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Comparison of Source Selection Approach Between U.S., Egyptian, and Japanese Shipbuilding Procurement

March 2025

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Department of Defense Management

Naval Postgraduate School

Prepared for the Naval Postgraduate School, Monterey, CA 93943

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ABSTRACT

Military procurement, particularly shipbuilding, 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 acquisition process. This research examines the source selection approaches of the United States, Egypt, and Japan, comparing their evaluation processes, source selection team compositions, and proposal evaluation criteria.

Using government acquisition regulations, laws, and publicly available solicitation data, we conducted a comparative analysis to identify areas for improvement. While all three countries share similarities in their evaluation processes, their team compositions and proposal criteria differ significantly. To enhance value, we provide recommendations based on our findings to better align each country's procurement practices with the American National Standard Contract Management Standards. Strengthening standardization and international cooperation in shipbuilding procurement will improve efficiency, transparency, and long-term sustainability across multiple nations. Future research can compare these results with other industry segments to further gauge areas for increased international cooperation.

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LIST OF ACRONYMS AND ABBREVIATIONS

AFDM	Auxiliary Floating Dry Dock Medium
ANS	American National Standard
ANSI	American National Standards Institute
AOE	Auxiliary Oiler Explosive
APOE	Aerial Port of Embarkation
ATLA	Acquisition, Technology, and Logistics Agency
CMBOK	Contract Management Body of Knowledge
CMS	Contract Management Standard
DBP	Defense Buildup Program
DD	Destroyer
DFARS	Defense Federal Acquisition Regulation Supplement
DHS	Department of Homeland Security
DoD	Department of Defense
DSCRC	Designated Sole-Source Contract Review Committee
EMOD	Egyptian Ministry of Defense
FAR	Federal Acquisition Regulation
FFM	Multi-Mission Frigate
GPE	Government-Wide Point of Entry
HTRO	Highest Technically Rated Offer
JMOD	Japanese Ministry of Defense
JMOF	Japanese Ministry of Finance
JMSDF	Japan Maritime Self-Defense Force
KPP	Key Performance Parameters
LPTA	Lowest Price Technically Acceptable
MCHD	Medium Class Hopper Dredge
NAICS	North American Industry Classification System
NCMA	National Contract Management Association
NF	National Fund
PSC	Products and Services Code
PV	Patrol Vessel

OUSD(A&S)	Office of the Under Secretary of Defense for Acquisition and Sustainment
QBL	Qualified Bidders List
QML	Qualified Manufacturers List
RFP	Request for Proposal
SSA	Source Selection Authority
SSAC	Source Selection Advisory Council
SSEB	Source Selection Evaluation Board
SSP	Source Selection Plan
SST	Source Selection Team
TKMS	ThyssenKrupp Marine System Company
USACE	U.S. Army Corps of Engineers
YRBM	Yard Repair Berthing and Messing Barge

I. INTRODUCTION

This chapter introduces our research on comparing shipbuilding procurement between the U.S. Navy, the Egyptian Navy, and the Japan Maritime Self-Defense Force (JMSDF). It compares the three countries' source selection approaches. First, this chapter starts by offering a background of the shipbuilding procurement within each navy, highlighting its significance of the shipbuilding procurement. Next, this chapter discusses the problem statement, focusing on the lack of research related to the source selection approaches used by these three countries, which served as the motivation for this research. Furthermore, this chapter presents the purpose statement, research questions, and explains the methodology used to analyze the source selection approaches of the U.S. Navy, the Egyptian Navy, and the JMSDF. Then, this chapter shows the benefits and limitations of this research and outline of report. Finally, we present a summary of this chapter.

A. BACKGROUND

> How do we produce affordable systems to meet our common strategic objectives? It becomes impractical for each nation to consider independent major weapon system development and/or production… To stay ahead of the enemy and to counter the new dimension of threats we will face as coalition partners; we must develop these new defenses cooperatively. (Kausal et al., 2000, p. viii)

The 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). As of May 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 water, 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).

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, and Japan 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.

B. PROBLEM STATEMENT

The problem that motivated this research is that each country's source selection approaches related to shipbuilding are distinctly 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.

C. 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, and Japan

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 related 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, and the JMSDF. 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.

D. RESEARCH QUESTIONS

This research addresses the following questions:

1. How does the source selection evaluation process differ among the U.S. Navy, Egyptian Navy, and JMSDF?
2. How does the source selection team composition differ among the U.S. Navy, Egyptian Navy, and JMSDF?
3. How do the proposal evaluation criteria differ among the U.S. Navy, Egyptian Navy, and JMSDF?
4. Based on the comparison and analysis, what implications for process improvement could be presented to the U.S. Navy, Egyptian Navy, and JMSDF?

E. METHODOLOGY

First, we will comprehensively review the laws, regulations, and guidelines related to the source selection evaluation, source selection team composition, and proposal evaluation criteria in the United States, Egypt, and Japan. Next, we will compare how each country aligns with common practices outlined in the Contract Management Standard (CMS). Then, we will analyze procurement case data from United States, Egyptian, and Japanese shipbuilding using qualitative methods to determine how well policy is implemented in practice. Chapter III will discuss this methodology in greater detail.

F. BENEFITS OF THE RESEARCH

This research aims to demonstrate how the diversity in source selection approaches contributes to achieving procurement goals. The findings will offer valuable recommendations for optimizing source selection approaches and strengthening the formation of source selection teams in different countries to meet procurement objectives effectively. Additionally, this research will highlight the strategic implications of source selection approaches and their implementation on national defense readiness and capabilities. The research will identify the main differences in source selection approaches between the U.S. Navy, the Egyptian Navy, and the JMSDF and assess their alignment with the CMS. The insights gained could help the U.S., Egyptian, and Japanese governments maximize value in shipbuilding procurement. Finally, this research will serve as a resource for future research to improve defense acquisition systems, suggest solutions to address source selection deficiencies, and promote greater transparency in procurement processes through CMS alignment.

G. LIMITATIONS OF RESEARCH

This research focuses on a narrow scope to ensure depth and manageability. Specifically, we will compare shipbuilding in the United States, Egypt, and Japan. Although the United States partners with numerous countries and engages in procurement across various industries, we confine our study to shipbuilding as a sector shared by these three nations. Furthermore, while contracting processes encompass multiple phases and aspects, this research is limited to examining the source selection process. This approach allows us to compare how these countries select sources within a specific industry while acknowledging that broader contracting practices and other industries fall outside the scope of this research.

Another significant limitation of this research is the quantity and availability of data. We will collect U.S. solicitation data from the SAM.gov website using the search function for shipbuilding solicitations from FY2018–2023. Only negotiated solicitations covered under Federal Acquisition Regulation (FAR) Part 15 will be analyzed. Published data from Egypt consists of the website of the general authority for government services, the official site of EMOD, and the executive regulations of Law No. 182 of 2018 for

Egypt's defense acquisition system. Japanese publications, including the website of the Acquisition, Technology, and Logistics Agency (ATLA)—which oversees the contract procedures for shipbuilding—will be the subject of analysis. In addition, as is common to the three countries, detailed guidelines and documents related to some procurements are treated as confidential and not generally made public. For this reason, the analysis will be only conducted on documents and procurement data that have been made public and are not classified or confidential.

Finally, this research focuses solely on pre-award phase decisions relevant to the source selection approach and the documents that support those decisions. Therefore, the validity of our conclusions is limited by the accuracy and accessibility of publicly available data during the initial stages of the contracting process.

H. OUTLINE OF REPORT

This research is composed of five chapters.

Chapter I introduces background information on shipbuilding procurement for the U.S. Navy, Egyptian Navy, and JMSDF. Then, we describe the problem statement, purpose statement, and research questions related to the procurement source selection approach and comprehensively explain the methodology. In addition, we provide the benefits and limitations of this research and show the overall structure and organization. To conclude this chapter, we provide a summary.

Chapter II provides a literature review that serves as the cornerstone for this research. We first discuss auditability theory and its three components. Then, we focus on capable processes, specifically the contracting process outlined by the CMS contracting framework. Next, we will discuss the overarching regulations for each country. Then, we will specifically discuss the portion of each country's regulations regarding the source selection evaluation process, source selection team composition, and proposal evaluation criteria. In addition, we will provide an overview of previous research. Finally, the chapter will conclude with a summary.

Chapter III presents the methods of data collection, justification for selection, and analysis, followed by specific methods for quantitative evaluation in the comparative study of each country.

Chapter IV provides a comparative analysis of the alignment of the U.S. Navy, Egyptian Navy, and JMSDF source selection approaches with the CMS. It also analyzes the findings based on a comparative analysis of the countries. Finally, Chapter IV provides recommendations for each country's source selection approach and summarizes this research.

Chapter V provides a summary and conclusions on this research, while also suggesting areas for future research.

I. SUMMARY

This chapter introduced our research comparing the U.S. Navy, Egyptian Navy, and JMSDF shipbuilding procurement. We began this chapter with background information on all three countries' shipbuilding environments and reasons for their importance. Then, we addressed the problem statement regarding the lack of research analysis on the source selection approaches of the countries that prompted this research. Next, we established the purpose statement of our research. Furthermore, we introduced the research questions and identified the challenges and limitations in gathering the procurement data among the three countries. Afterward, we briefly described the methodology for analyzing the source selection approaches of the U.S. Navy, the Egyptian Navy, and the JMSDF. Finally, we presented the outline of the chapters.

The next chapter presents a literature review that sets the foundation of our research.

II. LITERATURE REVIEW

This chapter aims to present a thorough examination of literature that establishes the foundation for this research. In this chapter, we cover auditability theory, the CMS, the source selection evaluation process, source selection team composition, proposal evaluation criteria in the United States, Egypt, and Japan, and related previous research. To begin, we present the theoretical framework that supports the CMS, as outlined in auditability theory. Then, we show how the FAR, Egyptian, and Japanese regulations align with the CMS. Additionally, we will comprehensively review regulations in the three countries and describe how they stipulate the source selection evaluation process, source selection team composition, and proposal evaluation criteria. Furthermore, we will review the relevant previous research and provide the foundation for understanding and contextualizing this research. Finally, we present a summary of this chapter.

A. AUDITABILITY THEORY

Rendon and Rendon (2015a) state, "Auditability is needed by procurement agencies to ensure the integrity, accountability, and transparency of their procurement programs and is an organization's first line of defense in the battle against procurement fraud" (p. 712). Furthermore, Grigoryan and Möller (2024) state "we develop a general theory of auditability to compare mechanisms in terms of how easy or hard it is for participants or some third-party auditing entity to detect deviation" (p. 2). Auditability theory is one of the crucial theories in defense procurement because it maintains the contracting process's transparency, accountability, and efficiency. Auditability theory aims to maintain public trust using a measurable and traceable procurement process.

Auditability theory states that for an organization to be successful, it must have "competent people, capable processes, and effective internal controls" (Rendon & Rendon, 2015a, p. 726). Figure 1 demonstrates this framework. On the left side of the triangle, components of personnel competency would include formalized training and first-hand experience in each career field. The bottom of the triangle, internal controls, represents all enforcement and compliance activities that ensure strict adherence to established laws and regulations (Rendon & Rendon, 2015a, p. 716). Finally, the right

side of the triangle, processes, is one of the conceptual framework principles of auditability theory that refers to the capability of organization procedures to implement procurement activities (Rendon & Rendon, 2015a). Since the research discusses the comparative analysis of the evaluation process, source selection team composition, and proposal evaluation criteria, we choose the capable process principle of the auditability theory as our research lens to maintain essential compliance with procurement regulations.

This subsection reviewed auditability theory, an essential lens in our research. The following subsection discusses the contracting process reflected in the National Contract Management Association (NCMA) CMS, our framework for this research.

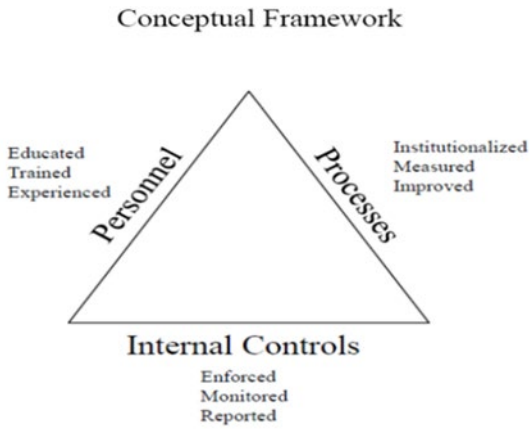

Figure 1. Conceptual framework of the auditability theory. Source: Rendon and Rendon (2015a).

B. CONTRACT MANAGEMENT FRAMEWORK

1. Introduction

The contract management framework outlines the dynamics of the buyer–seller relationship in the United States, Egypt, and Japan. This framework is based on the CMS, a foundational guide to understanding key contract management principles.

2. Contract Management Standard

The American National Standards Institute (ANSI) authorizes the CMS as an American National Standard (ANS), and the CMS defines the main concepts and processes of contract management (Cleven et al., 2024). In recent years, the DoD has

been reorganizing its contracting competency model and has adopted the CMS as its foundation. As part of the 2020 National Defense Authorization Act, Congress tasked DoD leadership to implement a contracting workforce certification program based on third-party program standards (Cleven et al., 2024). As a result, all federal government executive agencies have adopted the NCMA CMS as the basis for their contracting competency models and contracting workforce training. The use of CMS for training is also spreading in industry, and the CMS is contributing to establishing a common language for contract management and improving process efficiency and quality (Cleven et al., 2024). In addition, the CMS outlines a comprehensive framework for contract management, detailing its structure, life cycle, and processes that are adaptable for use by organizations representing both buyers and sellers (National Contract Management Association [NCMA], 2019).

According to the CMS, the contract management process is carried out by the contract manager and divided into three phases: pre-award, award, and post-award (NCMA, 2019). These three phases are further divided into five domains. These three phases and five domains are shown in Figure 2.

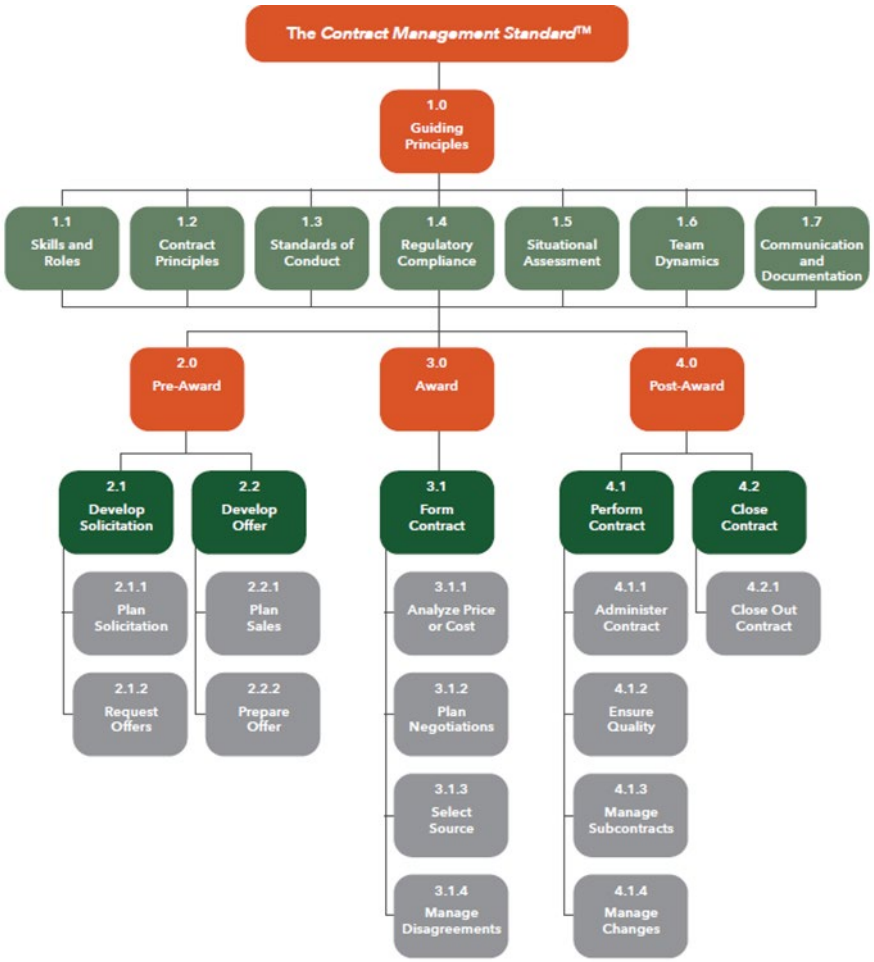

Figure 2. The Contract Management Standard. Source: NCMA (2019, p. 9).

The CMS states that the pre-award phase is the first stage of the contract life cycle and that there are two domains: develop solicitation by the buyer and develop offer by the seller (NCMA, 2019). The CMS further explains that developing solicitation involves "describing all the elements of the customer requirements to the sellers" (p. 9). According to the CMS, its value lies in accurately reflecting customer requirements during the solicitation process, leading to a responsive proposal and successful contract performance. On the other hand, the CMS also states that developing an offer involves "applying business practices and developing strategies to pursue and obtain contract awards" (p. 11). According to the CMS, its value consists of offering buyers a responsive offer that results in contract awards. Moreover, the CMS mentions that the buyer's specific actions in the develop solicitation domain are plan solicitation and request offers, and the seller's particular actions in the develop offer domain are plan sales and prepare

offers. The CMS also states that "pre-award life cycle phase interacts with each other and continuously integrates with the guiding principles" (p. 9). Furthermore, the CMS states that "the pre-award processes have a direct impact on the performance and results of the award and post-award life cycle phases" (p. 9).

Next, the CMS explains that "the award process involves the contract management functions known as 'contract formation' and reflects all the work performed by both the buyer and seller that produces an awarded contract" (NCMA, 2019, p. 13). Then the CMS states that the processes of the award life cycle phase engage with each other and are always incorporated into the guiding principles. The CMS further explains that the cumulative effect of the pre-award life cycle phase processes and results will directly influence the award life cycle phase. According to the CMS, one domain in the award phase is called form contract, which includes the analysis of price or cost, plan negotiation, select sources, and managing disagreements processes. The value of the form contract domain is "in mitigating or eliminating contract performance risk by selecting the best source and negotiating prices and terms and conditions" (NCMA, 2019, p. 13). Our research focuses on the award phase, specifically the select source competency.

Finally, the CMS explains the post-award contract life cycle phase. The post-award phase has two domains: perform and close the contract (NCMA, 2019). The CMS also emphasizes that the processes within the post-award life cycle phase are interconnected and consistently aligned with the guiding principles. First, the perform contract domain includes administering contracts, ensuring quality, managing subcontracts, and managing changes. According to the CMS, "the value added by this process is in monitoring risk, assessing its impact on contract performance, and ensuring compliance with contract terms and conditions during contract performance up to contract closeout or termination" (p. 14). On the other hand, the CMS also states that the close contract domain includes processes to verify that all the contract requirements have been met, settle unresolved matters, and reconcile the contract for final payment, and the process comprises a closeout contract. The CMS also explains that the value added by the close contract domain is to determine that all the contractual obligations of the buyer and seller have been met (NCMA, 2019).

Up to this point, we have reviewed the five domains in each contract life cycle phase as explained by the CMS. The Appendix demonstrates the processes included in each domain and shows the job tasks corresponding to each competence adapted from the CMS. The CMS explains that the processes cover each domain's competency and job tasks (NCMA, 2019). The orange-highlighted sections in the Appendix show the select source competencies and their job tasks for the award phase, which is the scope of our research.

As discussed above, the CMS outlines contract life cycle phases, competencies, and job tasks that serve as a foundation for contract management. These concepts are applied within the regulatory frameworks of different countries. The following subsections examine how these principles are implemented in the United States, Egypt, and Japan regulations. First, we examine U.S. regulations for contracting.

3. United States Procurement Regulation

In 1979, the Office of Federal Procurement Policy was directed by the Office of Management and Budget to establish a policy outlining a uniform procurement system (Carpenter et al., 2024). The first iteration of the FAR, which followed in 1983, contains policies and rules for the federal acquisition system and receives periodic updates in response to legislation, executive orders, and policy considerations from multiple government agencies (Carpenter et al., 2024).

Within the United States, the FAR is the primary document for all executive agencies for acquisitions using appropriated funds (FAR 1.101, 2024). Although the FAR is a regulation not organized by life cycle or process, it is aligned with the CMS. Yang (2023) created a cross-referenced matrix aligning CMS competencies with FAR parts, as reflected in Table 1.

Table 1. CMS: FAR cross-reference matrix. Adapted from Yang (2023).

Contract Management Standard: Federal Acquisition Regulation Cross-Reference Matrix	
CMS Competency	FAR Part
1.0 Guiding Principles	—
1.1 Skills and Roles	1
1.2 Contract Principles	1
1.3 Standards of Conduct	3, 9
1.4 Regulatory Compliance	9, 22–24, 27–29
1.5 Situational Assessment	17, 18, 25, 34–39, 41, 50
1.6 Team Dynamics	1, 2, 4
1.7 Communication and Documentation	1–52
2.0 Pre-Award	—
2.1 Develop Solicitation	—
2.1.1 Plan Solicitation	5–8, 10–16, 19, 26
2.1.2 Request Offers	5, 12–15
2.2 Develop Offer	—
2.2.1 Plan Sales	2, 3, 5–7, 9, 12–15
2.2.2 Prepare Offer	4, 5, 9, 12–15, 19, 32, 42, 44–46, 49, 51
3.0 Award	—
3.1 Form Contract	—
3.1.1 Price or Cost Analysis	12–15, 30, 31
3.1.2 Plan Negotiations	12–15
3.1.3 Select Source	12–15
3.1.4 Manage Disagreements	33
4.0 Post-Award	—
4.1 Preform Contract	—
4.1.1 Administer Contract	1, 4, 12–15, 30, 31, 42, 45, 47, 48
4.1.2 Ensure Quality	46
4.1.3 Manage Subcontracts	9, 19, 44
4.1.4 Manage Changes	2, 33, 43, 49
4.2 Close Contract	—
4.2.1 Close Out Contract	4, 12–15, 31, 32, 42, 44, 45, 47, 48, 52 (Yang, 2023, p. 11)

Our research is focused on source selection approaches, which are discussed in FAR Part 15, Contracting by Negotiation. The following subsection discusses Egypt's procurement regulations.

4. Egyptian Procurement Regulation

A government procurement portal was launched in Egypt under Law 89/1998 and was amended in 2010 by a prime ministerial decree. In July 2018, the Egyptian parliament enacted Law No. 182 of 2018, regulating government contracts concluded (i.e., awarded) for public bodies. Its provisions apply to the bodies in the state's general budget and the units of the state's administrative apparatus, including ministries, departments, and agencies with a special budget. Local administration units, public service and economic bodies, and units affiliated with these bodies follow the same contract regulations. Alanzi (2021) stated, "This new law mainly focuses on reducing the government bodies' corruption to improve public bodies' performance and rationalize government spending at the lowest possible level" (p. 114).

The procurement in the defense acquisition system of Egypt follows the executive regulations of Law No. 182 of 2018 in Issue No. 244 Continued B (i.e., revision) on October 31, 2019. It contains directives and instructions related to contracts within Egypt's defense acquisition system according to the provisions of the law. The public procurement for each nation should fulfill the country's legislative standards (Falagario et al., 2012). We demonstrate these policies and instructions in each phase of the contract life cycle. Table 2 shows how Egyptian procurement regulations align with the CMS.

Table 2. CMS: The executive regulations of the Law No. 182 of 2018 cross-reference matrix. Adapted from NCMA (2022).

Contract Management Standard: The Executive Regulations of Law No. 182 of 2018 Cross-Reference Matrix	
CMS Competency	The Executive Regulations of Law No. 182 of 2018
1.0 Guiding Principles	—
1.1 Skills and Roles	Second Gate Chapter Two Articles 2, 3
1.2 Contract Principles	Second Gate Chapter Two Articles 5, 6, 7, 9, 11
1.3 Standards of Conduct	Second Gate Chapter Two Articles 4, 8, 9
1.4 Regulatory Compliance	Third Gate Chapter One Article 12
1.5 Situational Assessment	Article 10 (Lacking One Principle)
1.6 Team Dynamics	Chapter 5 Articles 29–177 (Lacking One Principle)
1.7 Communication and Documentation	Article 167
2.0 Pre-Award	—
2.1 Develop Solicitation	—
2.1.1 Plan Solicitation	Chapter 2, Articles 14, 15, 16; Chapter 3, Article 17
2.1.2 Request Offers	Chapter 3, Article 18; Chapter 4, Articles 19, 20, 23, 24; Chapter 5, Articles 29, 30, 31, 32, 34
2.2 Develop Offer	—
2.2.1 Plan Sales	Chapter 5, Article 31
2.2.2 Prepare Offer	Chapter 5, Articles 31, 32
3.0 Award	—
3.1 Form Contract	—
3.1.1 Price or Cost Analysis	Chapter 5, Articles 37, 38, 39, 40, 42, 43
3.1.2 Plan Negotiations	Article 144
3.1.3 Select Source	Chapter 5, Articles 44, 45, 46, 49; Chapter 6, Articles 51, 53, 54, 60, 61, 62, 65, 66, 70, 71, 74, 75, 76, 78
3.1.4 Manage Disagreements	Chapter 5, Articles 48, 83, 86, 88
4.0 Post-Award	—
4.1 Preform Contract	—
4.1.1 Administer Contract	Articles 89, 90, 91, 92, 94, 104, 108, 109, 110, 111
4.1.2 Ensure Quality	Articles 98, 99, 105, 106, 112, 119, 175
4.1.3 Manage Subcontracts	Article 107
4.1.4 Manage Changes	Articles 96, 97, 112, 113
4.2 Close Contract	—
4.2.1 Close Out Contract	Articles 120, 180

Table 2 shows that Egyptian regulations and policies align with the context of modern defense acquisition processes and the CMS, except for two areas. The Egyptian regulations lack NCMA-explicit concepts addressing situational assessment and team dynamics principles. We discuss these two incomplete areas in detail later in Chapter IV.

We have reviewed the Egyptian procurement regulations and outlined how they align with the CMS. Next, we review the Japanese procurement regulations and their alignment with the CMS.

5. Japanese Procurement Regulation

The system of Japanese laws and regulations is structured hierarchically, within the constitution at the top, with subordinate procedures detailing supplementary content. The same is true of regulations concerning defense procurement, and unlike the U.S. FAR, a single regulation does not cover a wide range of contract procedures. Therefore, in this research, we will focus on reviewing the Public Accounting Act, Order for Budgets and the Settlement of Accounts, Detailed Regulations on the Handling of Contract Affairs under the Jurisdiction of the JMOD, Instruction on contract administration in the ATLA, Regarding the guidelines for processing administrative work related to the instructions on contract administration, Detailed Implementation Guidelines for Procurements through Open Solicitation or Proposal-Based Competition, and Administrative procedures for central procurement in the case of Proposal-Based Competition as the Japanese contract management framework.

The Public Accounting Act is a law that sets out rules for government expenditure and revenue, as well as government procurement contracts (Kaikeihou [Public Accounting Act], 1947). Enacted in 1947, this law requires each ministry and agency to execute their budgets properly; it stipulates that government procurement, such as public works, the purchase of goods, and service contracts, should, in principle, be conducted through competitive bidding to ensure competitiveness (Nihon Keizai Shinbun, 2024). The Order for Budgets and the Settlement of Accounts was established in 1947 to provide guidelines for the application of the provisions of the Public Accounting Act mentioned earlier and includes content relating to the overall contracting procedures carried out by government agencies (Yosankessan Oyobi Kaikeirei [Order for Budgets and the Settlement of Accounts], 1947). The Detailed Regulations on the Handling of Contract Affairs under the Jurisdiction of the JMOD were established in 2006 to provide more detailed regulations on contract affairs conducted by the JMOD, based on the Order for Budgets and the Settlement of Accounts (JMOD, 2006). The Directive on Contract

Affairs in the ATLA, established in 2015, stipulates the contract management and specific contract procedures of the ATLA, which mainly handles the procurement of shipbuilding (Acquisition Technology and Logistics Agency [ATLA], 2015a). The Administrative Guidelines Pertaining to the Directive on Contract Affairs further detail the content of the Directive on Contract Affairs in the ATLA, including the contract management process (ATLA, 2015b). In addition, the Detailed Implementation Guidelines for Procurements through Open Solicitation or Proposal-Based Competition and the Administrative Guidelines for Procurements through Proposal-Based Competition in Central Procurement set out the detailed procedures for conducting solicitations and proposal-based competitions at ATLA, based on the higher-level regulations (ATLA, 2015c, 2023).

Although the seven Japanese defense procurement laws and regulations within this hierarchical structure are not organized in a process-oriented framework, we believe that the various policies of the Japanese defense procurement laws and regulations can be adapted to a process-oriented CMS. Table 3 is a cross-reference matrix showing how the policies of the seven Japanese defense procurement laws and regulations align with the CMS content.

Table 3. Contract Management Standard: Seven Japanese defense procurement laws and regulations cross-reference matrix. Adapted from NCMA (2019).

Contract Management Standard: Seven Japanese Defense Procurement Laws and Regulations Cross-Reference Matrix	
CMS Competency	Seven Japanese Defense Procurement Laws and Regulations
1.0 Guiding Principles	—
1.1 Skills and Roles	A29, B68–69
1.2 Contract Principles	D3, E3
1.3 Standards of Conduct	D3, E3
1.4 Regulatory Compliance	D3, E3
1.5 Situational Assessment	None
1.6 Team Dynamics	None
1.7 Communication and Documentation	None
2.0 Pre-Award	—
2.1 Develop Solicitation	—
2.1.1 Plan Solicitation	D30, E62–65, F6

Contract Management Standard: Seven Japanese Defense Procurement Laws and Regulations Cross-Reference Matrix	
CMS Competency	Seven Japanese Defense Procurement Laws and Regulations
2.1.2 Request Offers	F6, G4
2.2 Develop Offer	—
2.2.1 Plan Sales	None
2.2.2 Prepare Offer	None
3.0 Award	—
3.1 Form Contract	—
3.1.1 Price or Cost Analysis	B79–80, B99
3.1.2 Plan Negotiations	D31, E65, G9
3.1.3 Select Source	A29, B83–91, B99, D12–15, D33–35, E19–22, E69–72, F13, F19, G8
3.1.4 Manage Disagreements	A161, B28, E6, E47, E83, E124, E125–126, F15, G10
4.0 Post-Award	—
4.1 Preform Contract	—
4.1.1 Administer Contract	A29, B101, C57, D39, E102, E136–161
4.1.2 Ensure Quality	A29, B101, C57, D40–41, E103, E162–177
4.1.3 Manage Subcontracts	D44, E115–123
4.1.4 Manage Changes	D44, E138, E143, E146, E157, E223–250
4.2 Close Contract	—
4.2.1 Close Out Contract	A29, B101, C55–61, D40–42, E162–177, E189–220

Note: "A" refers to the Public Accounting Act, "B" refers to the Order for Budgets and the Settlement of Accounts, "C" refers to the Detailed Regulations on the Handling of Contract Affairs under the Jurisdiction of the JMOD, "D" refers to the Directive on Contract Affairs in the ATLA, "E" refers to the Administrative Guidelines Pertaining to the Directive on Contract Affairs, "F" refers to the Detailed Implementation Guidelines for Procurement through Solicitation of Competitive Planning, and "G" refers to the Administrative Procedures Guidelines for Procurement through Competitive Planning in Central Procurement.

The above sections discussed the overarching regulations used by each of these countries. The following section will focus on the source selection evaluation process within these countries' regulations.

C. SOURCE SELECTION EVALUATION PROCESS

1. Introduction

According to the CMS, the source selection approach "involves mitigating buyer risk by selecting the offeror most likely to satisfactorily perform the contract and assures the seller of a consistent and fair selection process" (NCMA, 2022, p. 216). This section will discuss each country's source selection evaluation process as reflected in the regulations.

2. United States

The goal of a source selection team, as stated in FAR 15.302, is to choose the proposal that offers the most advantageous combination of cost, quality, and other factors to ensure the best overall value to the government. The best value is the expected outcome of the acquisition, providing the most significant overall benefit to the government (FAR 2.101, 2024). When determining the overall benefit to the government, both cost and non-cost criteria represent evaluation factors and subfactors considered by the source selection team. The government can determine the best value proposal by utilizing one of three methods: lowest price technically acceptable (LPTA), tradeoff, or highest technically rated offer (HTRO). The best value continuum represents one or a combination of source selection approaches, ranging from LPTA on one end of the spectrum to HTRO on the other (FAR 15.101, 2024).

In Figure 3, LPTA is on the left end of the best value continuum, showing price as the most critical evaluation factor. LPTA is the most appropriate source selection process when the government determines that the best value is achieved when the lowest cost proposal is selected from all proposals that meet minimum acceptability standards for all non-cost factors (FAR 15.101-2, 2024). The far-right side of Figure 3 represents the HTRO methodology, "allowing award to the highest technically rated offer also found to have a reasonable price without using tradeoffs between cost or price and technical" (Tenaglia, 2022, p. 37). The tradeoff method is used when it is considered the best value for the government to award to an offeror that is not the LPTA or HTRO but a balance of cost and non-cost factors and subfactors (FAR 15.101-1, 2024).

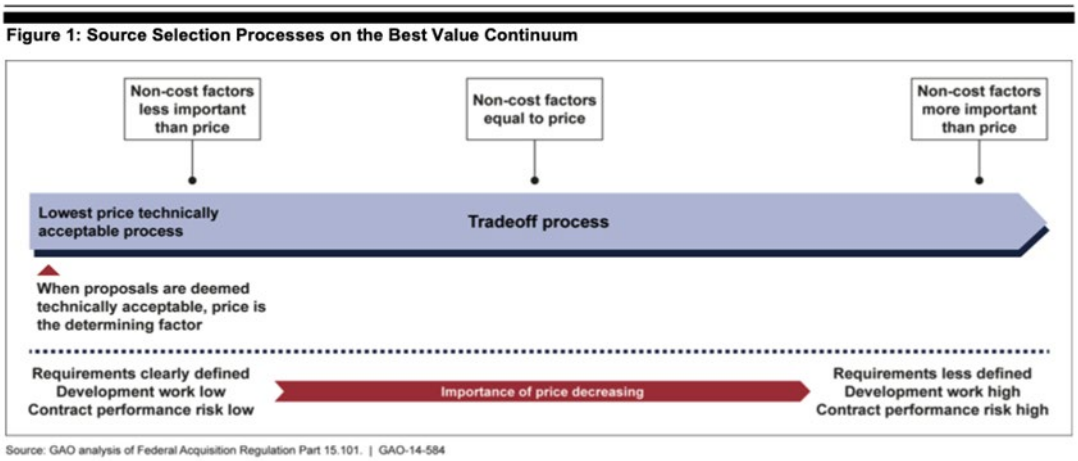

Figure 3. Best value continuum. Source: DiNapoli (2014).

This subsection reviewed the source selection evaluation approach in the United States. The following section will provide a detailed review of the source selection evaluation approach in Egypt's regulations.

3. Egypt

Using a consistent and fair selection process, the source selection approach selects the capable contractor to which to award the contract to mitigate the government risk (NCMA, 2022). Alanzi (2021) stated, "The government contract develops the relationship between government authorities with another government body or an ordinary non-government entity" (p. 105). Furthermore, the procurement departments aim to meet government agencies' requirements regarding the procurement process, which is done by source selection approach (Alanzi, 2021). The source selection evaluation approaches are regarded as a crucial administrative problem for any agency (Falagario et al., 2012). The following subsection demonstrates Egypt's contract life cycle, focusing on the source selection approach.

The contract life cycle in the Egyptian procurement system consists of six phases, as shown in Figure 4. We demonstrate the first two phases (needs identification and requirement analysis [pre-publication phase]—publication phase [proposal evaluation]) and their implications on the source selection phase (pre-contractual phase). The source selection process is crucial in business management literature and should be emphasized (de Boer et al., 2001). Streamlined procurement policies are designed to promote

transparency and fairness in the source selection approach, increasing the effectiveness and efficiency of the process. Government procurement regulations aim to improve competition among contractors regarding price and non-price factors (Dulmin & Mininno, 2003).

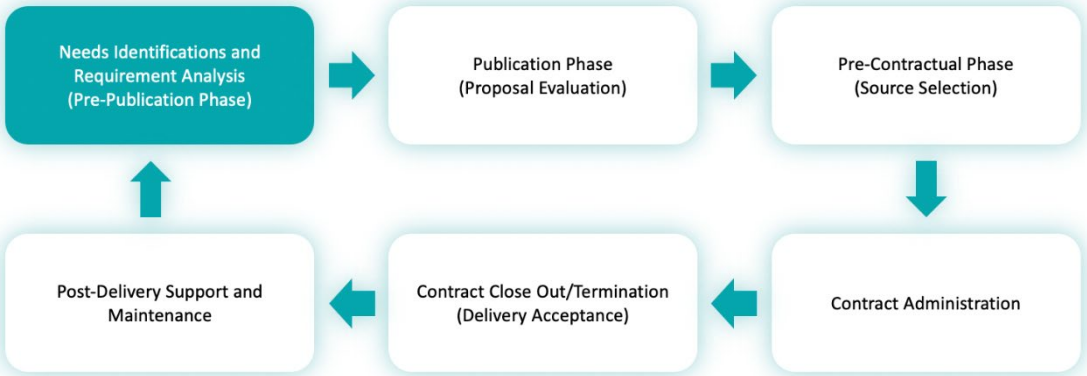

Figure 4. The contract life cycle of Egypt. Adapted from EMOD (2018).

a. First Phase: Needs Identification and Requirement Analysis (Pre-Publication Phase)

In the defense acquisition system, the first phase of the contract life cycle is the needs identification and requirement analysis phase (pre-publication phase). In this phase, we address and validate the warfighters' requirements and allocate the financial resources to meet the defense strategy and national security according to Chapter 2 of the procurement regulations. Moreover, conducting market research verifies qualified contractors, contractual conditions and technical specifications and validates proposed costs. In addition, the administrative authority forms the technical specifications, market research, and technical evaluation committees.

The outcome of this phase is the Request for Proposal (RFP), which includes the technical specifications, contractual terms and conditions, scope of work, evaluation factors, timeline, and milestones. The government increases transparency and competition in the source selection approach by discoursing a clear solicitation (RFP) for the public (Medhat et al., 2023). Although the procurement regulations of Egypt state to publish complete information in RFP, it is not allowed to publish the budget value and the name of the source selection team members. Each technical department sends its RFP

to the armament authority for publication. With this, we start the second phase of the contract life cycle, the publication phase (proposal evaluation).

b. Second Phase: Publication (Proposals Evaluation)

According to Chapter 2, Articles (37 and 60) of the Egyptian procurement regulations, the publication phase (proposals evaluation) starts by publishing the solicitations and receiving (technical and financial) proposals from the contractors by the armament authority. Then, as demonstrated in Figure 5, the public authority enacted by the members of the awarding committee (i.e., Practice and Contracting Committee) maintain the transparency in the source selection evaluation process through strict adherence to published procedures (Panayiotou et al., 2004).

The armament authority segregates the technical proposal, sends it to the technical department for evaluation, and keeps the financial proposals in the assessment by professional members specializing in cost and price analysis. All potential contractors have the same treatment, and the selection method must depend on "a rigorous ranking obtained by applying transparent decisional procedures" (Falagario et al., 2012, p. 2).

The source selection approach shows an apparent attempt at transparency and confidentiality in evaluating the technical and the financial proposal separately by following the procurement instructions of Articles 62, 65, and 66. The reason for this segregation is to ensure that the technical evaluator focuses only on the technical factors and avoids being affected by financial information.

However, this segregation creates internal administrative issues that further complicate aspects of the acquisition process. The Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD[A&S]) (2021) stated, "Previously, it was common for contracting and other functional experts to work independently in 'functional stovepipes' when acquiring services. This method is outdated and costly. Service acquisition requires a team effort" (p. 11). Selecting capable contractors who can meet governments' desired requirements is a significant challenge for organizations (Falagario et al., 2012). We will discuss in detail the implication of assessing the

technical/financial proposals independently in the source selection approach later in Chapter IV.

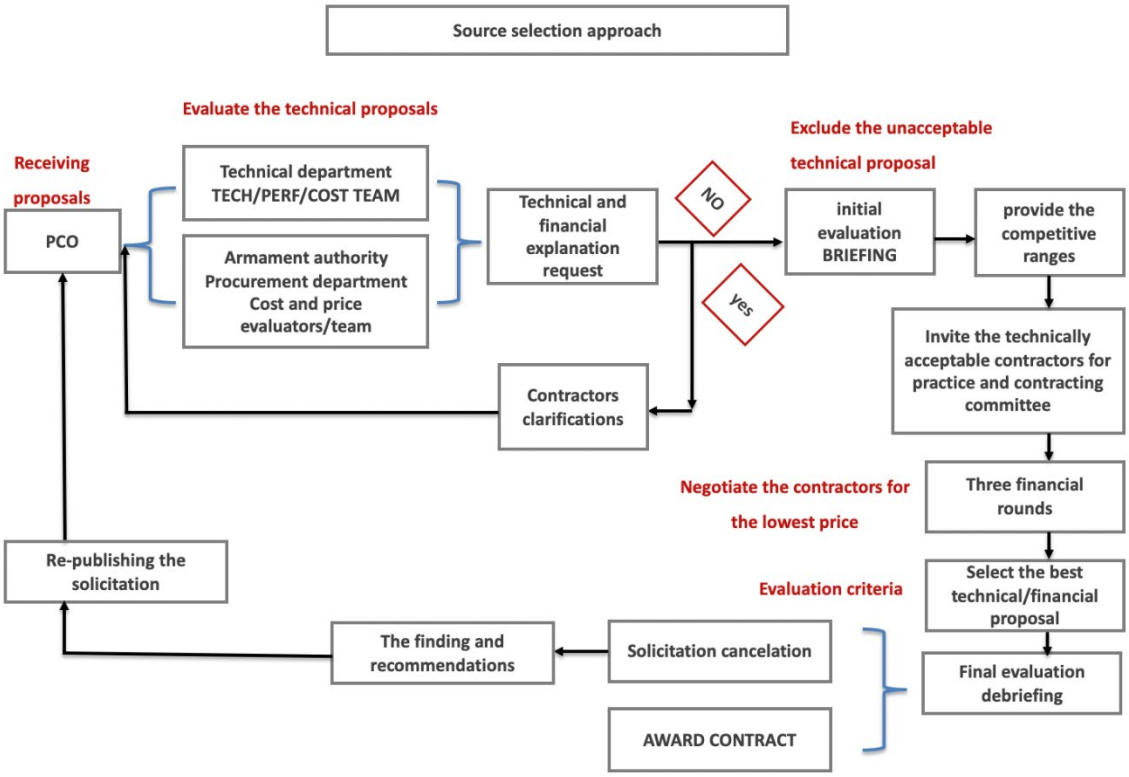

Figure 5. Source selection approach. Adapted from EMOD (2018).

After studying the technical/financial proposals of the contractors, the instructions of Articles 67 and 73 for the Egyptian procurement regulations permit the source selection team to ask for clarification for the proposals with limitations and without prejudice to the principle of equal opportunities and equality among all bidders (EMOD, 2018). The procurement regulations articles emphasize transparency and confidentiality in the evaluation stage. As we stated above, all potential contractors have the same treatment, and the selection method must depend on obvious evaluation criteria that maintain the transparency and achieve the best value for the government (Falagario et al., 2012).

In the initial evaluation-briefing step, the contractual officer (i.e., procuring contracting officer) excludes the unacceptable proposals and reports weaknesses, strengths, and deficiencies for each proposal. Additionally, the contractual officer

validates that all the acceptable proposals meet the requirements of the end users before passing to the next step (competing stage).

The contractual officer will then invite all acceptable bidders to attend the procedures of practice and contracting meeting. Prior to the commencement of this meeting, the contractual officer checks the power of attorney and the letter of guarantee for each contractor. The power of attorney functions like U.S. standards, ensuring legal authority to do business. The primary letter of guarantee, otherwise known as a bid bond, provides a pecuniary guarantee to the government that the contractor is committed and capable of fulfilling all terms and conditions of the contract if awarded. Upon completion of document validation, the committee will proceed with the sealed bidding process.

The sealed bidding process consists of three financial rounds. The financial proposal the contractor sent earlier in this phase and the technical proposal are regarded as the first financial round. In the second financial round, the contractual officer validates that all the proposals meet requirements according to the instructions of the RFP and creates a competitive atmosphere between the bidders. The third financial round is known as the best and final price because the contractors cannot change their financial proposal after this round. The reason for the three financial rounds is to increase the transparency of the process, encourage competition, get optimal prices, and optimize the cost and the quality of the offer.

After the best and final round, the contractual officer analyzes the technical and financial proposal according to the proposal evaluation criteria to comply with Articles 62, 69, 70, 71, and 72 of the Egyptian procurement regulations. Article 62 of the Egyptian procurement regulations contains 15 items demonstrating the ideal procedures for how the committee members open the closed envelopes of technical/financial proposals to achieve fairness and transparency in front of the contractors (EMOD, 2018).

The final evaluation debriefing is a crucial stage of the source selection approach. At this stage, the contractual officer reports the results of all the practice and contracting committee procedures, including the weaknesses and strengths of each proposal. Findings also include the contractors' prices, the proposal evaluation criteria, evaluation analysis, ranking of the contractors in numerical order, and any significant action or discount

during the process. The objectives of the final evaluation debriefing are transparency, performance feedback, regulatory compliance, and dispute prevention.

The outcome of this report results in one of two options: award the contract with the best value proposal or solicitation cancelation with findings. If canceled, the practice and contracting committee members will offer recommendations, such as re-publishing the solicitation to give the opportunity to other capable offerors. These procedures are controlled by Articles 77, 78, and 79 of the Egyptian procurement regulations (EMOD, 2018).

In this subsection, we reviewed the source selection evaluation process in Egypt. Next, we focus on Japan and review its source selection evaluation process.

4. Japan

Article 29, Paragraph 4, of the Public Accounting Act stipulates that, in cases where a contracting officer concludes a contract for the sale or purchase, lease, or contract, etc., they shall, in principle, publicly notify the contract and allow companies to make applications, thereby allowing those applicants to compete (Kaikeihou [Public Accounting Act], 1947). Furthermore, Article 29, Paragraph 6, of the same law stipulates that the government will select the company that has made the lowest bid within the range of the estimated price calculated by the government (i.e., Independent Government Cost Estimate). Additionally, suppose the number of applicants who should participate in the competition is small due to the nature or purpose of the contract. In that case, if it is not necessary to hold competitive bidding, or if it is deemed to be disadvantageous to the nation to have competitive bidding, it is stipulated that only the applicants selected by the government will be allowed to participate in the competitive bidding. In addition, in cases where the nature or purpose of the contract does not allow for competition, where it is not possible to hold a competitive bidding due to urgent necessity, and where it is deemed to be disadvantageous to the nation to have a competitive bidding, the method of directly selecting a specific company as a procurement source without holding a competitive bidding is stipulated. These are called open competitive bidding, selective competitive bidding, and negotiated contracts, respectively. This section aims to clarify the process of

evaluating the selection of sources for negotiated contracts through proposal-based competition.

First, the document issued by the Japanese Ministry of Finance (JMOF) shows the importance of ensuring competitiveness and transparency in public procurement. It points out that in 2006, ministries and agencies were quickly making negotiated contracts on a broad scale, and there were cases of inappropriate contracts (JMOF, 2006). To ensure the competitiveness and transparency of negotiated contracts, it also stipulates that open competitive bidding, proposal-based competition, or open solicitation, including the total evaluation bidding method, which evaluates factors other than price and value, shall be used in source selection. However, this document issued by the JMOF requires that source selection be carried out through open competitive bidding. As a rule, this includes the comprehensive evaluation bidding method and only allows for source selection through proposal-based competition in cases where it is difficult to carry out open competitive bidding due to the nature of the administrative work or program.

Here, we will discuss the differences between open competitive bidding and proposal-based competition in Japan. In open competitive bidding, the only factor considered is the price entered by each offeror. In contrast, in proposal-based competition, the source selection is carried out by evaluating both price and non-price factors submitted by each offeror.

Also, this regulation requires the following three processes when carrying out proposal-based competition to prevent any offeror from gaining an advantage (JMOF, 2006):

- Solicitation of participants.
- The procurement requesting authority and the contract section/department must be involved in the source selection process.
- The evaluation process must use a scoring system with multiple items defined explicitly in advance.

ATLA, which is mainly in charge of Japanese shipbuilding contracts, has established detailed implementation guidelines for cases where procurement is carried out through a proposal-based competition (ATLA, 2015c, 2023). According to these guidelines, ATLA will first conduct market research regarding the acquisition planning,

in addition to the draft specifications, draft RFP, and draft proposal evaluation criteria prepared by the procurement requesting authority. It will also prepare a draft evaluation team list and proposal-based competition announcement. Next, ATLA will determine the RFP and proposal evaluation criteria through internal procedures and officially announce the solicitation to the market. After that, ATLA will receive the offeror's proposal and begin the evaluation process based on the proposal evaluation criteria that were determined in advance. There are four specific methods of evaluation.

- A method in which multiple evaluators are assigned to different areas of responsibility according to their job descriptions and aptitudes, and each evaluator conducts evaluations individually.
- A method in which multiple evaluators are appointed to evaluate specific areas according to their job descriptions and aptitudes, and the evaluators in the same area discuss and conduct the evaluation. In this case, to ensure the objectivity of the evaluation and prevent bias, multiple evaluators are appointed to evaluate the same area.
- A method in which each evaluator conducts all evaluations when there is no need to consider the evaluator's job description or suitability for the evaluation.
- A method in which each evaluator discusses and conducts evaluations as a team when there is no need to consider the evaluator's job description or suitability for the evaluation.

The evaluation coordinator does not conduct the evaluation but instead compiles and tallies the results of the evaluations made by the evaluators. In principle, the head of the evaluation team does not perform the evaluation but only participates when the evaluators' scores are tied or when the second and fourth evaluation methods described above are chosen and the evaluators cannot reach a consensus. In addition, the evaluators must recognize the importance of ensuring the objectivity and independence of each evaluator in the first and third evaluation methods mentioned above and avoid contact with other evaluators as much as possible. Furthermore, the head of the evaluation team must take measures to minimize contact between evaluators. If the evaluation results are tied after such strict evaluation, the source must be decided by lot.

ATLA will decide on the contract method and source based on the evaluation results of the above process. After deliberation by the Designated Sole-Source Contract Review Committee (DSCRC), approval must be obtained from the commissioner of

ATLA and the Minister of Defense. After completing this series of processes, ATLA will send the applicants a notice of evaluation results. In this case, if the applicant has any questions regarding the evaluation results, the contract will be withheld in principle until the response to the questions has been completed. If there are no questions, ATLA will negotiate with the source regarding the specific contract details and conclude a negotiated contract. Furthermore, the proposal submitted by the applicant must be attached to ensure that the contents of the proposal that was the subject of the evaluation are carried out based on the contract. Figure 6 shows the overall process of a negotiated contract based on a proposal-based competition.

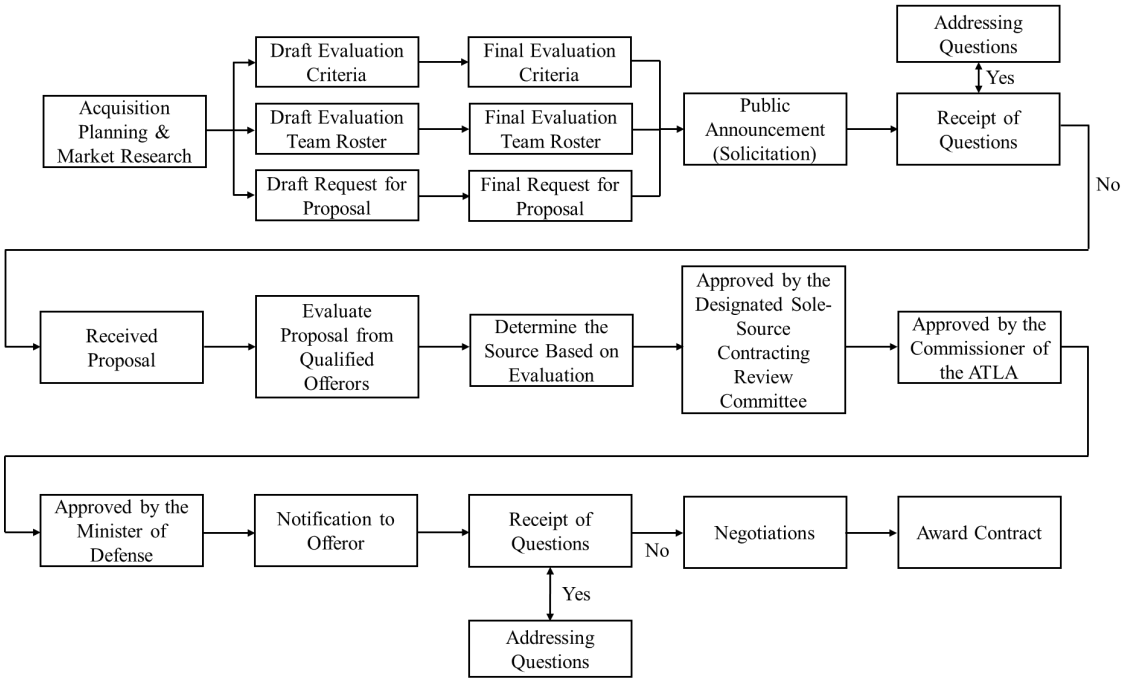

Figure 6. Process for negotiated contracts based on proposal-based competition. Adapted from ATLA (2023b).

The process described up to this point is for negotiated contracts based on proposal-based competition. Additionally, ATLA will reimburse the offeror's expenses associated with proposal preparation using a separate contract. (ATLA, 2022; JMOD, 2023). In other words, ATLA gives the offerors that have received the proposal contract the contractual obligation to prepare a proposal on the items specified by ATLA and pay a fee for the man-hours spent preparing the proposal. Of course, the offerors that could participate in the solicitation for this proposal contract were limited to those that could build Multi-Mission Frigate (FFM) or PVs and the ability to make proposals (ATLA,

2022; JMOD, 2023). Based on the proposal delivered as the deliverable of the proposal contract, ATLA will evaluate this proposal through the proposal-based competition and negotiated contract and will eventually conclude a shipbuilding contract with the company selected as the source.

In this section, we examined how the source selection evaluation processes in the United States, Egypt, and Japan are imposed based on the regulations of each country. The following section outlines how the U.S., Egyptian, and Japanese regulations specify source selection team composition, providing a fundamental basis for comparative analysis.

D. SOURCE SELECTION TEAM COMPOSITION

1. Introduction

According to the CMS principles, NCMA (2022) states, "The source selection team combines the functional disciplines of buyers and sellers for the common purpose of satisfying the user's need" (p. 148). According to the Guidebook for Acquisition of Services, "The goal of every acquisition team should be to obtain quality, timely contract services in both a legal and cost-effective manner, placing the responsibility for quality performance on the contractor. Nonetheless, achieving this goal can be challenging" (Defense Acquisition University, 2021). Competent selection team members, the composition of the source selection team, and communications among the team members are crucial factors that affect the source selection approach's efficiency, transparency, and accountability.

This section discusses how each country structures its source selection team to meet the government requirements. First, we will demonstrate the composition of the U.S. source selection team.

2. United States

Source selection is ultimately the responsibility of agency heads, and unless otherwise delegated, contracting officers are designated as the Source Selection Authority (SSA) (FAR 15.303, 2024). For complex and high dollar-value acquisitions, the SSA will form a team tailored to the specific acquisition, consisting of the source selection

advisory council (SSAC) and source selection evaluation board (SSEB) (Tenaglia, 2022, p. 11). Figure 7 demonstrates the typical three-tiered source selection team (SST) consisting of experts from specific functional areas charged with providing consolidated recommendations to the SSA, who will ultimately select the most advantageous proposal.

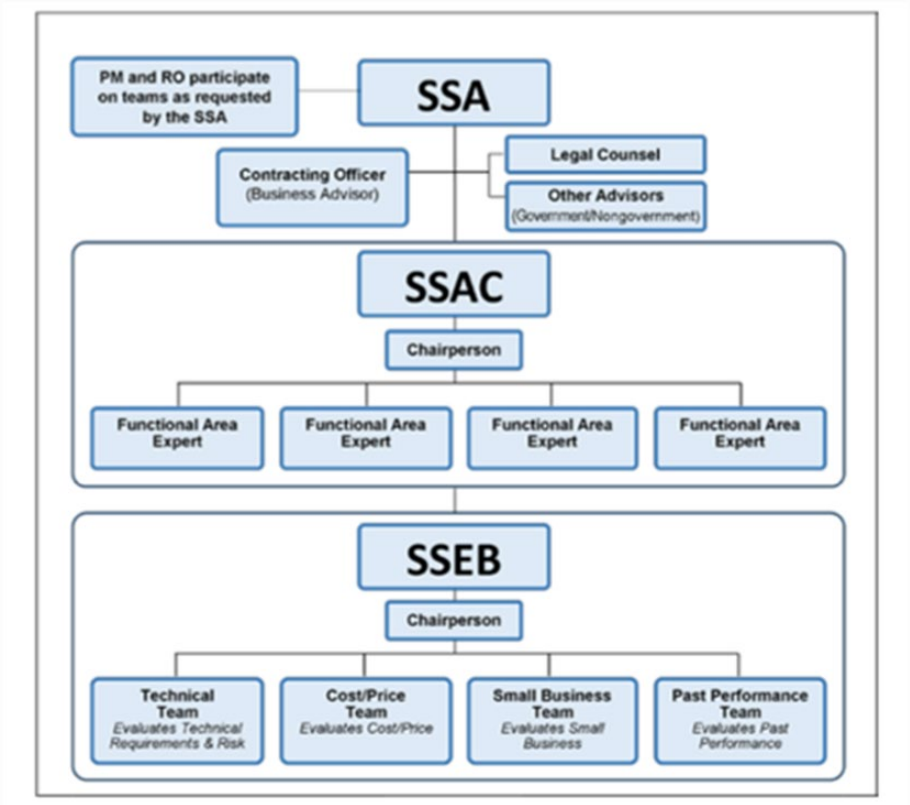

Figure 7. Typical SST structure for solicitations greater than $100 million. Source: Tenaglia (2022).

The purpose of the SSAC is to leverage functional area experts to assist the SSA throughout the source selection process (Tenaglia, 2022, p. 14). Functional area experts provide analysis of offers and recommendations to the SSA while managing SSEB functions. Specifically, SSAC personnel ensure the proposal evaluation criteria, and ratings generated from the SSEB are consistently applied to all proposals before offering recommendations to the SSA (Tenaglia, 2022, p. 10). The SSEB conducts a comprehensive review of proposals based on criteria on the RFP and provides feedback to the SSAC (Tenaglia, 2022, p. 13).

In the next section, we provide details on how the procurement regulation in Egypt structured the SST composition.

3. Egypt

The SSA for Egypt's source selection approach is the armament authority for all kinds of solicitations. The SSEB consists of four committees, as shown in Figure 8. The administrative authority (the specialized authority on contracting) forms three of the four committees: the technical specification committee, market research committee, and technical evaluation committee. The procurement department in the armament authority forms the last committee practice and contracting committee.

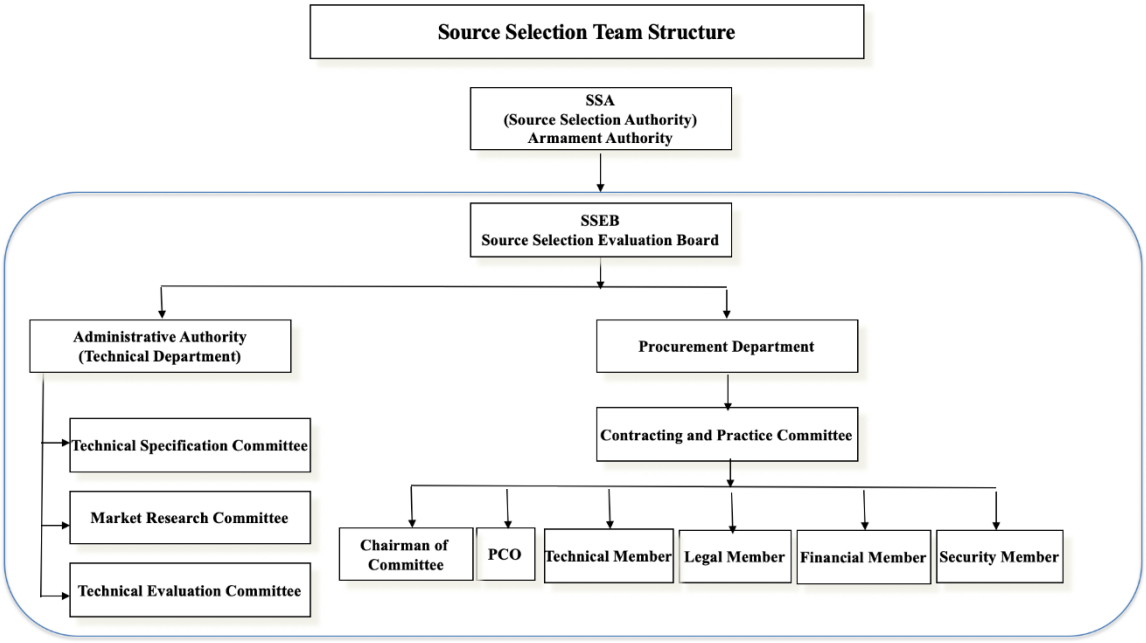

Figure 8. Structure of source selection team. Adapted from EMOD (2018).

According to Article 19 of the Egyptian procurement regulations, the technical specification committee comprises technical specialists from the specialized authority on contracting. In the event of their unavailability, it may ask for the assistance of whoever it deems appropriate from other administrative bodies or consulting offices to improve the efficiency of the outcomes (EMOD, 2018). NCMA (2022) stated, "Those who have different life experiences to contribute, and those who think differently provide the best starting point for a good decision and proposed actions" (p. 149).

The technical specification committee should not have fewer than three or more than seven members, depending on the size and nature of the contract. The committee shall develop technical specifications and consider the standards of sustainable

development, quality, technical, and qualitative characteristics required for the contract, including tests, method of evaluating bids, and any other data that the committee deems necessary for the place of contracting and in a manner that meets the needs of the administrative authority effectively and efficiently.

The technical evaluation committee comprises specialists from specialized authorities on contracting. There is no limit to the technical evaluation committee members; the administrative authority may ask for the assistance of whomever it deems appropriate from other administrative bodies or consulting offices (EMOD, 2018). The policy of no limitation for the technical evaluation members enhances the source selection approach's transparency, efficiency, and effectiveness.

The market research committee consists of technical and financial elements from the administrative authority's employees, who are experts in contracting. Moreover, it may ask for assistance from whoever it deems appropriate to perform its task, such as other administrative authorities or consulting offices, to study the market and set the estimated value or the basic price following the instruction of Article 27 of the Egyptian procurement regulations.

According to Article 60 of the Egyptian procurement regulations, the head of the SSEB and the practice and contracting committee should be at least the rank of brigadier general or higher. Their experience should be commensurate with the contract's value, importance, and nature (EMOD, 2018). Additionally, committee members should be selected from various departments, including procurement, legal, financial, military security, and technical. The maximum number of members of the practice and contracting committee should not exceed 15 members (EMOD, 2018). Egypt uses a sealed bidding process similar to the U.S. FAR Part 14, although Egypt does not have a comparable process to the U.S. FAR Part 15 (contracting by negotiation).

The members of all the SSEB committees should not consist of the same personnel. The justification for the requirement is to increase specialization and expertise, enhance transparency in selecting capable contractors, and reduce the risk of biases.

The segregation between the technical specification and technical evaluation committees creates a balanced situation and prevents conflict of government interests. In

addition, it enhances transparency and accountability in the procurement process by ensuring that no group has sole control over the decision of the source selection approach. The foundation of the SST is to work toward common goals instead of individual achievements (NCMA, 2022).

In this subsection, we reviewed the composition of the SST in Egypt. Next, we examine Japan's SST composition.

4. Japan

The administrative procedures for procurement through the proposal-based competition for central procurement issued by ATLA also specify the specific guidelines for SST composition (ATLA, 2023b). According to this, in the case of shipbuilding contracts, the head of the ships division of the ATLA Department of Procurement Operations will work with the procurement requesting authority to select the evaluation team members for the proposal-cased competition. The head of the ships division will serve as the head of the evaluation team. They will designate one of the contract staff members in the ships division to serve as the evaluation coordinator for the evaluation team. And, from the viewpoint of ensuring the objectivity of the evaluation and preventing bias in the evaluation, the evaluators shall, in principle, consist of at least two members each from the staff of the ships division and the staff of the procurement requesting authority, for a total of at least six members. In addition, if a specialized evaluation is required, the head of the evaluation team has the authority to add evaluators as deemed necessary. No restrictions on evaluators' numbers, affiliations, or knowledge are required for these specialized evaluations. Furthermore, these composition requirements do not change depending on the monetary scale or nature of the procured goods.

Next, we will review the composition of the DSCRC. As mentioned above, the DSCRC deliberates on the evaluation results determined by the evaluation team. The DSCRC's operating guidelines, which the ATLA publishes, specifically stipulate the purpose and composition of the members (ATLA, 2015d). First, the purpose of this DSCRC is to judge the appropriateness of the contract method, to confirm the appropriateness of the content of the procurement request or specifications, and then to

deliberate on matters related to the source to be selected, the reasons for selection, and the applicable provisions of the basic laws. The committee also deliberates on whether the competitiveness of the source selection process for the relevant contract has been ensured. The Director General of the Department of Procurement Management, ATLA, chairs the DSCRC, and the other members are broadly divided into standing and non-standing members. The standing members number 20, including the heads of each department within ATLA (such as equipment procurement, management, and evaluation) and the leaders of their subordinate departments. The non-standing members consist of 22 section leaders from procurement-related organizations outside ATLA. A simple majority of those present decides the deliberations of the DSCRC and, if approved, proceed to the approval process of the ATLA Director and the Minister of Defense. The composition of the Japanese SST discussed so far is shown in Figure 9.

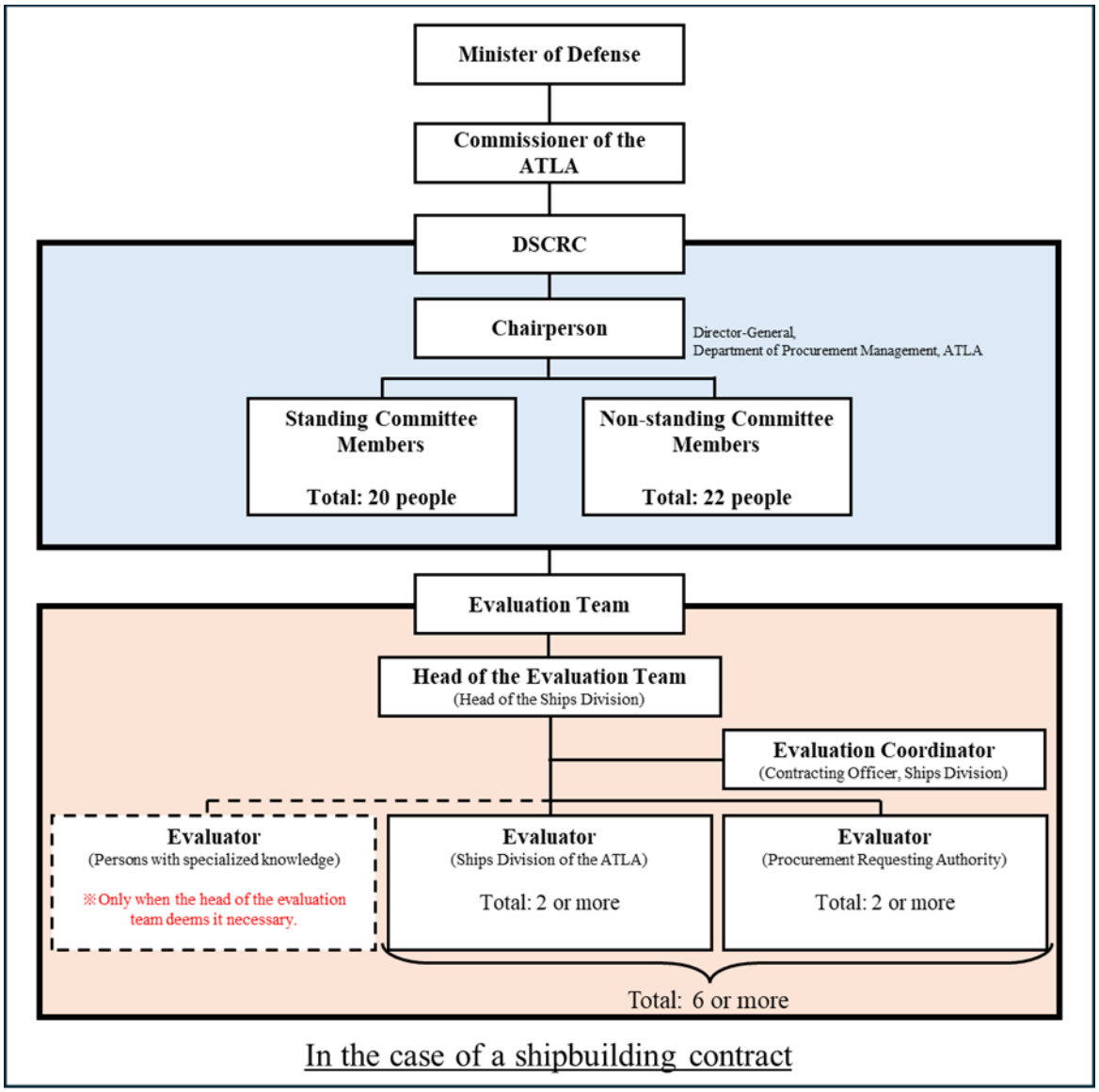

Figure 9. Japanese evaluation team composition and the Designated Sole-Source Contract Review Committee. Adapted from ATLA (2023b) and ATLA (2015f).

In this section, we examined how the SST composition in the United States, Egypt, and Japan is stipulated based on the regulations of each country. Next, we review how U.S., Egyptian, and Japanese regulations stipulate proposal evaluation criteria, providing a fundamental basis for comparative analysis.

E. PROPOSAL EVALUATION CRITERIA

1. Introduction

The proposal evaluation criteria are a fundamental component in the source selection approach because it encompasses how the SST evaluates the best proposal that meets the government requirements. Different proposal evaluation criteria and methods exist to select the best value for contract award. It depends on how the government requirement is identified, the solicitation's complexity, market research analysis, and the importance of price and non-price factors in the proposal evaluation criteria.

This section shows each country's proposal evaluation criteria methods and how these methods reflect the country's regulations and strategy. We start with the proposal evaluation criteria of the United States.

2. United States

In accordance with Defense Federal Acquisition Regulation Supplement (DFARS) 215.303(b)(2), for all competitive acquisitions, the SSA will approve in writing a Source Selection Plan (SSP) before issuance of the final solicitation. The SSP shall include evaluation factors and significant subfactors (Tenaglia, 2022). At a minimum, evaluation factors and significant subfactors must meet two criteria: indicate key factors and essential considerations for the decision-making process and adequately allow for distinction between multiple proposals (FAR 15.304, 2024). The price or cost to the government represents a mandatory evaluation factor that shall be used in every source selection (FAR 15.304, 2024). In addition, stating the factors and significant subfactors, the head of an agency must establish the relative importance assigned to each factor (10 U.S.C. 3206, 1957).

If the government determines the "best value" is the LPTA method on the basis that no additional value would be achieved from proposals that exceed the minimum technical or performance requirements, only price factors will be considered for all acceptable proposals (FAR 15.101-2, 2024). In all other cases where LPTA source selection criteria would "deny the government the benefits of cost and technical tradeoffs in the source selection process," a tradeoff process shall be used (41 U.S.C. 3701, 2011).

In the tradeoff process, the solicitation must specify whether the combined importance of all non-cost factors is greater than, equal to, or less than the cost or price (FAR 15.101-1, 2024). The HTRO approach makes no tradeoff between price and non-price factors, awarding the highest technically rated offeror with a fair and reasonable price.

After analyzing the proposal evaluation criteria in the United States, we will review the proposal evaluation criteria in Egypt and how the procurement regulations dictate methodology to select the most capable contractor that meets the government requirements.

3. Egypt

The proposal evaluation criteria in Egypt's source selection approach differ from those of other countries' systems. NCMA (2022) states, "The source selection through the sealed bidding method is accomplished using the price or price-based factors stated in the invitation for bids, and the lowest price wins the contract" (p. 217). The Contract Management Body of Knowledge (CMBOK) and U.S. regulations depend on the price/ price-related factors in the proposal evaluation criteria when using the sealed bidding contracting method.

In the last decade, governments have started to develop innovative methodologies for source selection approaches more in line with the private sector (de Boer et al., 2001). When using the sealed bidding contracting method, the proposal evaluation criteria in the Egyptian system are different and rely on price and non-price factors. Falagario et al. (2012) stated, "The awarding committee has to decide the tender proposal evaluation criteria of the presented bids in advance" (p. 1). Furthermore, selecting capable contractors, who can meet all desired requirements of government, is a significant challenge for the organization (Falagario et al., 2012). According to the Egyptian procurement regulations, Egypt uses the sealed bidding process with two different methods of proposal evaluation criteria.

The first method for proposal evaluation criteria is the point-based evaluation system. This system mirrors the best value concept in the CMBOK and U.S. procurement regulations. FAR 15.101 states, "the governmental agencies can use one or combination

of the source selection methods in negotiations to achieve the government's interest" (2019). For fully identified requirements and low performance risk, the price and the cost factors are crucial factors, while for the undefined requirements and high-risk performance the non-price factors play the important role in the source selection (FAR 15.101-1, 2019).

According to Egyptian regulations Article 74, point-based evaluation systems rely on the price and non-price factors to determine the best value for the government (EMOD, 2018). Examples of non-price factors could include technical specifications, past performance, service after selling, period of experience, expert workforce working for the contractor, successfully implemented projects, financial capability, availability of equipment and tools, and any other valuable factors deemed critical for government interest.

In most public procurement cases, the proposal evaluation criteria that depend on the price and non-price factors are complex processes (Falagario et al., 2012). The technical evaluation team prioritizes the most crucial aspects, assesses each proposal, and analyzes the final grade. After receiving the best and final price for each proposal, the practice and contracting committee members divide the price of each proposal into its technical evaluation grade; the result is called the equivalent number. The contractor with the lowest equivalent number is awarded the contract. Falagario et al. (2012) stated, "In public procurement, the decisions must be based on a strict and unambiguous ranking of the available offers" (p. 3).

These proposal evaluation criteria aim to select the best quantum (i.e., best value) for the government's interest by ensuring the chosen contractor achieves the government's goals and financial constraints. These criteria are used when the requirements of the government are not fully defined or there are challenges related to uncertain market research data, highly complex solicitation, R&D solicitation, new weapon system, and lack of experience.

The second method is the comparison of bids with the estimated value. The instructions of Article 75 of the Egyptian procurement regulations show how the SST evaluates the contractor's proposals for the second method of the proposal evaluation

criteria by comparing only the acceptable technical proposal with the estimated value (EMOD, 2018). The closest price to the estimated value receives the awarded contract. This process closely resembles the LPTA in the U.S. procurement regulations under FAR 15.101-2.

The market research committee in the SSEB determines the estimated value during the planning phase according to market research data, competitive sources, technologies, historical data for similar solicitation, and technical and financial experiences. We use this proposal evaluation criteria method when the solicitation is not complex, has fully identified requirements, and was previously acquired.

In this subsection, we reviewed the proposal evaluation criteria in Egypt. Next, we focus on Japan and review its proposal evaluation criteria.

4. Japan

The administrative procedures for procurement through the proposal-based competition for central procurement issued by ATLA also stipulate the proposal evaluation criteria (ATLA, 2023b). The proposal evaluation criteria are divided into two main categories: mandatory items and additional items, which are specific to each solicitation. First, the mandatory items are items that the applicant must satisfy in the proposal they submit. If even one of these is not satisfied, the proposal's content will not be able to achieve the purpose of the contract. In other words, if the proposal fails to satisfy even one of the criteria set out in the mandatory items, it will be disqualified. The additional items are made up of items that evaluate more advanced expertise, performance, functions, technology, creativity, etc. The additional items are only assessed for proposals that have satisfied all the mandatory items, and points are awarded according to the proposal evaluation criteria and scoring system that have been predetermined. Finally, ATLA will decide on the applicant who has obtained the highest score in the additional items as the source.

The administrative processing guidelines set three restrictions on allocating points for additional items (ATLA, 2023b).

- The score for each evaluation item in the additional items shall, in principle, be 1/20 or less of the total score for the additional items.

However, this may not apply if the ATLA procurement planning division manager agrees.

- The difference in the weight of the evaluation items between the additional items shall be reasonably explainable.
- The criteria for awarding points, the number of points awarded, and the calculation method for determining the number of points awarded shall be clearly stated in the written proposal evaluation criteria.

The above is the content of the Guidelines for Administrative Processing in the Case of Procurement through Proposal-Based Competition in Central Procurement that stipulates the proposal evaluation criteria. Therefore, since Japanese regulations do not specify proposal evaluation criteria in detail, it can be expected that proposal evaluation criteria are set for each case of proposal-based competition.

In this section, we reviewed how the proposal evaluation criteria in the United States, Egypt, and Japan are stipulated based on the regulations of each country. The next section will comprehensively review previous research.

F. PREVIOUS RESEARCH

Even though there is a lot of research on the contract life cycle process, there is limited research comparing source selection approaches between multiple countries. This limitation raises the need for a deep investigation into source selection approaches in shipbuilding efforts by the United States, Egypt, and Japan. By examining the existing literature, this section will establish the foundation for understanding challenges in the source selection approach when comparing multiple countries.

We started our research with Yang's (2023) thesis, "Comparison of Source Selection Strategies between the United States and Taiwan's Shipbuilding Procurement." The author uses comparative analysis to show the differences between the two countries in the source selection process, SST, evaluation factors, relative importance factors, contract type, and small business policy, trying to develop relevant recommendations for each system.

In the source selection process, Yang's research findings criticize the fact that U.S. regulations do not require the disclosure of specific budget amounts in solicitations for each procurement case (Yang, 2023). According to Yang's explanation, the U.S.

regulations not publishing specific budget amounts would limit the ability to analyze prices and affect the decision on the source selection approach for shipbuilding procurement in the U.S. Navy. Moreover, she believes "by not publishing the budget value in the solicitation, transparency of the procurement process can be called into question" (p. 48). The author suggests that disclosing the specific budget amount in a solicitation affects companies' proposals by steering them toward specific amounts, potentially resulting in price predetermination since companies are aware of the government's maximum funding ceiling. Yet, she recommends the U.S. system reveal the budget in the solicitations (Yang, 2023).

The inconsistency between the advantages/disadvantages of publishing the budget in solicitation and the recommendations of publishing the budget value for the U.S. system drives the controversy. The general recommendation for revealing the budget value in the solicitation of the U.S. procurement incentivizes the contractors to tailor their financial proposal with the maximum budget value and increases the cost risk.

The second area is the SST. Yang's research claims that the United States should disclose the names of its source selection evaluation teams in each procurement case, in the same way as Taiwan (Yang, 2023). The author supposes not publishing the name list of the evaluation team in solicitation reduces the transparency in the U.S. system. Yang (2023) states, "The name list of the members would not be published on the SAM.gov website. Thus, the lack of transparency and diversity might lead to insufficient knowledge on selecting proper contractors or the risk of the senior officers manipulating the source selection result" (p. 48). Although the author does not build her recommendation on empirical evidence or analytics proof, she recommends publishing the name list of the evaluation team for the U.S. system.

The second piece of research we examined was Alanzi's (2021) article entitled "Tendering in Assignment of the Administrative Contract: A Comparison of Egyptian Tender Law and Saudi Government Tenders and Procurement Law." The author uses the similarities and differences among the tendering legal systems of Egypt and Saudi Arabia to reflect the best practices to improve the procurement process, enhance transparency, and reduce corruption. This article outlines the role of the amended regulations in 2018

for Egypt and new regulations in 2019 for Saudi Arabia designed to enhance transparency and reduce corruption.

Alanzi (2021) stated, "These two countries are chosen because both share many common features in the legal framework regarding procurement and have done recent reforms" (p. 107). The author insists on the similarities between the procurement regulations of the two countries. However, there are significant differences between the two countries regarding the foundations of defense acquisition systems and financial resources. Alanzi notes the success of the new regulations for the two countries in improving the procurement process, enhancing transparency, and reducing corruption without empirical evidence or case study analysis (2021, p. 107).

The author used the comparative analysis of the procurement law and regulations only to show its implications on the procurement process, transparency, and corruption, even though the evaluation process, SST composition, and proposal evaluation criteria are critical factors affecting the procurement process, transparency, and corruption. Rendon and Rendon (2015b) state, "The lack of competent personnel, capable processes, and effective internal controls makes the DoD more vulnerable to procurement fraud" (p. 1).

Alanzi provides a detailed overview of the procurement law for Egypt and Saudi Arabia and the implications of the new regulations on the procurement process, enhancing transparency and reducing corruption. However, this study fails to show how these regulations have been implemented in practice. Furthermore, the author depends on the legal text more than case studies and empirical proof. The lack of outcome analysis reduces the article's credibility (Alanzi, 2021).

G. SUMMARY

This chapter aimed to present a thorough examination of literature that established the foundation for this research. In this chapter, we covered auditability theory, the CMS, and the source selection evaluation process, SST composition, proposal evaluation criteria in the United States, Egypt, and Japan, and related previous research. To begin, we presented the theoretical framework that supports the CMS, as outlined in auditability

theory. Then, we showed how the FAR, Egyptian, and Japanese regulations align with the CMS. Additionally, we comprehensively reviewed regulations in the three countries and described how they stipulate the source selection evaluation process, SST composition, and proposal evaluation criteria. Furthermore, we reviewed the relevant previous research and provided the foundation for understanding and contextualizing this research.

The next chapter presents the methodology we implemented in this research.

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III. METHODOLOGY

In this chapter, we present the methodology employed in this research. First, we outline the data sources utilized and explain the process of data collection. Next, we will address how we filter and arrange the data for a comparative analysis between the United States, Egypt, and Japan shipbuilding solicitations and policy documents. We conclude our chapter with a summary.

A. DATA SOURCES

As stated in FAR 5.002, U.S. policy dictates that contracting officers shall publicly advertise all contract actions to expand industry participation to the maximum extent practical and allow for adequate competition. Our research uses the government-wide point of entry (GPE) to collect U.S. shipbuilding solicitation data. The GPE is accessed online at (SAM.gov) (FAR.5.202, 2024).

Egypt publishes procurement regulations on the website of the general authority for government services, the official site of the EMOD, and the executive regulations of Law No. 182 of 2018 for Egypt's defense acquisition system. New solicitations and contracting actions for Egypt are promulgated through the Egyptian military attaché office after the Egyptian armament authority generates them. These solicitations are not accessible to the public.

In Japan, as stipulated in Article 29 of the Public Accounting Act, the contracting officer must disclose information widely when conducting a solicitation (Kaikeihou [Public Accounting Act], 1947). However, this solicitation is only posted on the website of each procurement organization for the necessary period until the deadline, and there is no public service that publishes all past solicitations at once. Nevertheless, some solicitations may remain online; in that case, they can be accessed. The same applies to the publication of the results of proposal-based competition.

B. DATA ACCESS

In accordance with the Federal Funding Accountability and Transparency Act of 2006, "all unclassified Federal award data must be publicly accessible" (FAR 4.603,

2024). Therefore, all unclassified U.S. shipbuilding solicitations will be made available using the GPE located at SAM.gov.

Egypt publishes procurement regulations online and are available to the public. However, individual solicitations and details on previous contracting actions are generally inaccessible to the public. The Egyptian regulations have restrictions for publishing the contracting actions in public, especially the name list of SSEB, the solicitation's budget, and the technical evaluation values for the proposal.

In Japan, the 2006 guidance on the proper conduct of public procurement stipulates that all unclassified solicitations and the results of these solicitations must be made public for a certain period (JMOF, 2006). Therefore, all unclassified shipbuilding solicitations and the results of these solicitations that are currently being made public can be accessed using a general web search service.

C. DATA FILTER

The GPE website allows different data filters to narrow searches for specific categories of RFP. Initially, for U.S. shipbuilding solicitations, we started with the search term "construction." We then applied two advanced filters to refine the results further. The first advanced filter was the North American Industry Classification System (NAICS) code representing "ship and boat building": 3366. The second advanced filter came from the Products and Services Code (PSC) Manual, representing Group 19: Ships, Small Crafts, Pontoons, and Floating Docks (U.S. General Services Administration, 2024). Finally, we restricted the proposal timeframe to include only data from 2018 to 2023. With these advanced filters and time constraints, we could focus on recent solicitations directly related to shipbuilding.

For Egypt, we gathered unclassified procurement data from the procurement department of the armament authority and through open sources. We selected the 2011 Germany's ThyssenKrupp Marine System Company (TKMS) submarine procurement for the Egyptian Navy as a case study. The 2011 TKMS submarine case study includes the comprehensive nature of the acquisition, which encompasses the critical elements of the contract life cycle, such as the source selection approach, proposal evaluation criteria,

and the structure of the SST. Furthermore, this case study aligns closely with the research methodology for comparative analysis against the U.S. and Japan case studies.

As there is no service like GPE in Japan, we first checked ATLA's ships division solicitation page to see any current solicitations. Next, we used a general web search service to find data removed from the ATLA's solicitation page, which is still available online. We used the search terms defense, shipbuilding, solicitation, or proposal-based competition. Using these two methods, we obtained comprehensive information on all currently accessible Japanese shipbuilding solicitations.

D. DATA ANALYSIS

After the shipbuilding solicitation data is collected and filtered for the United States, Egypt, and Japan, we organize it using similar criteria subject to comparison. These criteria include the source selection evaluation process, SST composition, and proposal evaluation criteria. Additionally, since the SST data is not publicly available for the United States, Egypt, or Japan, we use CMS standard practices to compare respective countries' policies as a benchmark. After comparing the factors previously described, we present our analysis findings.

E. SUMMARY

In this chapter, we presented the methodology employed in this research. First, we outlined the data sources for the United States, Egypt, and Japan and how we collected the data for each respective country. Then, we addressed how the data was filtered and arranged for comparative analysis. Finally, we concluded this chapter with a summary.

The next chapter presents our findings using the methodology described in this chapter.

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IV. FINDINGS AND ANALYSIS

A. INTRODUCTION

This chapter aims to present the findings from a comparative analysis of case data and regulations for shipbuilding solicitations from the U.S. Navy, Egyptian Navy, and JMSDF. First, we will present case data on shipbuilding solicitations for each country. In situations where case data is unavailable, we will reference each country's regulations to use in our analysis. We will compare the source selection evaluation process, SST composition, and proposal evaluation criteria in the U.S. Navy, Egyptian Navy, and JMSDF. Based on our comparison analysis, we present our findings. Next, we make recommendations for source selection approaches for shipbuilding procurement in the U.S. Navy, Egyptian Navy, and JMSDF. Finally, we conclude this chapter with a summary.

B. FINDINGS

The research findings on the source selection evaluation process, SST composition, and proposal evaluation criteria are divided into three subsections: the United States, Egypt, and Japan.

1. United States

After applying the search filters described in Chapter III, we received 61 initial search results that matched our criteria. Figure 10 depicts the advanced data filters on SAM.gov, starting with a keyword search of construction. Next, we narrowed the notice type to solicitation, NAICS code to 3366, and PSC to 19. Finally, we restricted the dates from January 1, 2018, to December 31, 2023, representing only recent shipbuilding solicitations.

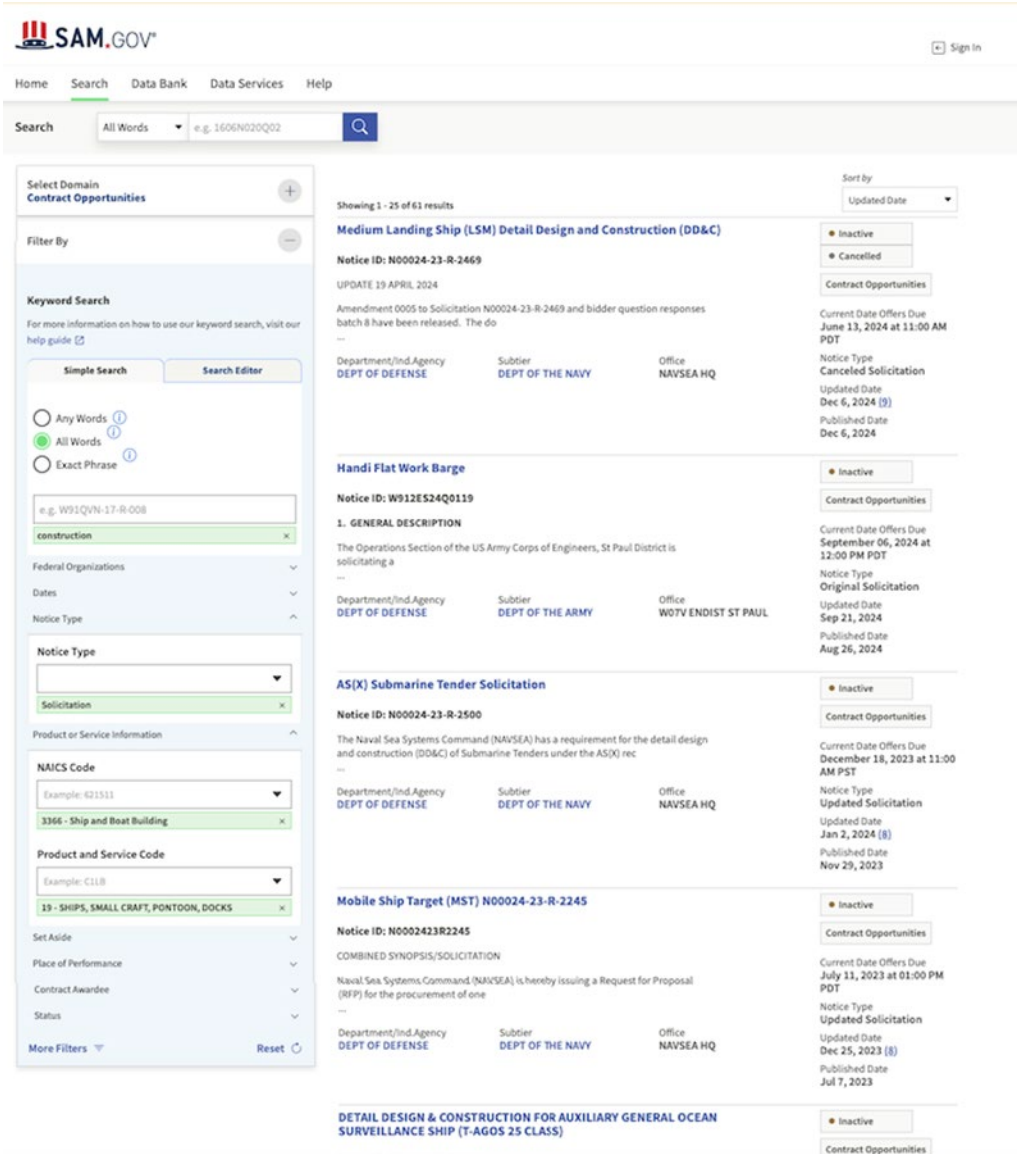

Figure 10. SAM.gov search results. Adapted from SAM.gov (n.d.).

Of the 61 initial search results, we focused on 18 total solicitations after filtering departments outside the DoD and Department of Homeland Security (DHS). We felt that the Department of the Army and DHS solicitations met the criteria of military shipbuilding and added valuable data points, which were thus included in the results. We then filtered out 12 solicitations not for shipbuilding, 17 out-of-date solicitations, three containing controlled information, and two canceled solicitations. The results of the further refinement are summarized in Table 4.

Table 4. Data filter results for the U.S. shipbuilding solicitations. Adapted from SAM.gov (n.d.).

Data	Category	Number	Results/Excluded Reasons
Original Data	SAM.gov search result	61	Search term: Construction Notice type: Solicitation NAICS Code: 3366 PSC: 19 Ships, Small Craft, Pontoon, Docks
Data Filter Process	Not for DoD or DHS	9	Exclude reasons: National Oceanic and Atmospheric Administration, Department of Forestry Services
	Not for shipbuilding	12	Exclude reasons: Industry studies, dismantlement, construction of sections
	Out of date	17	Excluded data before 2018, only applying data from January 1, 2018, to December 31, 2023
	Controlled information	3	Controlled unclassified information
	Canceled solicitation	2	Renew with another solicitation
Final Data	Final research data	18	

In terms of source selection approaches, of the 18 results that met our filter criteria, eight U.S. shipbuilding solicitations applied the tradeoff method, and 10 used the LPTA source selection approach. There were no solicitations where HTRO was favored as the source selection approach.

Six of the 10 LPTA solicitations originated from the U.S. Army Corps of Engineers (USACE), who relied solely on LPTA solicitations for their shipbuilding efforts. The remaining four LPTA solicitations were split evenly between the U.S. Navy and DHS, encompassing solicitations for both commercially available vessels and design-build agreements. Table 5. lists the results of our filter criteria showing the type of vessel in each solicitation and corresponding source selection approach.

Table 5. U.S. shipbuilding source selection evaluation approaches. Adapted from SAM.gov (n.d.).

U.S. Shipbuilding Procurement Source Selection Evaluation Process				
	Solicitation Name	Notice ID	Year	Source Selection Approach
1	Mobile Ship Target	N0002423R2245	2023	Tradeoff
2	Auxiliary General Ocean Surveillance Ship (T-AGOS 25 Class)	N0002422R2203	2022	Tradeoff
3	Yard Oiler, Non-Self Propelled	N0002422R2244	2022	LPTA
4	Auxiliary Floating Dry Dock Medium (AFDM)	N0002422R2243	2021	Tradeoff
5	Yard Repair Berthing and Messing Barge (YRBM)	N0002421R2253	2021	Tradeoff
6	Force Protection Small/ Large	N0002422R2270	2021	LPTA
7	U.S. Coast Guard Waterways Commerce Cutter Program	70Z02321RPRT00300	2021	Tradeoff
8	Medium Class Hopper Dredge (MCHD)	W912BU21R0001	2021	Tradeoff
9	FFG(X) Guided Missile Frigate	N0002419R2300	2019	Tradeoff
10	Lake Cumberland, Patrol Boat	W912P520Q0060	2019	LPTA
11	Aluminum Work Boat	W911WN19T0001	2019	LPTA
12	Bank Grading Unit Barge	W912EQ19B0007	2019	LPTA
13	65’ Dive Support Boat	N0002418R2209	2018	LPTA
14	Crane Barge	W912BU18B0014	2018	LPTA
15	Deck Cargo Barges	W912BU18B0012	2018	LPTA
16	Snag Barge	W912BU18B0016	2018	LPTA
17	U.S. Coast Guard Cutter Boat-Large	70Z02318RMOT00300	2018	LPTA
18	Expeditionary Fast Transport (EPF) 13	N0002418R2227	2018	Tradeoff

In terms of SST composition, our findings were that U.S. solicitations do not publicize information on SST composition. However, we assume that these solicitations were structured in accordance with policy and regulation presented in Chapter II.

In terms of proposal evaluation criteria, our findings are as follows. According to FAR 15.304, proposal evaluation criteria and significant sub-criteria are within the discretion of acquisition agency officials to determine. These criteria should represent key areas of importance and should be tailored to the individual acquisition (FAR 15.304[a]). From our analysis, agency officials from various departments place different importance on shipbuilding criteria. Criteria such as technical merit or design consistently rank as the most critical evaluation criteria for all agencies' tradeoff method source selection approach. The remaining criteria, even sometimes within the same agency, are prioritized with different significance for each acquisition. USACE, for instance, maintained consistent evaluation criteria and instructions for all six of their LPTA solicitations. Table 6 demonstrates source selection evaluation criteria considered for each acquisition and the order in which each criterion is prioritized in the decision process.

Table 6. U.S. shipbuilding evaluation criteria and order of importance. Adapted from SAM.gov (n.d.).

U.S. Shipbuilding Procurement Evaluation Factors and Order of Importance			
	Solicitation Name	**Source Selection Approach**	**Evaluation Factors and Order of Importance**
1	Mobile Ship Target	Tradeoff	1. Technical Merit of Design > 2. Facility and Management Feasibility > 3. Past Performance > 4. Price
2	Auxiliary General Ocean Surveillance Ship (T-AGOS 25 Class)	Tradeoff	1. Detail design and engineering approach = 2. Production approach > 3. Management approach > 4. Past performance > 5. Price
3	Yard Oiler, Non-Self Propelled	LPTA	Acceptable or unacceptable for 1. Technical approach and 2. Past performance. Then awarded to the lowest 3. Price
4	Auxiliary Floating Dry Dock Medium (AFDM)	Tradeoff	1. Technical merit of design > 2. Past performance > 3. Price
5	Yard Repair Berthing and Messing Barge (YRBM)	Tradeoff	1. Technical merit of design > 2. Facility and management feasibility > 3. Past performance > 4. Price

U.S. Shipbuilding Procurement Evaluation Factors and Order of Importance			
	Solicitation Name	**Source Selection Approach**	**Evaluation Factors and Order of Importance**
6	Force Protection Small/ Large	LPTA	Acceptable or unacceptable for 1. Technical approach and 2. Past performance. Then awarded to the lowest 3. Price
7	U.S. Coast Guard Waterways Commerce Cutter Program	Tradeoff	1. Technical approach > 2. Systems design capability and production capability > 3. Management approach > 4. Past performance > 5. Price
8	Medium Class Hopper Dredge (MCHD)	Tradeoff	1. Technical product > 2. Concept of technical approach > 3. Past performance > 4. Small business participation > 5. Price
9	FFG(X) Guided Missile Frigate	Tradeoff	1. Design and design maturity = 2. Objective performance > 3. Schedule, production approach, and facilities > 4. Data rights > 5. Price
10	Lake Cumberland, Patrol Boat	LPTA	Acceptable or unacceptable for 1. Technical specifications. Then awarded to lowest 2. Price
11	Aluminum Work Boat	LPTA	Acceptable or unacceptable for 1. Technical specifications. Then awarded to lowest 2. Price
12	Bank Grading Unit Barge	LPTA	Acceptable or unacceptable for 1. Technical specifications. Then awarded to lowest 2. Price
13	65’ Dive Support Boat	LPTA	Acceptable or unacceptable for 1. Technical and 2. Past performance and experience. Then awarded to the lowest 3. Price
14	Crane Barge	LPTA	Acceptable or unacceptable for 1. Technical specifications. Then awarded to lowest 2. Price
15	Deck Cargo Barges	LPTA	Acceptable or unacceptable for 1. Technical specifications. Then awarded to lowest 2. Price
16	Snag Barge	LPTA	Acceptable or unacceptable for 1. Technical specifications. Then awarded to lowest 2. Price
17	U.S. Coast Guard Cutter Boat-Large	LPTA	Acceptable or unacceptable for 1. Technical specifications. Then awarded to lowest 2. Price

U.S. Shipbuilding Procurement Evaluation Factors and Order of Importance			
	Solicitation Name	**Source Selection Approach**	**Evaluation Factors and Order of Importance**
18	Expeditionary Fast Transport (EPF) 13	Tradeoff	1. Commonality > 2. Ship design/technical approach > 5. Price. Acceptable or unacceptable: 3. Production/ management approach and 4. Past performance

The following section demonstrates case data for the source selection approaches of Egypt, including the source selection evaluation process, SST composition, and proposal evaluation criteria.

2. Egypt

According to the limitations on data resources and access for Egypt described in Chapter III, individual solicitation details are generally inaccessible to the public. Therefore, we used all available open-source procurement data, regulations on the website of the general authority for government services, EMOD's official website, and the executive regulations of Law No. 182 of 2018 for Egypt's defense acquisition system.

After our search for open-source Egyptian procurement data of newly developed weapon systems, we received eight search results, as shown in Table 7.

Table 7. The results of search for the Egyptian procurement data of newly developed weapon systems

Egyptian Search Results				
	Solicitation Name	The Fund	Year	Warfighter Names
1	Abrams M1A1	FMS	1998/2019	Tanks department
2	Submarine-209/1400	NF	2011	Navy Forces
3	Apache AH-64E Attack Helicopter	FMS	2015	Air Forces
4	Dassault Rafal	National Fund (NF) with loan facilities	2015	Air Forces
5	*Gowinds*-Class Corvette	NF with loan facilities	2015	Navy Forces
6	MIG-29 M1M2	NF	2018	Air Forces
7	*Mistral*-Class Helicopter Carrier	NF with loan facilities	2017	Navy Forces
8	MRAP	FMS	2019	Vehicle department

Of eight initial search results, we focused on five solicitations after excluding solicitations out of the National Fund (NF). We then excluded three solicitations that were not for shipbuilding. We finally focused on one solicitation by excluding all NF with loan facilities solicitations, as shown in Table 8.

Table 8. The search results after applying the filter criteria

Search Results Summarization				
	Solicitation Name	The Fund	Year	Results/Excluded Reasons
1	Abrams M1A1	FMS	Tanks department	Are not National Fund (NF)
2	Apache AH-64E Attack Helicopter	FMS	Navy Forces	
3	MRAP	FMS	Vehicle department	
4	Dassault Rafal	NF with loan facilities	Air Forces	Are not Navy Forces
5	MIG-29 M1M2	NF	Air Forces	
6	*Mistral*-Class Helicopter Carrier	NF with loan facilities	Navy Forces	NF with loan facilities
7	*Gowinds*-Class Corvette	NF with loan facilities	Navy Forces	
8	Submarine-209/1400	NF	Navy Forces	Accepted

The final search result was a solicitation for four submarines-209/1400 from Germany's TKMS company. This solicitation used the sealed bidding contracting process with a point-based evaluation system as proposal evaluation criteria for selecting the contractor. The following section shows how the Egyptian procurement system planned to acquire four 209/1400 submarines, including the source selection evaluation process, the SST composition, and the proposal evaluation criteria.

In terms of the source selection evaluation process, the armament authority published the solicitation for a new advanced submarine in early 2011. After the armament authority received the contractors' proposals, it sent the technical proposal to the naval armament department for technical evaluation. The technical evaluation committee evaluated the proposal according to the point-based evaluation criteria depending on the price and non-price factors, which were arranged according to their importance, as shown in Table 9. Then, the naval armament department sent the final

evaluation to the procurement department in armament authority in a secured and closed envelope.

The procurement department directed the practice and contracting committee to start the sealed bidding procedures with all technically acceptable proposals. Germany's TKMS company was among the contractors found to be technically capable to perform the contract. After the contracting committee received the best and final price from the contractors considered, they divided the last price into the technical evaluation number for each proposal to get the equivalent numbers. The lowest equivalent number was the proposal of Germany's TKMS company.

In terms of the SST composition, at the beginning of 2011, the Egyptian Navy forces followed the EMOD strategy to increase the naval power in the Mediterranean and the Red Sea to save the national interests. The commander of the naval forces gave his order to structure the three committees: the technical specifications committee, the market research committee, and the technical evaluation committee.

The technical specification committee started by identifying the operational requirements and the strategic objective of the EMOD to address which choice best meets national and defense security. The technical specification committee recognized the need for advanced submarines with multifunctional roles in reconnaissance, surveillance, and deterrence operations.

The market research committee identified the potential contractors in submarine manufacturing, their previous projects, the experience of their workforce, the project's estimated value, and addressed risk areas. The report published by the market research committee played a vital role in helping the technical evaluation team evaluate the technical proposals. The technical specification committee was able to combine findings from the market research report along with EMOD force design strategy to form Navy requirements to publish. RFQ No. (LP/2011/N/51) was created for the required submarine and submitted it to the procurement department/armament authority to start the next contract life cycle phase (publication phase).

In terms of the proposal evaluation criteria, the technical specification committee addressed the technical specification of the advanced submarine, the evaluation criteria

(point-based evaluation system method), and the evaluation criteria. It weighed them, as shown in Table 9, and assessed budgetary constraints and solicitation timelines.

Table 9. Evaluation factors for the required advanced submarine. Adapted from RFP No. (LP/2011/N/51)

Evaluation Factors for the Required Advanced Submarine (Arranged according to Importance)			
No.	Category of Factors		Evaluation Factors/Subfactors and Order of Importance
1	Evaluation factors		1. Price factors > 2. Non-price factors
2	Price factors		1. Total cost of acquisition > 2. Life cycle cost > 3. Payment structure
	2.1	Total cost of acquisition (subfactors)	1. Unite price > 2. Bulk purchase discount > 3. Cost support system (spare parts)
	2.2	Life cycle cost (sub-factor)	1. Maintenance cost > 2. Operational cost > 3. Training cost > 4. The cost of system upgrade
	2.3	Payment structure (sub-factors)	1. Flexible payment structure > 2. Financing or loan
3	Non-price factors		1. Technical specifications > 2. Operational support and maintenance > 3. Technology transfer and local content
	3.1	Technical specifications	1. Performance specifications > 2. Endurance and range > 3. Weapon system > 4. Stealth features (diesel-electric submarine)
	3.2	Operational support and maintenance (subfactors)	1. Training level for maintenance > 2. Logistic and maintenance support
	3.3	Technology transfer and local content (subfactors)	1. Technology transfer > 2. Local manufacturing

The following section demonstrates case data for the source selection approaches of Japan, including the source selection evaluation process, SST composition, and proposal evaluation criteria.

3. Japan

Japan announced the Defense Buildup Program (DBP) following the National Defense Strategy in December 2022. This initiative set out the level of defense capabilities that Japan should possess, the total expected cost, and the quantity of major equipment to be procured. According to this DBP, the plan is to procure two Aegis

System-equipped vessels, 12 destroyers (DD), five submarines (SS), eight transport vessels (including auxiliary oiler explosives (AOE)), and 10 patrol vessels (PV) by March 2028 (JMOD, 2023).

We obtained two RFPs and three documents from these shipbuilding plans explaining the results of shipbuilding proposal competitions due to access limitations described in Chapter III. In Japan, there are cases where contracts are awarded for multiple ships in one ship class rather than for each ship, so it should be noted that the number of shipbuilding plans mentioned in the DBP does not match the number of RFPs. One of the RFPs and one of the results of the proposal-based competition we obtained were both for the same procurement project. Additionally, we only had access to solicitations that were still active and available on the website. Ultimately, we obtained data for two DD classes, one AOE class, and one PV class.

First, we will present the findings of Japan's source selection evaluation process. The JMSDF used proposal-based competition when they solicitated both DD and PV class vessels (ATLA, 2022, 2023; JMOD, 2023).

In the case of AOE procurement, instead of conducting proposal-based competition, open solicitation was used. This represents the second source selection evaluation approach used by the JSMDF (ATLA, 2024b). The government checks whether the potential offerors are qualified to participate in the source selection based on the technical documents submitted in response to the open solicitation. Then, only the potential applicants who are recognized as qualified are allowed to participate in the price bidding to select the contractor.

The significant difference between the AOE procurement and the procurement of the other three types of ships is whether to conduct a price bidding based on an open solicitation or a proposal-based competition. In other words, the relative importance of the price element in the source selection process differs.

Also, according to the case data obtained from the RFP, the content explains what qualifications, abilities, equipment, and so on the offeror must possess as a prerequisite for submitting a proposal and includes content that focuses on what the offeror should do and how to do it to submit a proposal (ATLA, 2023b, 2024a). Therefore, there is no

specific description of the source selection evaluation process on the Japanese government's side. We assume that this is because the Japanese government is conducting a rigorous evaluation per the process based on the published regulations described in Chapter II, and such descriptions that are not directly related to the offerors' proposals or actions are excluded from the RFP.

Next, we will discuss the findings in terms of the SST composition in Japan. First, the two RFPs and three documents explaining the results of shipbuilding proposal competitions that we obtained do not reveal any information related to the SST composition (ATLA, 2022, 2023, 2024; JMOD, 2023). This means that the SST composition, such as the name, number of evaluators, and evaluators' skills in each shipbuilding procurement case, is unknown. On the other hand, in one type of DD shipbuilding procurement, there was a statement that fairness and transparency were ensured by having a non-government third party audit the evaluation process (ATLA, 2017). It is unclear whether this non-government third-party confirmation existed in other cases, as no specific mention exists.

In addition, although the names of the SST are not published in the RFP or three documents explaining the results of shipbuilding proposal competitions, the regulations clearly define which positions are to be appointed as the head of the evaluation team or members of the DSCRC. The names of high-ranking positions, as defined by the regulation, are published as a list of key executives (ATLA, 2024). Therefore, the names of the head of the evaluation team, the DSCRC chair, and some DSCRC members are available to all, including offerors.

Finally, we will clarify the findings of the proposal evaluation criteria in Japan. We obtained no specific descriptions of the proposal evaluation criteria in the RFP for the DD (ATLA, 2023a). On the other hand, the RFP does state 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. However, as these guidelines have not been made public, we cannot confirm this.

In contrast, the RFP for the AOE clearly stated the proposal evaluation criteria. The specific proposal evaluation criteria are listed in Table 10.

Table 10. Proposal evaluation criteria in the AOE procurement. Adapted from RFP for the AOE Procurement (ATLA, 2024b).

Proposal Evaluation Criteria in the AOE Case (Open Solicitation)		
1	Non-Price Items	Shipbuilding facilities
2		Shipbuilding techniques (shipbuilding organization, shipbuilding production process, manpower planning)
3		Quality control system
4		Cost reduction measures
5		Training of shipbuilding personnel
6		Status of technological partnerships, etc.
7		Status of participation in competitive shipbuilding contracts for other ships
8		Information security capability
9		Shipbuilding past performance
10		Response to technological challenges related to shipbuilding
11	Price Items	Shipbuilding price

Note. Although 11. Shipbuilding price is not mentioned in this RFP, we have added it because the price bid will be conducted in the next stage of the source selection evaluation process.

The three documents we obtained that explained the results of shipbuilding proposal competitions provided detailed explanations of the proposal evaluation criteria in each case. The first is a document announcing the results of a proposal-based competition for a PV to be contracted after 2023 (ATLA, 2022). According to this, the contents of the mandatory items have not been published. Still, it has been announced that the additional items were comprehensively evaluated for the items shown in Table 11.

Table 11. Results of the proposal-based competition for additional items related to PV. Adapted from ATLA (2022).

Evaluation Item		High-Scoring Companies	Primary Assessment
Advanced naval vessel design and construction	Conceptual design	JMU	Superior proposals in terms of annual fuel consumption, etc.
	Degree of achievement in operational requirements	JMU	Superior proposals in terms of the method of damping device, countermeasures for equipment, etc.
	Status of response to	JMU	Superior proposals for labor-saving and labor-saving measures, such as for boarding and disembarking and emergency situations.

	labor and energy saving		
Integrated management capability of related companies for onboard equipment, etc.	Business management capabilities	JMU MHI	Both companies have made equal proposals.
	Cost management capabilities	JMU	Superior proposals in terms of life cycle costs, etc.
	Supply chain management capabilities	JMU MHI	Both companies have made equal proposals.
	Quality management capabilities	JMU MHI	Both companies have made equal proposals.
	Ability to respond to overseas exports	JMU MHI	Both companies have made equal proposals.
	Maturity of proposal content	JMU MHI	Both companies have made equal proposals.
Integrated management capability from design to sustainment and maintenance	Ability to maintain availability	JMU	Superior proposals during the availability period, etc.

Based on the evaluation results above, ATLA selected Japan Marine United Corporation as the main contractor, with the highest total score in the proposal-based competition.

The second is a document announcing the results of the proposal-based competition for the new naval vessel, for which shipbuilding contracts will be concluded in FY2018 and beyond (ATLA, 2017). According to this, while the contents of the mandatory items were not announced, the additional items were comprehensively evaluated for the items shown in Table 12.

Table 12. Results of the proposal-based competition for additional items related to a new naval vessel. Adapted from ATLA (2017).

Evaluation Item		High-Scoring Companies	Primary Assessment
Ship design and shipbuilding capabilities	Conceptual design	MHI	A proposal with excellent balance in terms of total ship design, with high-speed performance.
	Degree in the achievement of operational requirements	MHI	The most capable proposal that meets the operational requirements.

	Status of response to labor and energy saving	MHI	Proposals based on extensive research into labor-saving.
Integrated management capability of related companies	Business management capabilities	MHI	The responsibilities of the prime contractor are more clearly defined.
	Cost management capabilities	JMU	Relatively cheaper life cycle cost estimates.
	Supply chain management capabilities	MES MHI	Measures to reduce supply chain costs are becoming clearer.
	Quality management capabilities	JMU MES MHI	Quality control capabilities are equivalent for all companies.
	Maturity of proposal content	MHI	Effectively apply new technologies that have been proven in other fields.
Sustainment and maintenance management capabilities	Maintaining and improving availability rates / Reducing LCC	MHI	Extensive consideration and highly specific proposals.
	Operation with a small number of people	MES MHI	Highly specific proposals.

Based on the evaluation results, ATLA selected Mitsubishi Heavy Industries, Ltd., as the main contractor, which had received the highest score in the competition based on the proposal.

The third is a document announcing the results of the proposal-based competition for the new FFM-class destroyer, for which shipbuilding contracts will be concluded in FY2024 and beyond (JMOD, 2023). Accordingly, while the mandatory items contents were not announced, the additional items were announced to have been comprehensively evaluated in the following four major categories.

- Advanced naval vessel design and construction
- Integrated management capability of related companies for onboard equipment, etc.
- Integrated management capability from design to sustainment and maintenance
- Shipbuilding cost

As a result of the proposal-based competition, ATLA selected Mitsubishi Heavy Industries, Ltd., as the main contractor, as it had the highest total evaluation score. This announcement of the results of the proposal-based competition for the new FFM-class destroyer did not explain the details of the additional items compared to the results of the proposal-based competition for the PV and new Navy vessel mentioned above. However,

given that the major categories of 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—are the same as those used in the PV case and new naval vessel cases, we can assume that the same or similar detailed items were chosen for the new FFM-class proposal-based competition.

We have looked at several notable Japanese proposal evaluation criteria features so far. First, the relative importance of each proposal evaluation criteria is not disclosed to offerors in the RFP. In other words, in each case, the government does not disclose which factors are more important than others in the evaluation and selection process. Within the limitations of the regulations reviewed in Chapter II, the government can set different weights for each proposal evaluation criteria, so we assume there were differences in the weights for the evaluation items in these cases.

In addition, although some of the proposal evaluation criteria in the four cases are common evaluation items, such as quality management capabilities, there are also proposal evaluation criteria that differ from case to case. We believe that this contributes to ensuring flexibility in the regulations, which do not stipulate the details of the proposal evaluation criteria, and allow the proposal evaluation criteria to be changed appropriately according to the current technological capabilities, situation, characteristics of the ship to be built, etc.

Based on the discussions up to this point, the findings for each country regarding source selection evaluation process, SST composition, and proposal evaluation criteria are summarized in Table 13.

Table 13. Summary of findings

	Case No.	Source Selection Evaluation Process	Source Selection Team Composition	Proposal Evaluation Criteria
U.S. Navy	18	- LPTA - Tradeoff	IAW: FAR, DFARS SSEB, SSAC, SSA Govt. Personnel only	- Technical - Past Performance - Price
Egyptian Navy	1	- Point-based evaluation	IAW: Egyptian procurement regulations, Article 19 -Egyptian Armament Authority (SSA) -Four committees (SSEB) -Govt. personnel only	Key Performance Parameters - Performance specifications - Endurance and range - Weapon systems - Stealth features

JMSDF	3	- Proposal-based competition	IAW: Japanese regulation - Minister of Defense - Commissioner of the ATLA - DSCRC - Evaluation Team (Industry and Academia professional authorized)	Mandatory Items - N/A Additional Items - Conceptual design - Cost management capabilities - Quality management capabilities
	1	- Open solicitation		Non-Price Items - Shipbuilding facilities - Quality control system - Past performance Price Items - Shipbuilding price

Note: Japanese regulation; Administrative Procedures for Proposal-Based Competition in Central Procurement (2023) and Operating Guidelines for the Designated Sole-Source Contract Review Committee (2015).

The above subsections are the findings on Japan in this research. In the next section, we discuss the findings by conducting a comparative analysis for the United States, Egypt, and Japan discussed so far.

C. DISCUSSION OF FINDINGS

The following section uses both solicitation data and the regulations of the U.S., Egyptian, and Japanese source selection approaches to analyze differences in shipbuilding procurement. We focus on three variables: source selection evaluation process, SST composition, and proposal evaluation criteria.

1. Source Selection Evaluation Process

The United States, by regulation, maintains the largest variety of source selection methods, including tradeoff, LPTA, and HTRO. However, in the cases we analyzed, no U.S. solicitations utilized the HTRO approach. However, our findings only show Egypt utilizing the point-based evaluation system, which closely resembles the U.S. Tradeoff approach. This system assigns weighted values to both price and non-price factors, with the specific weights disclosed in the RFPs and made available to interested contractors. Our findings for Japan demonstrate that that they used two types of source selection evaluation approaches. Proposal-based competition, which is the closest equivalent to the U.S. tradeoff method, was used for PV and DD vessels. The second, known as the open solicitation method, which closely resembles LPTA, was used for the AOE class

procurement. Unlike Egypt and the United States, Japan does not disclose proposal evaluation criteria values in its RFPs.

2. Source Selection Team Composition

This research analyzed 18 cases from the United States, one from Egypt, and four from Japan. However, information about the composition of SSTs was unavailable in all cases, likely because none of these countries require public disclosure of such data, including the names and expertise of evaluators. As a result, our comparative analysis of SST composition in the United States, Egypt, and Japan is based on the regulatory frameworks outlined in Chapter II.

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 (Tenaglia, 2022). These teams are organized around specific evaluation criteria, and voting members must be government employees under FAR 7.503, as source selection is considered an inherently governmental function. Egypt follows similar guidelines, prohibiting all but government employees from voting membership in SSEBs. In Japan, evaluation teams are formed according to job descriptions and suitability, as dictated by regulations. Unlike in the United States and Egypt, evaluators in Japan, organized by the ships division, 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. At the ALTA's discretion, evaluators may be supplemented by private industry, academia, or any other sector where government employees are lacking sufficient credentialing.

The second difference involves the role of supporting organizations. In the United States, the SSAC plays a critical role, utilizing functional area experts to ensure consistency in SSEB ratings before passing recommendations to the SSA. In contrast, Egypt and Japan lack an equivalent organization to the SSAC. In Egypt, the SSEB directly reports its evaluation results to the SSA. In Japan, evaluation results are reviewed by the DSCRC before being submitted to ATLA and the Minister of Defense, who serve as SSA equivalents. Notably, the DSCRC in Japan performs additional administrative

checks beyond proposal evaluation, such as verifying compliance with procurement procedures, the adequacy of specifications, and the suitability of the selected contractor. These administrative functions distinguish the DSCRC from the SSA in the United States. Figures 8 and 9 illustrate the reporting structures in Egypt and Japan, further emphasizing these structural and functional differences.

3. Proposal Evaluation Criteria

For U.S. solicitations, we found that there was consistency in the proposal evaluation criteria. All solicitations referred to the use of technical evaluation criteria, past performance evaluation criteria, and price evaluation criteria. However, depending on whether it is tradeoff or LPTA will determine the relative importance of evaluation criteria. For tradeoff proposals, non-price criterion such as technical merit or approach and past performance consistently were more important than price criteria. Alternatively, for LPTA proposals, price was the most important evaluation criteria followed by technical specifications and past performance.

In Egypt, the technical specification committee identifies the threshold of the key performance parameters (KPPs) in the RFP that the contractor proposal will be evaluated. These parameters represent the minimum ability of the contractor and form the basis for the technical evaluation committee to accept or exclude the contractor's proposal. Price was the most important criteria in Egypt's solicitation followed by non-price factors of technical specifications, operational support, and technology transfer.

In Japan, proposal evaluation criteria are divided into two main categories: mandatory items and additional items. First, the mandatory items, which are not named in the RFP but are based on case data, are related to prospective contractors' ability to perform the contract to stated specifications. Mandatory items could include sufficient facilities, workforce ability, contractor's ability to finance projects, etc. 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 the mandatory items, and points are awarded according to the proposal evaluation criteria and scoring system that was determined prior to the solicitation. We did not have any

findings about whether Japan incorporates relative importance for either mandatory or additional items.

In addition to the differences in relative importance of evaluation criteria for each country, we found differences in the way evaluation criteria were rated. U.S. evaluation criteria are described in one of two ways. The first way, primarily utilized when tradeoff is the source selection method, is adjectival. That is, rather than assigning a numerical value to a score a particular evaluation criterion, an adjective identifier will be used as a rating standard. Table 14 demonstrates adjectival rating standards used in solicitation N00024-22-R2203.

Table 14. Adjectival rating standards. Adapted from DoD (2021).

Adjectival Rating Standards	
Adjectival Rating	**Description**
Outstanding	Proposal indicates an exceptional approach and understanding of the requirements and contains multiple strengths, and risk of unsuccessful performance is low.
Good	Proposal indicates a thorough approach and understanding of the requirements and contains at least one strength, and risk of unsuccessful performance is low to moderate.
Acceptable	Proposal meets requirements and indicates an adequate approach and understanding of the requirements, and risk of unsuccessful performance is no worse than moderate.
Marginal	Proposal has not demonstrated an adequate approach and understanding of the requirements and/or risk of unsuccessful performance is high.
Unacceptable	Proposal does not meet requirements of the solicitation, and thus, contains one or more deficiencies, and/or risk of unsuccessful performance is unacceptable. Proposal is unawardable. (DoD, 2021, p. 250)

The second way primarily used when LPTA is the source selection approach is "acceptable" or "unacceptable" as the rating criteria. There were multiple instances in U.S. cases where both rating standards were used in the same solicitation.

Egypt and Japan in contrast, assign numerical values to evaluation criteria rather than using an adjectival valuation when tradeoff is the favored source selection method (point-based evaluation in Egypt and proposal-based competition in Japan).

D. IMPLICATION OF FINDINGS

The previous section discussed the findings of the solicitation data. This section shows the implications of these findings on the source selection approaches for each country.

(1) The United States and Egyptian SST composition is excessively restrictive for participation by non-government experts.

Under the FAR, procurement integrity includes activities such as developing solicitations, evaluating bids or proposals, and selecting sources (FAR 3.104-1). While FAR 7.503 permits limited contractor support for acquisition planning and technical evaluation of proposals, it strictly prohibits contractors from serving as voting members on any source selection boards. Similarly, Egyptian law restricts voting membership in evaluation boards exclusively to government employees. By relegating voting membership on SSTs to government employees, the United States and Egypt reduce the probability of fraud or mismanagement. These practices aim to emphasize transparency and objectivity, or at least the appearance of such, but they do so at the expense of leveraging the expertise of highly educated and experienced personnel outside of government.

This limitation is particularly problematic for complex procurement decisions, such as shipbuilding-related ones, where specialized knowledge is crucial. By contrast, Japan recognizes the value of outside expertise and allows non-government specialists to participate more robustly in the source selection process for complex proposals. With proper internal controls in place, expanding the participation of non-government experts could significantly enhance the effectiveness of the source selection process in both the United States and Egypt.

(2) The U.S. adjectival rating system for evaluation criteria is overly subjective and limits the ability of evaluators to distinguish between proposals effectively.

As Yang (2023) notes, the current system used in many shipbuilding RFPs restricts evaluators to five options: outstanding, good, acceptable, marginal, and unacceptable. This framework creates overly broad distinctions between ratings, making

it difficult to differentiate between proposals that fall at the higher or lower ends of the same category. For example, there is little clarity in distinguishing between a "good" rating that is nearly outstanding and a "good" rating that is barely acceptable. This issue is compounded when multiple evaluation criteria are combined with subjective adjectival ratings, increasing the potential for evaluation inconsistency. In contrast, Egypt and Japan use numerical rating systems for evaluation criteria, which are easier to interpret and apply consistently across all proposals. These systems maintain transparency by allowing evaluators to objectively rank proposals, with the highest or lowest numerical value indicating the best or worst alternative. Adopting a more precise and objective evaluation framework, such as numerical ratings, could enhance the fairness and consistency of the U.S. procurement process.

(3) Egypt and Japan combine elements of FAR 9.2 (qualification requirements) as part of their source selection evaluation process.

KPPs in Egypt and Mandatory Items in Japan function as minimum qualification requirements to ensure prospective bidders possess the necessary financial and material resources, as well as a competent workforce, to complete contract specifications to satisfactory standards. In Japan, Mandatory Items are used to disqualify contractors early in the process, before additional, more technical evaluation criteria are considered. Interestingly, while shipbuilding solicitations in Japan often display results for additional technical evaluation criteria, mandatory qualification items are not always explicitly listed.

In contrast, the U.S. FAR 9.204 outlines a deliberate and publicly released process for establishing qualification requirements prior to award, which serves as an effective tool for assessing the suitability of prospective contractors before formal solicitation procedures. This approach not only ensures that bidders meet minimum standards but also helps determine the level of effective competition that can be expected before solicitation is issued. While U.S. shipbuilding data does not reference pre-solicitation qualification requirements, we conclude that formalizing qualification validation procedures separate from the solicitation itself could benefit Egypt and Japan's shipbuilding efforts. Given the immense resources required for successful contract

completion, such procedures could enhance the efficiency and effectiveness of their procurement processes.

(4) Egypt does not maintain a public government website for past and current contracting actions.

In contrast, the United States and Japan have online repositories that provide access to both current and historic solicitations, as well as other contracting actions (modifications, cancellations, etc.). While the scope of government website functionality differs significantly between the United States and Japan, both systems at minimum include active and past RFPs. Egypt, on the other hand, only makes procurement policies, laws, and documents containing proposal evaluation criteria publicly available. However, Egypt does not disclose how these criteria are weighed, evaluated, or the ratings assigned to each contractor. Bidders and contractors are informed of the final arrangement individually, but Egypt does not publish the assigned values for technical and financial evaluations.

In the following section we present our recommendations based on the findings in our comparative analysis.

E. RECOMMENDATIONS BASED ON FINDINGS

According to the findings, discussion of findings, and the implications of findings subsections that we discussed above, the next subsection presents several recommendations for the source selection approaches for each country to improve the transparency and mitigate the risk of cost, performance, and schedule in the defense acquisition systems for each country.

(1) Allow for increased participation by industry experts and scholars in the U.S. and Egyptian source selection evaluation process.

Public procurement agencies are responsible for ensuring that contracts deliver maximum value to their customers while maintaining accountability, transparency, and process integrity (Rendon & Rendon, 2015a, p. 724). However, current regulations, such as FAR 7.5, prohibit contractors from participating on source selection boards to safeguard transparency and integrity in the procurement process. While this ensures

impartiality, it also excludes the valuable expertise of industry professionals and scholars with significant experience in specialized fields like shipbuilding. To address this, we propose allowing increased participation by these external experts while implementing robust internal controls to mitigate risks. For instance, tools such as the OGE Form 450 (Confidential Financial Disclosure Report) can help identify and manage any real or perceived conflicts of interest between official duties and private interests, ensuring accountability without compromising the benefits of specialized expertise.

(2) Supplement U.S. adjectival rating system for shipbuilding with numerical weights such as those in Egypt and Japan.

FAR 15.305 allows for the use of numerical weights for evaluation criteria along with color or adjectival descriptions. The adjectival evaluation system was used for all U.S. shipbuilding solicitations utilizing the tradeoff method for source selection. While this allows for flexibility in the selection process, it lacks transparency (real or perceived). Assigning a numerical range to each adjectival rating under the U.S system will allow for more objective, definitized results for each evaluation criterion. Table 15 demonstrates proposed changes to the current U.S. practices. The column of the left is adapted from proposal N000-22-R2203 (2021). The column on the right is adapted from Tenaglia's Source Selection Procedures (2022), assigning numerical values to combined technical/risk ratings.

Table 15. Adjectival rating standards with numerical description. Adapted from DoD (2021).

Adjectival Rating Standards			
Adjectival Rating	**Numerical Rating**	**Adjectival Description**	**Numerical Description**
Outstanding	8–10	"Proposal indicates an exceptional approach and understanding of the requirements and contains multiple strengths, and risk of unsuccessful performance is low" (DoD, 2021, p. 250).	(10) A proposal with more than two strengths has a minimal risk of unsuccessful performance. (9) A proposal with two strengths also has a low risk of unsuccessful performance. (8) A proposal with one strength still maintains a low risk of unsuccessful performance.
Good	6–7	"Proposal indicates a thorough approach and understanding of the requirements and contains at least one strength, and risk of unsuccessful performance is low to moderate" (DoD, 2021, p. 250).	(7) A proposal with one or more strengths carries a moderate risk of unsuccessful performance. (6) A proposal that includes at least one strength also presents a moderate risk of unsuccessful performance.
Acceptable	4–5	"Proposal meets requirements and indicates an adequate approach and understanding of the requirements, and risk of unsuccessful performance is no worse than moderate" (DoD, 2021, p. 250).	(5) A proposal that meets the requirements has a risk of unsuccessful performance that is lower than moderate. (4) A proposal that meets the requirements carries a moderate risk of unsuccessful performance.
Marginal	2–3	"Proposal has not demonstrated an adequate approach and understanding of the requirements and/or risk of unsuccessful performance is high" (DoD, 2021, p. 250).	(3) A proposal that fails to demonstrate a sufficient approach or understanding of the requirements carries a high risk of unsuccessful performance. (2) A proposal that does not adequately show both an approach and understanding of the requirements presents a high risk of unsuccessful performance (Tenaglia, 2022, p. 23-25).

By supplementing the adjectival rating with a numerical value and corresponding description, increased granularity between competing bids can be achieved. After

combining multiple evaluation criteria using the updating standards, a consensus will no longer be a discussion, but rather a computation by evaluators, thus increasing fairness and transparency.

(3) Egypt and Japan should establish a formalized process to pre-qualify manufacturers and suppliers prior to award, particularly in highly technical and resource-intensive industries like shipbuilding.

Implementing processes such as a qualified bidders list (QBL) or qualified manufacturers list (QML) would offer several benefits for both awarding agencies and prospective contractors. For awarding agencies, these lists would streamline the source selection process by eliminating the need to screen all prospective manufacturers prior to each award. Instead, qualification standards could be verified in a separate, pre-solicitation process, allowing specialized personnel to focus on technical evaluation criteria. Once QMLs and QBLs are established for prominent shipbuilders, agencies would only need to verify standards rather than conduct full validations, significantly reducing costs and time for both the agency and offerors.

For potential offerors, this qualification process would provide clear feedback from awarding agencies, offering specific instructions to remedy deficiencies if qualifications are not met. This approach would give contractors the opportunity to address issues and be considered for current or future solicitations. Additionally, those not actively seeking qualifications could still access advertised criteria to prepare for future opportunities, potentially increasing competition in the industry. By codifying this process, both nations can enhance efficiency, reduce costs, and encourage greater participation in procurement processes.

(4) Egypt should develop a government website to publicize government contract actions and enhance transparency in the source selection process.

Public disclosure of contract actions would significantly improve public confidence and trust in the procurement system. By adopting data controls like those used in systems like SAM.gov in the United States or its equivalent in Japan, Egypt could protect sensitive information while still allowing the public release of evaluation criteria, including their weight and priority. This level of transparency would provide prospective

offerors with a clearer understanding of the selection process, encouraging greater industry participation. In turn, this could lead to more innovative proposals, ultimately delivering greater value to taxpayers.

The following section summarizes the data presented in this chapter.

F. SUMMARY

This chapter presented case data on shipbuilding solicitations for the U.S. Navy, Egyptian Navy, and JMSDF. Where case data on shipbuilding solicitations was unavailable, we referenced each country's regulations to determine findings. Based on these results, we compared the source selection evaluation process, SST composition, and proposal evaluation criteria in the U.S. Navy, Egyptian Navy, and JSMDF. Implications of these results followed the analysis of differences. Finally, we offered recommendations based on our findings.

The next chapter presents a summary of our research, conclusions, and areas for future research.

V. SUMMARY, CONCLUSION, AND AREAS FOR FUTURE RESEARCH

A. INTRODUCTION

In this chapter, we present a comprehensive summary of this research, and in conclusion, we answer the research questions. Finally, we suggest areas for future research.

B. SUMMARY

The United States, Egypt, and Japan are driven by their unique motivations and geopolitical climates. However, they share the necessity of procuring naval vessels to achieve national security objectives. Differences in policy and procurement practices complicate potential collaboration. Therefore, we conducted a comparative analysis of the source selection approaches used in the United States, Egypt, and Japan shipbuilding while leveraging the NCMA CMS as a common benchmark. Thus, this research aims to clarify the differences in source selection approaches based on comparative analysis of the source selection evaluation processes, SST composition, and proposal evaluation criteria of the U.S. Navy, the Egyptian Navy, and the JMSDF. Based on our analysis, we provided insights on each country's current shipbuilding procurement practices and offered suggestions to streamline further collaborative or individual efforts.

C. CONCLUSION

Based on the findings and analysis of shipbuilding procurement by the U.S. Navy, the Egyptian Navy, and the JMSDF, we will conclude this research by answering the research questions presented in Chapter I.

(1) How does the source selection evaluation process differ among the U.S. Navy, Egyptian Navy, and JMSDF?

The U.S. Navy has a wide variety of methods stipulated in its regulations for the source selection evaluation process, including tradeoff, LPTA, and HTRO. Still, none of the cases we analyzed involved the HTRO in U.S. solicitations. On the other hand, the Egyptian Navy uses a point-based evaluation system as its source selection evaluation

process, which is very similar to the U.S. tradeoff. In this system, values are assigned to both price and non-price factors, and the specific weights are disclosed in the RFP and made available to interested potential offerors. The case data for JMSDF demonstrated two source selection methods: proposal-based competition and open solicitation. However, JMSDF does not disclose specific values for the proposal evaluation criteria in its RFP, unlike the U.S. Navy and Egyptian Navy.

(2) How does the SST composition differ among the U.S. Navy, Egyptian Navy, and JMSDF?

The first significant difference is in the regulations governing source selection evaluation team allowable membership. In the United States, the SSEB includes advisors, cost or pricing experts, legal counsel, small business experts, and subject matter experts. These teams must be government employees following FAR 7.503. Egypt also follows similar guidelines, limiting the voting members of the SSEB to government employees only. By contrast, evaluation teams in Japan are formed according to job description or suitability in accordance with the regulations. At the discretion of the evaluation team chairperson, the team may be supplemented by evaluators from the private sector, academia, or other sectors if government employees are not sufficiently qualified.

The second difference relates to the role of supporting organizations. In the United States, the SSAC plays a critical role, utilizing experts in functional areas to ensure consistency in SSEB ratings before submitting recommendations to the SSA. On the other hand, Egypt and Japan do not have an organization that is equivalent to the SSAC in the United States. In Egypt, the SSEB reports evaluation results directly to SSA. By contrast, in Japan, evaluation results are submitted to the Director General of ATLA, the equivalent of SSA, and the Minister of Defense after evaluation by the DSCRC. In particular, the DSCRC in Japan evaluates the proposals themselves and performs additional administrative checks, such as compliance with procurement procedures, adequacy of specifications, and eligibility of selected contractors. Because of this administrative function, the DSCRC plays a different role from the SSA in the United States.

(3) How do the proposal evaluation criteria differ among the U.S. Navy, Egyptian Navy, and JMSDF?

Within the scope of the data we collected, proposal evaluation criteria in the U.S. Navy fall into two categories. First, for the tradeoff process, non-price evaluation criteria such as technical merit, approach, and past performance were consistently more important than price evaluation criteria. An adjectival rating standard was used to assign weight to each criterion. On the other hand, in LPTA cases, price was the most important proposal evaluation criteria, followed by technical specifications and past performance. In cases where LPTA was used as a source selection process, "acceptable" or "unacceptable" was instead used to determine if minimum specifications were met.

In the Egyptian Navy case, the technical specifications committee identifies the threshold of the KPPs in the RFP, and the contractor's proposal is evaluated. These parameters represent the minimum ability of the contractor and are the criteria by which the technical evaluation committee decides whether to accept or exclude the contractor's proposal. Price was considered the most important evaluation criteria followed by technical and supportability non-price factors.

In the cases of proposal-based competition in the JMSDF, proposal evaluation criteria are divided into two main categories: mandatory items and additional items. The mandatory items relate to the capabilities essential for performing the contract as described in the specification. The additional items comprise proposal evaluation criteria assessing more advanced expertise, design, technology, creativity, etc. The additional items are evaluated only for proposals that meet all the mandatory items. Points are awarded according to the proposal evaluation criteria, and the scoring system is decided before the RFPs are issued.

While the United States uses adjectival rating standards in the case of tradeoff, Egypt and Japan's tradeoff equivalent assigns numerical values to each evaluation criteria.

(4) Based on the comparison and analysis, what implications for process improvement could be presented to the U.S. Navy, Egyptian Navy, and JMSDF?

Based on a comparative analysis focusing on the source selection approaches for shipbuilding in the U.S. Navy, Egyptian Navy, and JMSDF, particularly the source selection evaluation process, SST composition, and proposal evaluation criteria, we made four recommendations as the result of our research.

The first recommendation is to increase the participation of industry experts and scholars in the source selection evaluation process in the United States and Egypt. This will enable the effective use of the valuable expertise of industry experts and academics with extensive experience in specialized fields such as shipbuilding. In addition, using tools such as the OGE Form 450 (Confidential Financial Disclosure Report) will help identify and manage actual or potential conflicts of interest between public service and private interests, ensuring accountability without compromising the benefits of expertise.

The second recommendation is to supplement the U.S. adjectival rating system for shipbuilding with a numerical weighting system used in Egypt and Japan. This will enable more objective and precise results for each proposal evaluation criteria and more detailed comparisons between competing bids. In addition, when multiple proposal evaluation criteria are combined using updating standards, consensus is no longer a matter of debate but is simply a matter of calculation by the evaluator. Therefore, fairness and transparency will be improved.

The third recommendation is that Egypt and Japan establish a formal process for pre-qualifying manufacturers and suppliers before awarding contracts, especially in high-technology, resource-intensive industries such as shipbuilding. Specifically, formalizing a process to pre-approve bidders and manufacturers (QBL and QML) should be implemented. This would eliminate the need to evaluate all manufacturers before each procurement case and significantly reduce costs and time for agencies and potential contractors. This qualification process is also a good opportunity for potential contractors to obtain feedback on improving any deficiencies in their qualifications. Therefore, by formalizing this process, both countries can increase efficiency, reduce costs, and encourage increased participation in the procurement process.

The final recommendation is that Egypt develop a government website to publish information on government contracts and increase the transparency of the source selection process. This will significantly improve public confidence and trust in the procurement system. Moreover, ensuring transparency will enable prospective bidders to better understand the selection process and encourage greater industry participation. As a result, this will lead to more innovative proposals and ultimately provide greater value for taxpayers.

In the following section, we will provide recommendations for further research that falls outside the scope of our analysis.

D. AREAS FOR FUTURE RESEARCH

Our research concentrated on the source selection approach for the shipbuilding of the United States, Egypt, and Japan in the award phase of the contract life cycle and its related actions in the solicitation planning stage during the pre-award phase. Furthermore, our research focused only on three areas of the source selection approach: the source selection process, the source selection team composition, and the proposal evaluation criteria. Therefore, our suggested areas for future research are:

The first area is to widen the scope to include other critical elements of the procurement process, such as pre-award risk assessment, which could provide a deep understanding of how to identify and mitigate the risk early that affects the source selection approach, contract negotiation strategy, post-award contract management, contract types, and small business policies.

The second area focuses on the comparative analysis of source selection approaches for countries other than the United States, Egypt, and Japan, which introduce new source selection structures and regulatory frameworks. Most, if not all, countries with territory bordering water procure ships in some capacity for national security.

The third area is to focus on the comparative analysis of the source selection approach for the same three countries regarding the source selection evaluation process, source selection team composition, and proposal evaluation criteria, but for industries outside of shipbuilding such as aircraft and ground combat vehicles. Further analysis in

this area could uncover inconsistencies in the procurement process between different industry segments.

APPENDIX. OVERVIEW OF RESOURCES IN THE CMS

Table 16. Overview of processes in the CMS. Adapted from NCMA (2019).

Overview of Processes in the CMS	
Competency	Job Tasks
2.0 Pre-Award	—
2.1 Develop Solicitation	—
2.1.1 Plan Solicitation	• 1 Shape Internal Customer Requirements • 1.1 Perform Needs Assessment • 1.2 Perform Requirements Analysis • 1.3 Identify Measurable Outcomes and Incentives • 1.4 Verify Availability of Funds
	• 2 Conduct Market Research • 2.1 Identify Potential Suppliers • 2.2 Evaluate Requirement Achievability • 2.3 Conduct Pre-Offer Conference • 2.4 Consider Solicitation Changes
	• 3 Perform Risk Analysis • 3.1 Make or Buy Determination • 3.2 Supply or Services Determination • 3.3 Develop Delivery Schedule • 4,4 Determine Owner-Furnished Property/ • Equipment/Information Management
	• 4 Formulate a Contracting Strategy • 4.1 Select Proper Contract Type • 4.2 Select Proper Contract Method • 4.3 Determine Appropriate Business and Regulatory Requirements • 4.4 Formulate Offer Evaluation Plan
	• 5 Finalize the Solicitation Plan
2.1.2 Request Offers	• 1 Execute Solicitation Plan

Overview of Processes in the CMS	
Competency	Job Tasks
	• 2 Prepare Solicitations • 2.1 Respond to Questions from Potential Offerors • 2.2 Incorporate Proposed Contract Terms • 2.3 Determine the Need for Pre-Offer Review
	• 3 Issue Solicitations • 3.1 Determine Need to Publicize Solicitations
	• 4 Respond to Seller Communications
	• 5 Amend Solicitations
2.2 Develop Offer	• —
2.2.1 Plan Sales	• 1 Conduct Pre-Sales Activities • 1.1 Assess Customer Relationships • 1.2 Develop Marketing Strategy • 1.3 Determine Supply Chain Support
	• 2 Evaluate Solicitation • 2.1 Request Clarification • 2.2 Propose Solicitation Changes
	• 3 Conduct Bid/No-Bid Analysis
	• 4 Finalize the Sales Plan
2.2.2 Prepare Offer	• 1 Execute Sales Plan
	• 2 Develop an Execution Plan • 2.1 Understand Unique and Special Requirements • 2.2 Assess Capability to Satisfy All Solicitation Requirements
	• 3 Develop Risk Mitigation Plans • 3.1 Develop Pricing Strategy • 3.2 Develop Terms to Manage Risk • 3.3 Develop Technical Approach

Overview of Processes in the CMS	
Competency	Job Tasks
	• 3.4 Develop Offer Evaluation Strategy
	• 4 Assess Teaming Options and Partners • 4.1 Negotiate Nondisclosure Agreements • 4.2 Negotiate Agreements • 4.3 Make Teaming Decisions
	• 5 Participate in Customer Communications
	• 6 Finalize Offer • 6.1 Submit Offer and Verify Receipt
3.0 Award	• —
3.1 Form Contract	• —
3.1.1 Analyze Price or Cost	• 1 Comprehend Offer
	• 2 Evaluate Seller Terms and Their Impact on Risk
	• 3 Determine Reasonable Pricing • 3.1 Perform Price Analysis • 3.2 Perform Cost Analysis
	• 4 Document Analysis Results
3.1.2 Plan Negotiations	• 1 Clarification Requests • 1.1 Prepare • 1.2 Respond
	• 2 Document Negotiation Objectives
	• 3 Conduct Discussions

Overview of Processes in the CMS	
Competency	Job Tasks
3.1.3 Select Source	• 1 Review Compliance of Offer(s)
	• 2 Source Selection • 2.1 Evaluate Offer(s) in Accordance with Evaluation Criteria • 2.2 Withdraw Offer
	• 3 Conduct Negotiations
	• 4 Finalize Negotiations
	• 5 Final Offer Revision • 5.1 Request • 5.2 Prepare
	• 6 Prepare Contract Document • 6.1 Document Basis for Award • 6.2 Review/Approve Contract
	• 7 Finalize Contract Award • 7.1 Award Contract • 7.2 Notify Unsuccessful Offeror(s) • 7.3 Debrief Offeror(s)
	• 8 Document Outcome of Offer
3.1.4 Manage Disagreements	• 1 Submit Protests and Appeals
	• 2 Respond to Protests and Appeals
4.0 Post-Award	• —
4.1 Preform Contract	• —
4.1.1 Administer Contract	• 1 Execute Contract
	• 2 Conduct Post-Award Conference Meeting

Overview of Processes in the CMS	
Competency	Job Tasks
	• 3 Maintain Contract Documentation/Files • 3.1 Track Project Funding and Contract Value • 3.2 Manage Contract Payment Process • 3.3 Manage Key Personnel Changes • 3.4 Administer Owner-Furnished Property/ Equipment/Information
	• 4 Provide Cost Information
	• 5 Establish/Maintain Communications • 5.1 Internal Stakeholders • 5.2 External Stakeholders
	• 6 Evaluate Interim Contractor Performance • 6.1 Assess and Document Interim Contractor Performance • 6.2 Reclama or Rebut Interim Performance Assessment
	• 7 Manage Deliverables
4.1.2 Ensure Quality	• 1 Plan for Contract Performance Delivery • 1.1 Allocate Resources • 1.2 Execute Schedule • 1.3 Manage Costs • 1.4 Manage Risk • 1.5 Control Quality
	• 2 Plan for Contract Performance Monitoring • 2.1 Conduct Performance Reviews
	• 3 Inspect and Accept Contract Performance
4.1.3 Manage Subcontracts	• 1 Determine Supply Chain Requirements
	• 2 Issue Subcontracts • 2.1 Subcontract Planning • 2.2 Subcontract Formation

Overview of Processes in the CMS	
Competency	Job Tasks
	• 2.3 Subcontract Administration
4.1.4 Manage Changes	• 1 Manage Contract Changes • 1.1 Modification Planning • 1.2 Modification Formation • 1.3 Modification Administration
	• 2 Conduct Contract Interpretation • 2.1 Submit Contract Disputes • 2.2 Resolve Contract Disputes
	• 3 Determine Contract Termination • 3.1 Execute Contract Termination
4.2 Close Contract	• —
4.2.1 Close Out Contract	• 1 Validate Contract Performance
	• 2 Verify Physical Contract Completion
	• 3 Prepare Contract Completion Documents
	• 4 Coordinate Final Disposition of Owner-Provided Property/Equipment
	• 5 Settle Subcontracts
	• 6 Reconcile Contract • 6.1 Conduct Audits • 6.2 Respond to Audits
	• 7 Make Final Payment

Overview of Processes in the CMS	
Competency	Job Tasks
	• 8 Evaluate Final Contractor Performance • 8.1 Assess and Document Final Contractor Performance • 8.2 Reclaim or Rebut Final Contractor Performance
	• 9 Finalize Contract (NCMA, 2019, pp. 10–18)

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