluation Committee (Matsuda et al., 2025).

The Japan solicitation documents did not reveal any information about the source selection team composition (names, number of evaluators). The Japan Acquisition, Technology, and Logistics Agency (ATLA) procurement regulations clearly define the source selection team structure to include the head of the Designated Sole-Source Contract Review Committee (DSCRC) as well as its members. Additionally, the names of high-ranking positions, as defined by the regulations, are published as a list of key executives. Therefore, the names of the head of the evaluation team, the DSCRC chair, and some DSCRC members are available to all interested parties, including offerors. It should also be noted that in one of the Japan solicitations, it stated that fairness and transparency were ensured by having a non-government third party audit the evaluation process. It is unclear whether this non-government third-party requirement existed in the other Japan solicitations as well (Matsuda et al., 2025).

In the Taiwan solicitations analyzed, all of the names of the source selection team members (Procurement Evaluation Committee and Working Group) were published on the agency procurement website designated by the responsible authority. In addition, the Taiwan procurement code specifies a minimum requirement of the total number of source selection team members and minimum percentage requirement for source selection team members outside the government agency (e.g., representatives from industry and academia; Yang, 2023).

Proposal Evaluation Factors

In the U.S. solicitations analyzed, the 13 solicitations using the LPTA approach established proposal evaluation factors with price as the highest priority, and technical acceptability and past performance acceptability as the next priority. For the 17 solicitations that used the Trade Off source selection approach, the evaluation factors reflected technical approach and design as the most important factor, then the management factor, and then the past performance factor and then the price factor, which is the least important. In addition, for the Trade Off approach, the non-price factors, when combined, were considered significantly more important than price (Matsuda et al., 2025).

As previously stated, the Egyptian solicitation used a point-based evaluation system method for source selection. The solicitation included evaluation factors consisting of price factors weighing more important than non-price factors. The price factors, in order of importance, were total cost of acquisition, life cycle cost, and payment structure. The non-price factors, in order of importance, were technical specifications, operational support and maintenance, and technology transfer and local content (Matsuda et al., 2025).

In Japan's solicitations, proposal evaluation criteria are divided into two main categories: mandatory items and additional items. The mandatory items, which are not identified in the solicitation but are based on case data, are related to prospective contractors' ability to perform the contract to stated specifications. The additional items are made up of factors that evaluate more advanced expertise, design, technology, creativity, etc. The additional items are assessed only for proposals that have satisfied all of the mandatory items, and points are awarded according to the proposal evaluation criteria and scoring system that was determined prior to the issuance of the solicitation. The analysis of Japan solicitations covered three solicitations. One of the solicitations (DD) contained no specific descriptions of the proposal evaluation criteria in the RFP. This is no surprise since the RFP stated that the guidelines for preparing the



necessary documents to be submitted by offerors will be handed over to them in person. Therefore, there is a possibility that information on the proposal evaluation criteria is included in the guidelines for preparing the necessary documents to be distributed to offerors. Thus, these guidelines were not made public. The solicitation for the AOE clearly stated the proposal evaluation criteria. The criteria included non-price items (shipbuilding facilities, shipbuilding techniques, quality control system, cost reduction measures, training of shipbuilding personnel, status of technological partnerships, status of participation in competitive shipbuilding contracts for other ships, information security capability, shipbuilding past performance, and response to technological challenges related to shipbuilding) and price. The solicitation for the PV included the following evaluation items: advanced naval vessel design and construction, integrated management capability of related companies for onboard equipment, and integrated management capability from design to sustainment and maintenance (Matsuda et al., 2025).

In the Taiwan solicitations analyzed, all four of the solicitations used a ranking method to select the most advantageous tender. The ranking method evaluates and awards a score against each evaluation item and the total scores of all tenders are converted to a ranking. The rankings are totaled to determine each tender's overall ranking. The tender that attains the lowest overall ranking is ranked first. Thus, the ranking method is converted through the score and then totaled with the ranking numbers, and the offeror with the lowest ranking number is the most advantageous tender for the buyer. In addition, Taiwan Navy policy states that if the price factor is included in the consideration of the evaluation, the weighting of the price factor shall be not less than 20% and not more than 50% compared to all of the evaluation items. Thus, the score of the price as an evaluation factor should be no less than 200 and not more than 500 if the total score for all the evaluation factors is 1000. The evaluation factors used were consistent in the four solicitations. The importance of the evaluation factors ranged in descending order from technical capability, price, offeror's organizational structure and financial condition, management and execution of project plan, past performance, other factors related to the functions or benefits of this procurement to performance of presentation and on-site questions and answers (Yang, 2023).

Conclusions and Areas for Further Research

Although the U.S. FAR best value continuum reflects at least three source selection basis for award approaches, LPTA, Trade Off, and Highest Technically Rated Offer (HTRO), in the solicitations analyzed in this research, only LPTA and Trade Off were used. Additionally, the findings indicate that Egypt utilizes the point-based evaluation system (closely resembles Trade Off). Our findings also indicate that for Japan's solicitations, they use two types of source selection evaluation approaches. Proposal-based competition (closely resembles Trade Off), and the open solicitation method (closely resembles LPTA). Unlike Egypt and the United States, Japan does not disclose mandatory proposal evaluation criteria values in its RFPs. It is interesting to note that the Taiwan Navy solicitations included the budget amount of the procurement within the solicitation. This may have implications for ensuring integrity, accountability, and transparency in the source selection process.

In our analysis on Source Selection Team (SST) composition, information about the composition of SSTs was unavailable in all cases, likely because none of these countries require public disclosure of such information, including the names and expertise of evaluators. As a result, our comparative analysis of SST composition in the United States, Egypt, Japan, and Taiwan is based on the regulatory frameworks. In terms of regulations, the first notable difference lies in the composition and regulation of evaluation teams. In the United States, the SSEB includes advisors, cost or pricing experts, legal counsel, small business specialists, and subject-matter experts. Egypt follows similar policies, prohibiting all but government employees from voting membership in SSEBs. In Japan, evaluators may not always operate independently



for each evaluation criterion, and voting members are permitted to serve on multiple boards simultaneously depending on the complexity of the contract. In addition, in Taiwan source selections, evaluators may be supplemented by private industry, academia, or any other sector where government employees are lacking sufficient expertise or credentialing.

For the 30 U.S. solicitations, we found that there was consistency in the proposal evaluation criteria within LPTA source selections and Trade Off source selections. For LPTA solicitations, price was the most important evaluation criteria followed by technical specifications and past performance. For Trade Off solicitations, non-price factors such as technical merit or approach and past performance consistently were more important than price. In the Egyptian solicitations, price was the most important criteria followed by non-price factors of technical specifications, operational support and maintenance, and technology transfer. For the Japan solicitations, we could not access the mandatory evaluation items which are not stated in the solicitation, but did identify the additional items to include facilities, techniques, quality control and cost reductions, training, proposed partnerships, information security, and past performance. We did not have any findings about whether Japan incorporates relative importance for either mandatory or additional items. The Taiwan solicitations all four of the solicitations used a ranking method to select the Most Advantageous Tender (similar to Trade Off).

Based on the findings of this research, the following areas for further research are identified for U.S. shipbuilding solicitations. First, the United States should further explore the benefit of using the HTRO source selection approach for our most technically advanced ships (aircraft carriers, destroyers, submarines). Second, the United States should explore if including the procurement budget within the solicitation would increase the accountability, integrity, and transparency of the shipbuilding procurement. Third, the United States should explore if there is any benefit in making the names of the members of the source selection team publicly accessible for interested parties. This approach may also add to the accountability, integrity, and transparency of our shipbuilding procurements. Finally, the United States should further explore the benefits of including nongovernment personnel, such as industry and academia representatives who have needed expertise, as member of the source selection team, in either a voting or non-voting capacity.

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