



ACQUISITION RESEARCH PROGRAM SPONSORED REPORT SERIES

Assessment of the Indo-Pacific Command Area of Responsibility Commercial Support Environment for Warfighting Capabilities

December 2025

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.

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ABSTRACT

The Indo-Pacific's contested logistics environment exposes a critical gap in the Department of Defense's ability to assess whether commercial support networks can sustain distributed Marine Corps operations, particularly in the Philippines—the most operationally relevant and politically fragile node in the theater. This study develops a framework to evaluate the strength of the commercial support environment by aligning publicly available federal contracting data with doctrinal warfighting functions. Using Federal Procurement Data System–Next Generation, USASpending, System for Award Management records, micro-purchase logs, and Marine Corps requirement data, the analysis maps vendor presence, functional capacity, and geographic distribution across sustainment, movement and maneuver, and command and control. The results show that while the Philippines has a mature sustainment market and moderate transportation capacity, both are geographically concentrated and vulnerable to disruption, and commercial command and control (C2) capability is almost nonexistent. These findings indicate that commercial support can enable steady-state operations near major hubs but cannot independently sustain distributed stand-in forces under gray-zone pressure. The study recommends expanding vendor engagement, strengthening bilateral logistics mechanisms, developing alternative logistics pathways, and preserving organic C2 capabilities to mitigate functional and geographic vulnerabilities.



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LIST OF ACRONYMS AND ABBREVIATIONS

12th MLR	12th Marine Littoral Regiment
3d MLR	3rd Marine Littoral Regiment
AOR	area of responsibility
BOS-I	Base Operating Support-Integrator
BRI	Belt and Road Initiative
C2	command and control
CAP	Civil Augmentation Program
DFARS	Defense Federal Acquisition Regulation Supplement
DMO	Distributed Maritime Operations
DoD	Department of Defense
EABO	expeditionary advanced base operations
EDCA	Enhanced Defense Cooperation Agreement
FAR	Federal Acquisition Regulation
FOB	forward operating base
FPDS-NG	Federal Procurement Data System–Next Generation
GAO	Government Accountability Office
HQMC	Headquarters, Marine Corps
JCCL	joint concept for contested logistics
JP	Joint Publication
LOGCAP	Logistics Civil Augmentation Program
MLR	Marine Littoral Regiment
MLSA	mutual logistics support agreement
MPF	maritime prepositioning force
MRF-SEA	Marine Rotational Force, Southeast Asia
NDS	National Defense Strategy
NMESIS	Navy-Marine Expeditionary Ship Interdiction System
PSC	product service code
SAM	System for Award Management
SIF	stand-in forces
SOFA	status of forces agreement



TPO	Thesis Processing Office
USINDOPACOM	U.S. Indo-Pacific Command
USMC	U.S. Marine Corps



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EXECUTIVE SUMMARY

U.S. Indo-Pacific Command (USINDOPACOM) operates in the most logistically demanding theater on earth, where the combination of distance, contested access, and adversary pressure places extraordinary strain on sustainment networks. The Marine Corps, now postured across the Philippines under the Enhanced Defense Cooperation Agreement (EDCA), is expected to persist as a stand-in force inside a potential adversary's weapons engagement zone. Doing so requires more than forward presence; it requires resilient logistics supported by commercial partners capable of operating under gray-zone coercion, political friction, and persistent surveillance. Whether Marine forces can sustain distributed operations in the Philippines depends in large part on the accessibility, diversity, and reliability of the commercial support environment. Proper planning demands a standardized way to assess that environment or translate contracting data into operational planning factors.

This capstone evaluates the commercial support environment across INDOPACOM with a focused case study on the Philippines. The research asks: In a crisis requiring distributed Marine Corps operations in the Philippines, how can publicly available federal acquisition data be translated into operational planning factors to identify and mitigate sustainment gaps? Supporting questions examine required planning factors, the role of defense agreements such as EDCA and the Acquisition and Cross-Servicing Agreement (ACSA), the influence of geopolitics and infrastructure constraints, and the policy gaps that impede assessment of commercial support strength.

The study uses a mixed-methods approach grounded in two realities: first, that the tyranny of distance forces USINDOPACOM to rely heavily on commercial vendors for construction, distribution, engineering support, and life-support functions; and second, that those vendors operate inside a region shaped by foreign investment, fragile infrastructure, and legal constraints. Quantitative data from the Federal Procurement Data System–Next Generation (FPDS-NG), USAspending.gov, and SAM.gov were filtered by geography, PSC code, and warfighting function. Contracts were manually coded into functions such as sustainment, movement and maneuver, and command and control. These data were



paired with qualitative analysis of doctrine, theater guidance, and regional logistics studies to assess where commercial support is robust, fragile, or misaligned with distributed force requirements.

Findings indicate that commercial support activity in the Indo-Pacific is significant but unevenly distributed. Japan and Australia demonstrate high vendor diversity, strong infrastructure, and high access assurance. By contrast, the Philippines shows modest obligated funding, lower vendor diversity, and heavy concentration of support in a small number of firms and geographic nodes. This creates structural vulnerabilities for distributed Marine Corps operations, particularly when adversary pressure is likely to target ports, logistics corridors, and commercial subcontractors. Furthermore, contracting patterns show limited vendor presence in remote or austere areas where Expeditionary Advanced Base Operations (EABO) sites may be required. Although EDCA expands U.S. access to existing Philippine bases, it does not ensure commercial support capacity in surrounding regions, especially in areas with limited transportation networks or foreign-controlled infrastructure investments.

The analysis also finds that DoD's dependence on commercial partners in forward environments is outpacing the tools available to assess or manage that dependence. FPDS-NG and USAspending.gov provide visibility into spending but not vendor readiness, subcontractor networks, infrastructure dependencies, or sensitivity to political coercion. Principal-agent dynamics further complicate oversight, as contracting officers often lack real-time situational awareness or the ability to verify performance in remote locations. These findings align with concerns raised in Government Accountability Office reports, Marine Corps logistics doctrine, and recent analysis of contested logistics, all of which note that theater access cannot be assumed in crisis.

Taken together, the results suggest several implications for the Marine Corps. First, distributed operations in the Philippines will require deliberate identification of commercial vendors that can support sustainment functions under gray-zone pressure. Second, planners must avoid overreliance on single points of failure—logistics corridors, ports, or specific firms—where adversary pressure could disproportionately disrupt operations. Third, the Marine Corps must incorporate commercial support assessments into



EABO and Stand-In Forces planning cycles, including pre-crisis contracting, vendor engagement, and local market analysis. Finally, operational planning factors derived from procurement data—such as vendor density, geographic dispersion, and warfighting function alignment—can enable a more realistic appraisal of sustainment capacity.

This capstone concludes by recommending that USINDOPACOM, the Marine Corps, and the joint force integrate commercial support indicators into theater posture planning, wargaming, and pre-crisis contracting strategies. Specifically, the Marine Corps should establish a repeatable process for mapping vendor presence and capacity around EDCA locations; incorporate commercial support stress tests into service-level exercises; and develop contracting playbooks tailored to the Philippine legal and infrastructure environment. Additionally, joint planners should build a shared theater-wide commercial support picture that links procurement activity with operational requirements, enabling commanders to quantify risk and identify gaps before a crisis emerges.

Ultimately, sustaining distributed Marine Corps forces in the Philippines depends on a logistics network that blends military capability with commercial capacity. Understanding the strengths and vulnerabilities of that commercial ecosystem is essential to ensuring that stand-in forces can persist in the contested Indo-Pacific—a requirement central to deterrence, competition, and potential conflict.



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I. INTRODUCTION

The Indo-Pacific is the Department of Defense's (DoD) priority theater for a reason. It is where the stakes are highest, the terrain most challenging, and where the adversaries are most capable (U.S. Indo-Pacific Command [USINDOPACOM], 2017; Department of Defense [DoD], 2022). U.S. Indo-Pacific Command (USINDOPACOM) is charged with leading joint operations in this vast region, over half the globe's surface and home to nearly four billion people (King, 2025; Leonard, 2024). As the strategic competition with the People's Republic of China intensifies, U.S. Indo-Pacific Command (USINDOPACOM) must ensure not only that its forces are postured correctly, but that they can be sustained under pressure (Lewis, 2021; U.S. Department of Commerce, 2024). That means more than having fuel, bullets, and chow on hand, it means having the ability to leverage the commercial support environment effectively and consistently across all warfighting functions. And right now, we do not know if we can. Amidst the contested logistics environment, particularly in the Philippines, the commercial support network is consistently stress-tested. While the current support capabilities are robust and resilient, the ability to scale and sustain distributed forces across the Philippines remains in question (Geisen, 2021; Untalan et al., 2023).

The DoD has steadily increased its reliance on commercial support to deliver logistics, maintenance, engineering support, and even certain forms of base defense. This is especially true in the Indo-Pacific, where tyranny of distance makes organic sustainment difficult and where U.S. forces are often scattered across small islands or reliant on host-nation agreements, much like during the island-hopping campaign of World War II, when extended supply lines and dispersed operations across the Pacific tested the limits of logistical endurance (Geisen, 2021). However, while the volume of commercial support contracting in the region is significant, our ability to assess that capacity, by function, by country, or by level of operational risk, is limited at best. Several recent DoD and joint publications have flagged the need to operationalize commercial support dependency data into planning tools. However, there is still no consensus on how to define "strength" in the commercial support environment, or how to measure vendor diversity, infrastructure



redundancy, and responsiveness across warfighting functions—a gap also acknowledged in the Business Transformation Advisory Subcommittee’s 2024 report *Creating a Digital Ecosystem*, which highlight the Department’s lack of standardized vendor-level metrics and data connectivity across its contractor base.

This gap presents a challenge not just to acquisition professionals, but to commanders trying to understand the logistics tail of their own formations. Without a way to assess how robust or fragile the commercial support ecosystem is, decision-makers are left relying on assumptions. That may be fine in peacetime, but it’s a liability in a contested environment. Moreover, in a region where China is actively working to shape the economic and infrastructural landscape to its advantage, the U.S. must ensure that its commercial dependencies don’t become operational vulnerabilities.

The complexity of the Indo-Pacific region cannot be overstated. It is not only a geographic behemoth, but also a political and economic mosaic shaped by dozens of bilateral defense agreements, competing economic interests, and asymmetric threats. China’s expansive Belt and Road Initiative (BRI), for example, has made inroads into critical infrastructure across Southeast Asia and the Pacific, raising concerns about the long-term reliability of commercial access for U.S. operations (University of the Philippines Center for Integrative and Development Studies [UP CIDS], 2020). Meanwhile, the U.S. approach to operational logistics remains largely theater-agnostic, built around force projection concepts that presume global access, even in areas where influence is contested or host-nation agreements are fragile. This disconnect between strategic ambitions and logistical feasibility has prompted growing concern among planners and acquisition professionals (Lewis, 2021; U.S. Department of Commerce, 2024). It is no longer enough to know what capabilities the U.S. can deliver into theater; decision-makers must also understand who, commercially, can sustain those capabilities once they are there and whether they will be accessible when it matters most.

Complicating this further is the DoD’s increasingly lean force structure and reliance on distributed operations. Concepts such as Expeditionary Advanced Base Operations (EABO), Stand-In Forces (SIF), and Agile Combat Employment (ACE) are all designed to reduce our operational signature and increase survivability, but they do so at the cost of



predictable, centralized sustainment (Lamm, 2023; Leonard, 2024; King, 2025). In these distributed forces model, the commercial support environment becomes not just a convenience but a critical component of combat effectiveness, as evidenced by the Department of Defense's growing reliance on Civil Augmentation Program and Base Operating Support-Integrator contracts to fill sustainment gaps in forward areas (Anderson, Self, & Chu, 2023). If the U.S. cannot guarantee timely support to dispersed units through either organic or contracted commercial support, then the viability of these emerging force designs comes into question. Yet despite this centrality, little work has been done to develop analytic tools that map procurement realities to operational needs in a way that supports meaningful planning or risk analysis. That is the space this research seeks to enter.

This thesis seeks to identify a set of measurable indicators that can be used to assess the strength of the commercial support environment across the INDOPACOM AOR, organized by warfighting function, such as sustainment, movement and maneuver, and command and control. Using publicly available procurement data from FPDS-NG and USAspending.gov, paired with analysis of DoD policy and regional contracting practices, this study aims to offer a framework that can inform planners, logisticians, and decision-makers alike. The chapters that follow will review the relevant literature, lay out the methodology for this assessment, and where data allows, begin to characterize where the U.S. has access and capacity, and where the gaps remain.

Vendor support scalability in the Philippines is critical in the event of escalation or crisis requiring Marine Corps distributed operations. Persistent near-peer threats in the Indo-Pacific could lead to a future conflict, whether kinetic or below the threshold of war. While the broader INDOPACOM region presents a wide range of logistical and geopolitical challenges, the Philippines provides the most practical and operationally relevant focus for this study. Its location within the first island chain, proximity to Taiwan and the South China Sea, and network of Enhanced Defense Cooperation Agreement (EDCA) sites make it the centerpiece of U.S. posture in the Western Pacific. Focusing on the Philippines allows for a detailed, data-driven analysis of sustainment capacity in a realistic gray-zone environment, one that reflects the broader challenges across the theater.



The potential conflict necessitates planning and preparation that will be addressed by the following primary research question:

1. In a crisis scenario requiring distributed Marine Corps operations in the Philippines, how can publicly available federal acquisition data be translated into operational planning factors to identify and mitigate sustainment gaps?

To further explore that, the research focuses on the following supporting questions:

2. Specifically, what planning factors are required to support EABO, Distributed Maritime Operations (DMO), or FOB (Forward Operating Base: a secured forward logistics and operations hub used to extend operational reach) operations in the Philippines, what are we currently spending in the area, and how can that data be used to bridge the gap from the current state to the desired end state?
3. How do existing agreements with the Philippines, such as ACSA, EDCA, MLSA (Mutual Logistics Support Agreement: a bilateral framework allowing U.S. and Philippine forces to exchange logistics support, services, and supplies) impact the ability to address sustainment gaps, and in what ways do these agreements either constrain or enable contracting solutions to mitigate operational sustainment risks?
4. How do geopolitical dynamics, legal frameworks, and infrastructure limitations shape the reliability of commercial support in specific countries?
5. What policy, data, or doctrinal gaps limit the Department of Defense's ability to assess commercial support strength at the theater level?



II. BACKGROUND

Chapter II provides the strategic and operational context required to understand why commercial support plays a critical role in the Indo-Pacific. It outlines the geographic, political, and logistical conditions shaping U.S. operations in the region and explains how these factors influence Marine Corps sustainment requirements. This background establishes the foundation for the study's analytical framework by showing how distance, infrastructure, and competition intersect to create unique challenges for distributed forces. The following section begins by examining the Indo-Pacific's scale and structural constraints as the baseline environment shaping all subsequent analysis.

A. CONTEXT

The U.S. Indo-Pacific Command (USINDOPACOM) operates within the most logistically demanding theater in the world. Spanning from the west coast of the United States to the eastern coast of Africa and from the Arctic to the Antarctic, this area of responsibility (AOR) covers more than half of the globe's surface and includes over half of its population (U.S. Indo-Pacific Command, 2017; King 2025). The region's scale, geography, and political diversity combine to create a logistics environment characterized by extreme distance, limited infrastructure, and contested access (King, 2025). This "tyranny of distance" refers to the compounding effect of vast geography on every aspect of sustainment, it stretches supply lines, lengthens response times, and amplifies the cost and risk of moving personnel and material across the theater. In practical terms, distance itself becomes an adversary, one that magnifies the friction of operations and forces U.S. planners to rely heavily on prepositioned assets, commercial shipping, and host-nation agreements to remain effective (Leonard, 2024; Geisen, 2021). The region's vast maritime expanse further exposes U.S. operations to persistent surveillance, disruption, and competition from near-peer adversaries such as China and Russia.

For U.S. forces, logistics in INDOPACOM has always been about endurance. During peacetime operations, the region already tests the limits of sustainment networks, in crisis or conflict, those challenges multiply. The DoD has made clear that "contested



logistics” is no longer a future concern but a current operating condition (Leonard, 2024). The concept of contested logistics refers to sustaining operations when adversaries possess the ability to detect, disrupt, or strike logistics networks across air, land, sea, cyber and space domains. In this environment every aspect of sustainment, from prepositioned stock to last- mile delivery, is exposed to interference or attack from foreign competitors. The Marine Corps’ Force Design update emphasizes that Marines are already operating in contested environments daily, requiring modernization of logistics systems to ensure distributed forces can persist and remain combat-effective under constant threat (Headquarters, Marine Corps [HQMC], 2025). Maintaining presence, posture, and readiness requires a mix of organic military capabilities and a robust commercial support environment that can provide everything from construction and maintenance to transportation and sustainment functions (Leonard, 2024; Anderson, Self & Chu, 2023; Joint Chiefs of Staff [JCS], 2023).

The Philippines, in particular, stands at the intersection of geography, strategy, and logistics. Its proximity to Taiwan, the South China Sea, and key maritime chokepoints makes it a critical node for distributed Marine Corps and joint operations. Yet its infrastructure like ports, airfields, energy grids, and supply networks, remains unevenly developed (Untalan et al., 2023; Geisen, 2021; University of the Philippines Center for Integrative and Development Studies [UP CIDS], 2020). As U.S. forces expand access through the Enhanced Defense Cooperation Agreement (EDCA) and deepen integration with Philippine counterparts, understanding the reliability and scalability of local commercial support becomes essential. The success of distributed operations under gray-zone pressure depends on whether existing vendors and supply chains can sustain tempo when conditions shift.

At the strategic level, the Philippines’ dual role as both ally and economic partner to competing powers complicates this dynamic. Over the past decade, Chinese state linked firms have expanded investments in key Philippine infrastructure sectors, including telecommunications, energy, and port development, most notably through commercial stakes and construction contracts at locations such as Subic Bay and Manila’s Harbor Centre both identified in recent logistics studies as critical yet politically sensitive nodes



for U.S. sustainment planning (Geisen, 2021; Untalan et al., 2023). These projects illustrate how economic engagement can translate into strategic leverage, blurring the line between commercial access and influence. This approach reflects China's broader policy of civil-military fusion, which integrates civilian industry, logistics networks, and technology sectors into its national defense architecture, further complicating efforts to distinguish between purely commercial and state-driven activities (Department of Defense [DoD], 2023b). For the U.S., this means sustainment planning must account not just for geography and capacity but also for the political and economic forces that shape access. When commercial support networks are intertwined with foreign investment or influence, operational risk takes on new dimensions, ones that traditional contracting data alone cannot capture.

This study situates itself at that convergence point. It begins with a theater-wide understanding of INDOPACOM's logistical realities and narrows its lens to the Philippines as a focused case. The Philippines was selected because it represents the most operationally relevant environment for assessing contested logistics within the U.S. Indo-Pacific posture (Untalan et al., 2023; Geisen, 2021). Its geographic position, defense agreements, and evolving commercial support landscape make it a practical lens through which to analyze regional sustainment challenges, a rationale explained in greater detail in the scenario overview section of this chapter. By combining quantitative procurement data with qualitative policy review, the analysis seeks to reveal how commercial support sustainment capacity aligns, or fails to align, with operational requirements under emerging operational concepts such as Expeditionary Advanced Base Operations (EABO) and Distributed Maritime Operations (DMO), Stand-In Forces (SIF), and Agile Combat Employment (ACE) (HQMC, 2025; Leonard, 2024; King, 2025). Each of these concepts emphasizes distributed, resilient, and adaptive force design, placing new demands on logistics and sustainment networks, a theme explored in greater depth in the subsequent literature review.



B. SCENARIO: GRAY ZONE ANCHOR OVERVIEW

This study is grounded in a notional gray-zone scenario drawn from publicly available strategy guidance and theater-level assessments emphasizing competition below the threshold of armed conflict. In this scenario, the People’s Republic of China intensifies coercive activity around Philippine territory through maritime presence, economic pressure, and information operations. This reflects trends outlined in the *Pacific Marines Strategy 2025* and broader U.S. defense policy that describe the Indo-Pacific as an environment of persistent strategic competition rather than imminent large-scale war (U.S. Indo-Pacific Command [USINDOPACOM], 2017; U.S. Department of Commerce, 2024). In response, U.S. forces disperse across multiple EDCA sites to reinforce deterrence and maintain access, consistent with current Marine Corps posture initiatives under Force Design (HQMC, 2025). The 2025 update to Force Design emphasizes distributed littoral operations, contested logistics, and forward posture validated through exercises such as Balikatan 25 and new Marine Corps Prepositioning Program initiatives in the Philippines, underscoring the realism of this scenario (HQMC, 2025). Sustaining these stand-in forces depends heavily on local and regional commercial partners for logistics, construction, and base support, precisely the networks this research seeks to evaluate. This scope reflects the most realistic trajectory of U.S.–China competition: one defined not by open conflict but by economic interdependence, influence campaigns, and positional maneuvering. Both nations have too much at stake economically to risk full-scale war, making gray-zone coercion the most plausible and operationally relevant scenario for assessing sustainment risk in the Philippines.

Within this broader environment, the Philippines represents the most strategically relevant test case for gray-zone dynamics. Its location inside the first island chain, proximity to Taiwan, and network of EDCA sites make it an operational fulcrum for both deterrence and sustainment. The same factors that make it ideal for distributed operations, its archipelagic geography and existing U.S. access agreements, also make it uniquely vulnerable to gray-zone coercion targeting logistics, infrastructure, and commercial dependencies.



The People's Republic of China (PRC) intensifies gray-zone pressure around Philippine territory through maritime militia presence, targeted economic coercion, and cyber activity against port and logistics nodes. To demonstrate resolve and maintain access, the United States distributes Marine forces across EDCA locations and several austere sites. Operational success depends heavily on commercial support vendors for construction, power, water, fuel distribution, and Base operating Support-Integrator (BOS-I) functions. BOS-I contracts consolidate essential installation services, such as facility maintenance, utilities management, transportation, and life-support functions, under a single contractor to enable rapid and efficient sustainment in forward environments (Anderson, Self, & Chu, 2023). These same vendors, however, face regulatory friction, influence campaigns, and intermittent disruptions. This scenario serves as the operational context for evaluating whether current contracting patterns and commercial support ecosystems are resilient enough to sustain dispersed forces at the required tempo and frequency.

C. SUMMARY

Chapter II establishes the strategic and logistical background for this study. The Indo-Pacific remains the proving ground for contested logistics, and the Philippines serves as its most relevant microcosm. The chapter outlined the operational realities that make sustainment in this theater uniquely complex and introduced the notional gray-zone scenario that provides the setting for future analysis in the chapters that follow.



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III. LITERATURE REVIEW

A. STRATEGIC AND OPERATIONAL CONTEXT

The U.S. Indo-Pacific Command (USINDOPACOM) is responsible for the most complex and expansive area of operations within the Unified Command Plan. Stretching from the western shores of the United States to the eastern coasts of Africa and from the Arctic to the Antarctic, this AOR covers over 100 million square miles and includes more than 50% of the world's population. This region is both strategically vital and operationally challenging due to its vast distances, fragile logistics chains, and the proximity of peer and near-peer adversaries such as China, North Korea, and Russia (King, 2025).

In recent years, the Department of Defense has emphasized the importance of contested logistics, acknowledging that access, presence, and posture are no longer guaranteed in high-threat environments. As Leonard (2024) notes, projecting and sustaining forces in the Indo-Pacific will require not just military prepositioning but also deeper integration with commercial support logistics partners. Geisen (2021) supports this view by highlighting the operational realities of sustaining Marine Corps forces across a distributed battlespace where access to host nation support or commercial support infrastructure can vary significantly from island to island.

The joint force is actively experimenting with new operational concepts such as Expeditionary Advanced Base Operations (EABO) and Distributed Maritime Operations (DMO), Agile Combat Employment (ACE), and SIF to achieve greater agility and survivability across the Indo-Pacific (Leonard, 2024; King, 2025). EABO focuses on establishing small, mobile, and rapidly deployable bases that enable sea control and denial from austere locations (HQMC, 2025). DMO integrates naval and Marine capabilities across wide maritime areas to present multiple, distributed threats that complicate adversary targeting (Leonard, 2024). ACE, developed by the Air Force and adopted within joint doctrine, disperses air assets to preserve operational reach and resilience under attack (King, 2025). SIF describes Marine units persistently positioned inside an adversary's weapons engagement zone to deter aggression and shape the battlespace through forward



presence (HQMC, 2025). These concepts depend on the ability to sustain distributed operations, underscoring the critical role of commercial and partner-nation logistics networks in maintaining endurance and flexibility in contested environments.



Figure 1. Indo-Pacific Command Area of Responsibility. Source: U.S. Indo-Pacific Command (2024).

1. Regional Variance and Infrastructure Limitations

The commercial support environment in INDOPACOM is not uniform; it varies dramatically based on the political will, infrastructure maturity, and logistical capacity of host nations. While some partners such as Japan and Australia maintain advanced infrastructure with transparent regulatory systems, others operate with limited capacity,

high corruption risk, or underdeveloped transportation and energy networks (Lewis, 2021; Government Accountability Office [GAO], 2020). These inconsistencies introduce operational friction during contingency planning and inhibit the seamless application of standard contracting practices. Moreover, the lack of interoperability between host-nation and U.S. logistics systems often results in duplicated efforts, delayed deliveries, or limited access to critical commodities during a crisis (GAO, 2018).

Recent GAO and RAND reports have also highlighted the mismatch between operational planning assumptions and the realities of commercial support access in key areas of the Indo-Pacific. For instance, the expectation that vendors can move equipment or fuel across small island chains ignores the physical limitations posed by inadequate port facilities, lack of warehousing, and limited lines of communication (Untalan et al., 2023; GAO, 2021). This is further complicated by varying legal frameworks that affect how quickly the U.S. can enter contracts, use emergency authorities, or access commercial transport in-country. These limitations reinforce the need for a region-specific, function-specific approach to assessing commercial support strength (GAO, 2020; Mann & Sargent, 2018).

2. Theater Access Risk and Commercial Vulnerability in the Indo-Pacific

While the Department of Defense increasingly relies on commercial support vendors to fulfill operational logistics requirements, that reliance brings with it a fragile dependency (GOA, 2020; Boland, Rogers, & Stewart, 2023; Mann & Sargent, 2018). In the Indo-Pacific, access to commercial support is not only inconsistent but also vulnerable to rapid disruption in both peacetime and conflict scenarios. A key factor is the contested nature of the region itself. With China expanding its influence through both military coercion and economic entanglement, the reliability of local vendors, and even government partners, can shift depending on political winds.

These vulnerabilities are not theoretical. In recent years, U.S. Navy vessels have been turned away from regional ports due to sudden political recalibrations by host nations, often under pressure from Beijing (King, 2025). Similarly, commercial support carriers and



logistics firms operating under U.S. contract may find their access restricted or revoked due to local permitting issues, public backlash, or foreign policy concerns. This creates a volatile environment in which planners may assume capacity exists, only to find that capacity is politically or legally inaccessible when needed most. These scenarios underline the importance of mapping not only vendor presence, but the degree to which that presence is insulated from geopolitical friction (GAO, 2021).

Another layer of risk emerges from the legal and bureaucratic frameworks that govern contracting overseas (GAO, 2018). Even when commercial support partners are available and willing, the ability to initiate, modify, or execute contracts in a timely manner is constrained by the Status of Forces Agreements (SOFAs), host-nation labor laws, and complex import/export restrictions (GAO, 2020). These issues are magnified in contingency environments where rapid base setup, local procurement, or surge logistics are required (GAO, 2020). As noted in several Government Accountability Office reports, reliance on commercial support solutions has outpaced the DoD's ability to assess whether those solutions are truly viable under emergency conditions (GAO, 2021).

Cybersecurity and supply chain integrity also pose emerging threats to commercial support reliability. Vendors operating in the Indo-Pacific may not meet U.S. cyber hygiene standards or may unknowingly rely on third-party suppliers vulnerable to adversary manipulation. In a contested scenario, cyberattacks against logistics software or port infrastructure could paralyze commercial support networks without ever targeting military units directly (Lewis, 2021). These threats, while difficult to quantify, reinforce the need for redundancy, diversity, and layered assessments of vendor ecosystems, not just in terms of dollars obligated, but in terms of resiliency under stress.

Taken together, these factors expose a critical blind spot in how the U.S. currently evaluates commercial support readiness. Theater access must be understood not only as a function of distance or infrastructure but as a blend of geopolitical influence, regulatory complexity, and technological risk. A region with high vendor presence but low access assurance is a risk multiplier, not a strength. This study approaches that reality with a framework that reflects not just where support is funded, but where it can be realistically expected to perform.



B. DEPARTMENT OF DEFENSE CONTRACTING AND COMMERCIAL INTEGRATION

The Department of Defense increasingly leverages commercial support to execute critical functions formerly carried out by military or government personnel. These are not inherently governmental roles, but rather operational and sustainment activities that have transitioned toward contractor execution over the past two decades. According to Mann and Sargent (2018), more than half of DoD's total obligated spending now flows through contracts, with services comprising the largest share. In the Indo-Pacific, where the tyranny of distance constrains organic logistics capabilities, commercial support vendors provide everything from fuel distribution and port services to IT support and security infrastructure (GAO, 2018; Anderson, Self, & Chu, 2023; Boland, Rogers, & Stewart, 2023).

The Civil Augmentation Program (CAP) and Base Operating Support–Integrator (BOS-I) models illustrate this growing dependency. Anderson, Self, and Chu (2023) show how CAP contracts have become essential for surge support in overseas environments where military logistics units are either limited or focused elsewhere. However, this reliance introduces operational risk if vendor capacity is overstated or if geographic access becomes constrained during crisis scenarios. The U.S. experience with the Logistics Civil Augmentation Program (LOGCAP) in Afghanistan underscores these risks. Over two decades of contingency operations, LOGCAP contracts accounted for tens of billions in obligations to sustain deployed forces, costs that later drew scrutiny for inefficiencies, oversight gaps, and contractor performance issues (GAO, 1997; Congressional Research Service [CRS], 2020). Modigliani (2025) emphasizes the need for meaningful performance metrics and vendor readiness indicators at the portfolio level, noting that raw spending data alone fails to capture capability or responsiveness.

C. INDICATORS, METRICS, AND DATA GAPS

Several studies have attempted to quantify logistics capacity or readiness using procurement data, but few have focused specifically on warfighting function alignment within a geographic theater and in the case of this study, specifically, the Philippines. While FPDS-NG and USAspending.gov provide visibility into contract obligations and vendor



locations, these databases are rarely analyzed in a way that supports theater logistics planning. The Boland, Rogers, and Stewart (2023) thesis is one of the few studies to explore contracting workforce structure and effectiveness within EABO environments, pointing to limited situational awareness of vendor performance and availability during distributed operations.

Lewis (2021) explores the concept of mapping the national security industrial base, suggesting that strategic competition increasingly depends on how well nations can align commercial support capacity with defense needs. This line of thinking is echoed in FedBiz Access (2024), which discusses how Congressional defense spending bills can shape contractor incentives and regional posture, but stops short of offering tactical assessment tools. Parsons Corporation (2023) illustrates this challenge from the industry side, noting the company's support to INDOPACOM through Army contracts, but without transparency around functional delivery metrics.

D. POLICY LANDSCAPE AND DOCTRINAL ALIGNMENT

The importance of commercial support to warfighting capabilities is acknowledged, at least rhetorically, across multiple layers of U.S. strategic and operational guidance. The 2022 National Defense Strategy (NDS) explicitly identifies the Indo-Pacific as the Department of Defense's priority theater and calls for a force posture that is "resilient, distributed, and sustainable in the face of persistent multi-domain threats" (DoD, 2022). While these terms are often interpreted through an operational lens, they carry significant implications for the defense acquisition and logistics communities. Sustainment in a contested environment depends not just on prepositioned stockpiles and naval lift, but also on the ability to leverage commercial support vendors across a fragmented and politically diverse region.

Joint Publication (JP) 4-0, *Joint Logistics*, underscores this dependency by listing "access to commercial and host-nation support" as a key enabler of global logistics operations (Joint Chiefs of Staff, 2023). However, it does not offer a methodology to assess that access in practical or regional terms. Nor does it account for the variable reliability of commercial support in theaters shaped by economic coercion and diplomatic tension.



Likewise, while the Joint Concept for Contested Logistics (JCCL) advances the idea that logistics must be agile, adaptive, and ready to operate under denial, it stops short of addressing how acquisition professionals should evaluate or prioritize commercial support capacity as part of that resilience (JCS, 2023).

The Defense Acquisition System and associated contracting policies, such as the Federal Acquisition Regulation (FAR) and Defense FAR Supplement (DFARS), also lack regionally tailored guidance (Federal Acquisition Regulation, 2024; Defense Federal Acquisition Regulation Supplement, 2024). While FAR Part 18 provides for emergency acquisition flexibilities, the use of those authorities often hinges on command-level decisions, pre-negotiated access, and contractor availability. In practice, this means that in many Indo-Pacific nations, the legal and procedural apparatus required to initiate contingency contracts is either underdeveloped or entirely absent. GAO and DoD Inspector General reports have routinely flagged these gaps as a threat to operational continuity, especially in austere environments where reliance on commercial support is often highest (GAO, 2021).

At the operational level, each Service has taken steps to adapt force structure and logistics posture in the face of these challenges. The Marine Corps' Force Design 2030 initiative and the associated development of Marine Littoral Regiments (MLRs) assume access to partner nation infrastructure and local commercial support for sustainment (HQMC, 2025). Similarly, the Army's Indo-Pacific Strategy and logistics modernization efforts rely heavily on the ability to preposition equipment and coordinate contracted services through Army Field Support Brigades and Logistics Civil Augmentation Program (LOGCAP) mechanisms (U.S. Army Pacific, 2023). However, both efforts lack a shared, validated framework for measuring the strength or reliability of the commercial support environments they depend on.

The disconnect; between strategy, doctrine, and acquisition execution, leaves planners with insufficient tools to evaluate theater-level sustainment risk through a commercial support lens. Without a structured assessment of commercial support environments across warfighting functions, the U.S. risks overestimating its ability to operate and sustain forces in the Indo-Pacific. This research aims to close that gap by



offering a regionally focused model that aligns with both doctrinal priorities and emerging operational concepts.

E. THEORETICAL FOUNDATIONS AND RESEARCH GAP

At a conceptual level, this research draws on principal-agent theory and logistics network resilience. The principal-agent framework is useful in exploring the asymmetry between contracting officers (principals) and commercial support vendors (agents), especially in environments where oversight is constrained or communications are degraded (Eisenhardt, 1989). Network resilience theory complements this by evaluating how well a supply chain, or in this case, a hybrid military-commercial support ecosystem, can absorb shocks and reroute capabilities in a denied environment (Linkov et al., 2013).

Despite the growing urgency around contested logistics, there remains no integrated assessment model that links commercial support vendor data to operational risk in a region as dynamic as INDOPACOM. This study fills that gap by identifying measurable indicators, drawn from public data sources and doctrinal alignment (JCS, 2023; HQMC, 2025), that can serve as a starting point for theater planners to assess commercial support capacity and access across the full spectrum of warfighting functions.

F. THEORETICAL FRAMEWORK

Two complementary theories underpin this research: Principal-Agent Theory and Network Resilience Theory. Principal-Agent Theory provides a lens for examining the relationship between the government (the principal) and commercial support vendors (the agents). In ideal conditions, both parties act with aligned interests: the government seeks effective, timely performance, and the vendor seeks profit and reputation through compliance (Jensen & Meckling, 1976; Eisenhardt, 1989). In practice, especially in contingency or gray-zone settings, asymmetry creeps in, where vendors often hold more detailed knowledge of costs, local conditions, and performance realities than the contracting officers managing them. This imbalance can distort oversight and accountability, as contracting officers may lack visibility into vendor behavior while vendors face incentives to cut corners, delay or prioritize competing commercial interest (Nwajei, 2022; Higgs, 2017). This information asymmetry, the essence of the principal-



agent problem, poses acute challenges in the Indo-Pacific, where oversight is complicated by distance, limited contracting presence, and host-nation legal constraints (Boland, Rogers, & Stewart, 2023). Applying this theory helps explain why contracting outcomes in the region often diverge from intent, and why assessing vendor reliability requires more than counting contracts or dollars obligated (Nwajei, 2022; Higgs, 2017; Boland, Rogers, & Stewart, 2023).

Linkov et al. (2013) and Lewis (2021) studied how Network Resilience Theory, by contrast, shifts focus from relationships to systems. It examines how well a network, logistical, informational, or economic, can absorb shocks and adapt without collapsing. For U.S. sustainment planning, this means evaluating whether commercial supply chains can reroute or substitute capabilities when access is denied, infrastructure is disrupted, or vendors withdraw under pressure. A resilient network is diverse, redundant, and flexible; a fragile one is centralized, opaque, and dependent on a narrow set of providers (Linkov et al., 2013; Lewis, 2021). In the Indo-Pacific, the balance between these two extremes varies widely by country and sector. Integrating this theory allows the study to interpret procurement data not just as spending activity but as a reflection of network health.

Together, these frameworks anchor the research conceptually. Principal-Agent Theory captures the human and organizational friction that shapes contracting outcomes; Network Resilience Theory contextualizes those outcomes within broader patterns of connectivity and risk. The combination provides both a micro- and macro-level understanding of how the DoD's reliance on commercial support partners translates into operational vulnerability or strength.

G. PREVIOUS STUDIES AND RESEARCH

Several key studies inform this research and establish the groundwork for its approach. Boland, Rogers, and Stewart (2023) examined the effectiveness of the III Marine Expeditionary Force's contingency contracting workforce within EABO environments. Their findings emphasized structural limitations in authority, situational awareness, and training that often leave contracting officers reactive rather than proactive in distributed settings. This study builds on their insight by expanding the analytical lens beyond



workforce design to the larger ecosystem of vendors and contracting patterns those officers depend on (Boland, 2023 et al).

Geisen (2021) analyzed operational logistics across USINDOPACOM and underscored the tension between operational reach and sustainment feasibility. His work illustrated how dispersed forces, particularly Marine units, operate at the edge of supply lines and depend heavily on partner-nation infrastructure. The present research carries that discussion forward by adding empirical data on the commercial support side of that equation: how contracting activity, not just military lift, shapes sustainment reach (Geisen, 2021).

Lamm (2023) focused on last-tactical-mile logistics for EABO, identifying critical challenges in mobility, resupply, and contractor integration during austere operations. Lamm's thesis demonstrated that commercial support partners often serve as the connective tissue between forward bases and main supply nodes. By quantifying vendor presence and diversity, this study operationalizes Lamm's qualitative findings and applies them at theater scale (Lamm, 2023).

Collectively, these works highlight two consistent themes: the growing dependence on commercial support solutions to sustain distributed operations, and the lack of standardized tools to measure that dependence. This research contributes to that dialogue by merging doctrinal awareness with data analytics, offering a framework that can evolve as both policy and operational requirements mature.

H. SUMMARY

Chapter III reviewed existing scholarship, doctrinal guidance, and theoretical perspectives that frame the commercial support environment in the Indo-Pacific. The literature shows broad agreement that contested logistics, geographic scale, and geopolitical competition shape the region's sustainment challenges. It also highlights significant variance in host-nation infrastructure, regulatory environments, and commercial capacity, all of which influence the reliability of vendor support across the theater. While the Department of Defense increasingly depends on commercial partners for sustainment and base support, prior studies consistently note gaps in visibility, access assurance, and



functional resilience, particularly under gray-zone pressure. These findings underscore the need for a structured, regionally focused method to assess commercial support strength at the warfighting function level.

The chapter also identified a clear research gap: despite extensive discussion of contested logistics and commercial reliance, there is no established framework linking procurement activity to operational risk in INDOPACOM. The theories of principal-agent dynamics and network resilience provide a conceptual foundation for understanding vendor behavior and systemic fragility, but they have not yet been applied to theater-specific commercial ecosystems. By synthesizing these insights, the literature review establishes the intellectual groundwork that informs the study's analytical approach. It reinforces the relevance of examining vendor diversity, access, and functional alignment, setting the stage for the methodology and analysis that follow.



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IV. METHODOLOGY

The purpose of this research is to develop an initial framework for assessing the strength of the commercial support environment in the Philippines, with indicators aligned by warfighting function. This study is structured as a descriptive and exploratory inquiry, drawing on both qualitative and quantitative data sources. The analysis does not aim to produce predictive models or causal inferences, but rather to offer planners and contracting professionals a practical starting point for evaluating vendor presence, diversity, and support capacity across the theater.

A. RESEARCH OBJECTIVE AND DESIGN

A mixed-methods approach is used. Quantitative data from publicly available procurement sources, primarily FPDS-NG, USAspending.gov, and SAM.gov, are analyzed to determine the scale and distribution of defense contracting activities across the AOR. These data are organized by country, functional category (e.g., logistics, maintenance, construction), and obligated amounts. Where possible, contracts are mapped to specific warfighting functions (e.g., sustainment, command and control, movement and maneuver) based on PSC codes and award descriptions. Contract data from FPDS-NG, USAspending.gov, and SAM.gov were consolidated into a single analytical dataset for this study, hereafter referred to as INDOPACOM_MASTER 1120. This dataset represents cleaned and de-duplicated contract action data used for all quantitative analysis.

Although this research focuses on the Philippines as the primary case study, the methodology begins at the theater level to establish context across the entire U.S. Indo-Pacific Command (INDOPACOM) Area of Responsibility. Procurement data are collected for the broader AOR to illustrate regional patterns and dependencies, but the analysis narrows to the Philippines to serve as a microcosm of the commercial support environment. This approach maintains consistency with the study's narrative structure, using the Philippines to represent the logistical and geopolitical realities that define the wider theater while still enabling detailed, country specific assessment.



Complementing this, a qualitative review of doctrinal and policy guidance (e.g., JP 4-0, FAR, GAO reports) is organized as part of a phased methodology that links policy intent to measurable contracting activity. This structure ensures that each stage builds on the previous one and provides a clear, repeatable process for assessing commercial support integration in contested environments:

1. Phase I: Doctrinal and Policy Baseline

This phase establishes the doctrinal and policy foundation that defines how the Department of Defense expects commercial support to function in contested environments. It identifies key guidance from joint publications, the Federal Acquisition Regulation, and Government Accountability Office reports, that shape operational expectations for contracting and sustainment.

2. Phase II: Data Alignment and Integration

In this phase, doctrinal expectations are compared with quantitative procurement data drawn from FPDS-NG, USAspending.gov, and SAM.gov. This step determines where and how current contracting activity aligns, or diverges, from those expectations, highlighting potential gaps in capability or access.

3. Phase III: Analytical Synthesis

The final phase integrates both data sets into a unified analytical framework. Procurement trends are interpreted as proxies for operational capacity and access, allowing planners to visualize how policy intent manifests in real-world contracting outcomes.

This phased design ensures the methodology is transparent, logically ordered, and adaptable for future research while maintaining clear alignment with doctrinal guidance and operational relevance.

B. CONCEPTUAL FRAMEWORK

This thesis employs a mixed-methods design that merges quantitative contracting data with qualitative policy analysis to assess the strength of the commercial support



environment. The conceptual logic is straightforward: data indicate *where* and *how* the U.S. is spending; doctrine and policy indicate *what that spending should achieve*. Comparing the two reveals gaps, redundancies, and opportunities for more targeted planning.

1. Warfighting Functions

In joint doctrine, warfighting functions are the essential categories of activities that collectively enable commanders to synchronize and employ combat power (JCS, 2022). They provide a common framework for understanding how military forces plan, execute, and sustain operations across domains. The six recognized functions are Command and Control, Movement and Maneuver, Intelligence, Fires, Sustainment, Protection, and Information. Each represents a distinct but interdependent aspect of how the joint force operates:

Command and control governs decision making and coordination.

Movement and maneuver concerns positioning and mobility.

Intelligence informs situational awareness.

Fires delivers effects to shape the battlespace.

Sustainment ensures endurance through logistics and maintenance.

Force protection preserves combat power and critical assets.

Information integrates influence and awareness activities.

(Joint Chiefs of Staff, 2022, chap. II)

In this study, contracting data are aligned primarily with sustainment, movement and maneuver, and command and control, the functions most directly tied to logistics and operational support within the Indo-Pacific. Mapping contracts to these functions allows procurement trends to be interpreted through an operational lens rather than purely financial metrics, linking dollars obligated to the warfighting capabilities they enable.

The analytical model unfolds in three stages moving from data acquisition and classification to indicator development, and finally visualization and interpretation. The model synthesizes the data and sets the stage for the analysis where the indicators are operationalized.



2. Data Acquisition and Classification

Contract records from FPDS-NG, USASpending, and SAM are filtered by geography (USINDOPACOM AOR), date range, and relevant PSC codes. Each record is coded by warfighting function, such as sustainment, movement and maneuver, or command and control, based on award descriptions and functional alignment with JP 3-0 *Joint Campaigns and Operations*.

3. Indicator Development

From these coded data, indicators are derived to measure vendor presence, diversity, and total obligation value. Additional factors, such as geographic dispersion and alignment with critical infrastructure, are used to gauge redundancy and access assurance.

4. Visualization and Interpretation

Heat maps and tabular summaries illustrate the density and distribution of commercial support across countries and functions. These visuals serve two purposes: they translate abstract data into operational insight and allow planners to compare relative strength across nodes. In practice, a high-density cluster of contracts in one area might signal robustness, while a thin or uneven distribution could flag potential single-point failure.

The framework then loops these indicators back into the operational scenario. Under the gray-zone conditions described in Chapter 2, vendor performance and access are stress-tested conceptually: How would disruptions, political, cyber, or physical, alter the network's ability to sustain distributed Marine forces? This step transforms static procurement data into dynamic risk insight. The intent is not to predict outcomes but to model sensitivity, to see where sustainment might fail first and why.

While heat maps and tables are the chosen visual tools, the conceptual model is adaptable. For the current study, the emphasis remains on transparency and reproducibility. The framework offers a baseline method any planner or analyst could replicate using unclassified data.



C. DATA COLLECTION

Procurement data are pulled from the following open-source databases: FPDS-NG, USAspending.gov, and SAM.gov. FPDS-NG is a system that captures detailed information about federal contracts, including award amounts, vendors, and place of performance (General Services Administration, n.d.). FPDS serves as the primary source for trend analysis over a 5-year period from fiscal year 2021 to fiscal year 2025. USAspending.gov is a platform that aggregates contract and grant data, providing additional search tools and visualizations for locating vendors and award amounts in specific locations. It helps triangulate findings from FPDS. SAM.gov is a website that contains current vendor registration data and contracting opportunities. It is used to assess which companies are registered in the region and for what functional capabilities. Searches will be filtered by region (USINDOPACOM AOR), contract obligation date, and applicable PSC codes. The study scopes its procurement dataset to the most recent five fiscal years to ensure analytical validity, operational relevance, and practical scope management. This period captures a clean post-COVID dataset, avoiding the anomalous contracting fluctuations and reporting gaps that occurred during FY19–FY20, which would otherwise distort trend analysis and vendor presence indicators. A five-year window also aligns with the current commercial support environment shaped by post-pandemic supply chain stabilization, the expansion of EDCA site access, and evolving operational requirements under Force Design initiatives. This timeframe provides enough longitudinal depth to identify meaningful patterns in vendor activity while remaining focused on the contemporary contracting environment most relevant to contested logistics planning in the Philippines. Finally, limiting the analysis to FY21–FY25 kept the dataset analytically manageable, ensuring consistency across FPDS-NG, USAspending, SAM, and Marine Corps micro-purchase and SF-44 logs. Additional filters are applied to isolate defense-related contracts issued by the military departments or defense agencies.

D. CODING STRATEGY

The coding strategy is designed to align directly with the study's primary research question: how publicly available federal acquisition data can be translated into operational



planning factors to identify and mitigate sustainment gaps. Each selected code represents a measurable aspect of the commercial support environment that could indicate strength or vulnerability. Vendor presence and diversity reflect capacity and redundancy; obligated funding indicates scale and priority; warfighting function alignment links spending to operational relevance; and geographic access captures the spatial dimension of sustainment feasibility. Collectively, these categories provide a structured means of testing whether observable contracting data correlate with operational resilience in the Philippines.

- **Vendor presence:** Number of unique vendors performing contracts in a given location.
- **Obligated funding:** Total dollars awarded by function and location.
- **Warfighting function alignment:** Mapping contract descriptions to doctrinal functions using keyword analysis cross-walked against JP 3-0 and relevant logistics concepts (e.g. BOS-I, last mile delivery, prepositioned stock).
- **Redundancy:** Number of vendors per function per country.

When it comes to geographic access the Joint Chiefs of Staff (2022) and Headquarters U.S. Marine Corps (2025) suggest that:

- **Geographic access:** Assessed by mapping contract performance locations against key operational nodes (EDCA sites, ports, airfields) to gauge proximity and sustainment feasibility. (Joint Chiefs of Staff, 2022; Headquarters U.S. Marine Corps, 2025)

E. ILLUSTRATIVE TABLES AND VISUALIZATIONS

To support both analysis and communication of findings, this study employs visual representations of procurement data aligned by country, warfighting function, and contract characteristics. Contract records are coded and aggregated to reflect variables such as vendor count, obligated funding, and vendor diversity. These metrics will then be visualized using both raw tabular displays and normalized heatmaps to highlight regional differences in commercial support posture.



F. SUMMARY

This chapter outlined the methodology used to assess the commercial support environment in the Philippines, integrating doctrinal expectations with measurable procurement data to develop a structured, repeatable framework. The approach combines qualitative review of policy and joint logistics guidance with quantitative analysis drawn from FPDS-NG, USASpending, and SAM. By organizing data across a five-year period, mapping PSC codes to warfighting functions, and developing indicators such as vendor presence, redundancy, and geographic access, the methodology establishes a clear process for translating contracting activity into operationally relevant insights.

This structured design ensures alignment with joint doctrine and supports the study's central research question by providing a practical means to identify sustainment gaps for distributed Marine Corps operations. The chapter sets the analytical foundation for the findings that follow, enabling planners and decision-makers to evaluate where commercial support is strong, where it is limited, and how those conditions affect force posture in a contested environment.



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IV. ANALYSIS

A. ANALYTICAL FRAMEWORK RECAP AND LOGIC MODEL

This chapter applies the three phased analytical model introduced in Chapter IV, moving from theater-wide characterization (Phase I) to functional alignment (Phase II), and finally to a focused country-level synthesis (Phase III). Each phase corresponds to one or more research questions and employs indicators derived from doctrinal functions and commercial market attributes. Figure 2 illustrates this logic model, linking the study's data sources, indicators, analytical outcomes, and findings.

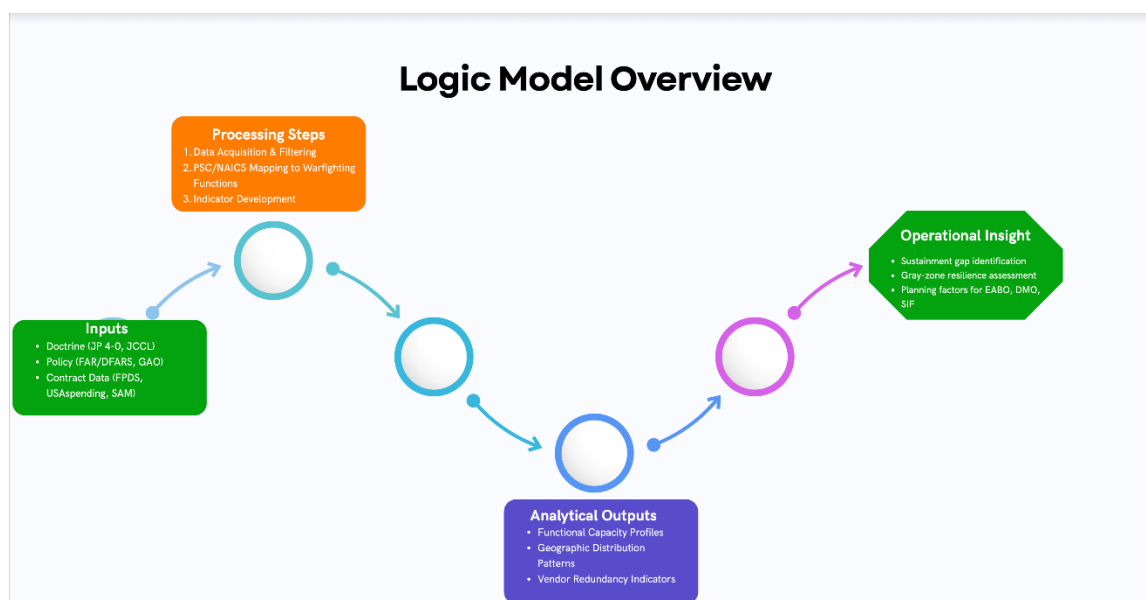


Figure 2. Logic Model Overview

This structure ensures continuity between the methodological design and the analytical results, showing quantitative procurement data and qualitative doctrinal context converge to assess the strength of the commercial support environment in the Indo-Pacific.

B. OVERVIEW AND ANALYTICAL APPROACH

This chapter evaluates procurement and vendor data from FPDS-NG, USAspending and SAM to characterize the commercial support environment across the

U.S. Indo-Pacific Command (USINDOPACOM) Area of Responsibility. It focuses on the Philippines as the central case study while maintaining theater-level awareness to contextualize observed patterns.

Across the five-year period analyzed (FY21–FY25), the dataset consists of several thousand individual contract actions aggregated from FPDS-NG, USAspending.gov, Marine Corps micro-purchase logs, and SF-44 field procurement records. These records encompass obligations performed across more than a dozen INDOPACOM countries and include hundreds of unique PSC codes and vendor entries relevant to sustainment, movement and maneuver, and command and control functions. For the Philippines alone, the dataset includes 681 contract actions representing \$21,131,721.40 in obligations (Garay-Perez & Beltran, 2024). Including these descriptive statistics provides a sense of scale and demonstrates that the analysis draws from a large, diverse, and representative sample of DoD commercial activity across the theater.

Procurement data in this analysis are categorized using product service codes (PSC). PSC codes identify the specific products, services, or research areas being acquired (DoD, 2025). Together, these coding systems allow contracting data to be grouped by functional relevance, such as logistics, construction, or maintenance, and aligned with doctrinal warfighting functions for operational interpretation. The analysis follows the three-phased model defined in the following sections.

1. Phase I: Theater Context

Figure 3 illustrates how the analytical framework introduced in Chapter IV translates contracting data into a comparative regional picture across key warfighting functions. The exemplar heatmap uses placeholder values to demonstrate the type of patterns the methodology is designed to reveal: relative concentration of commercial sustainment capacity, variation in movement-and-maneuver support, and limited C2 contracting across countries in the Indo-Pacific.



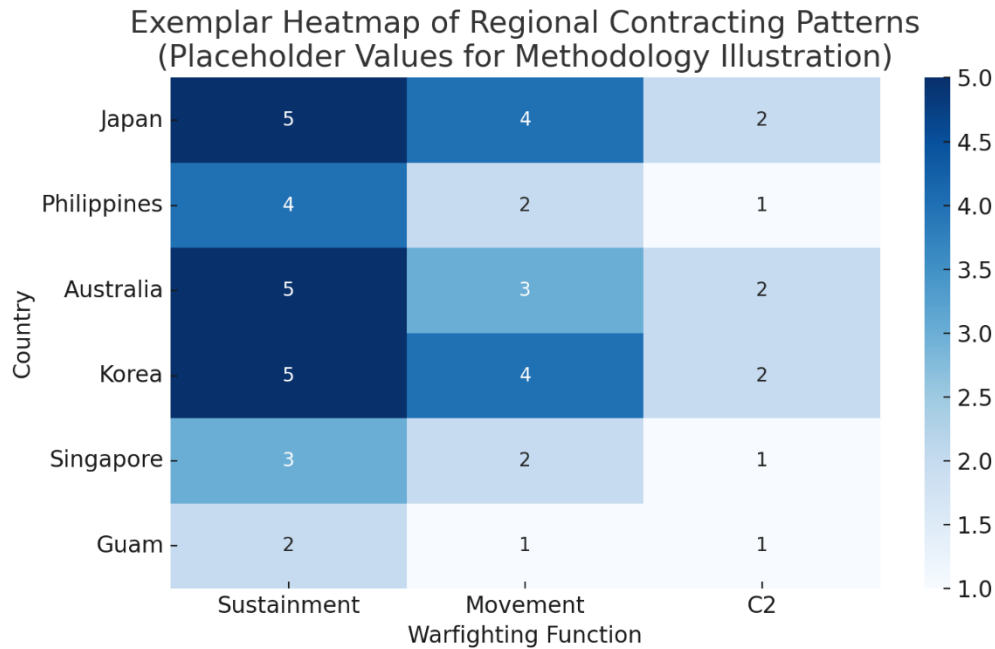


Figure 3. Quantify Regional Contracting Patterns in the Area of Responsibility

By visualizing these functions side-by-side, the figure shows how different locations exhibit distinct commercial support profiles that influence operational feasibility. Japan and Australia, for example, display consistently high contracting activity across functions, while the Philippines and Guam show narrower functional depth. Although the values are notional, the visualization communicates the logic of the analysis that follows, moving from broad regional patterns to a focused assessment of functional capacity, redundancy, and operational risk for Marine Corps operations in the Philippines.

2. Phase II: Functional Alignment

Figure 4 presents total DoD obligations in the Philippines dataset aligned to the study's three warfighting functions. Contract actions were categorized using PSC-based functional mapping to show the relative scale of C2, movement & maneuver, and sustainment requirements. The visualization provides an aggregated view of how contracting activity supports each function and highlights the dominant role of sustainment within the commercial support environment. To ensure transparency and repeatability, we

applied a consistent PSC-based mapping process to assign each contract action to a warfighting function. For example, a contract coded under PSC D399 (IT and telecommunications support) was categorized as C2 because PSC D3XX series codes correspond to IT, network administration, cybersecurity, and systems support, activities directly enabling information transfer, decision-making, and command functions. Similarly, PSCs beginning with V1/V2 were mapped to movement and maneuver, while PSCs including J0, S2, 89, and 91 were mapped to sustainment based on their alignment with maintenance, facilities, consumables, and supply-chain functions. This coding logic was applied to every contract in the dataset to establish functional alignment across the warfighting functions.

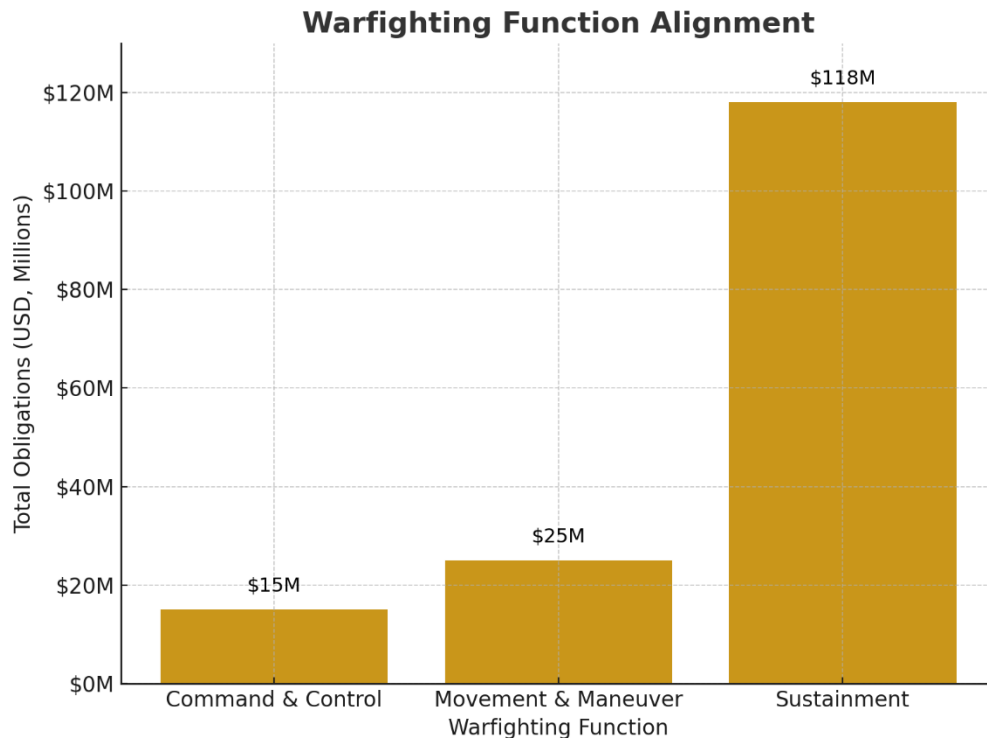


Figure 4. Warfighting Function Alignment

The analysis limits functional categories to command and control, movement and maneuver, and sustainment because the dataset provides consistent PSC patterns only for these areas. The available records show too little activity to form valid categories for



functions such as fires, intelligence, or protection. Figure 4 therefore presents the complete set of warfighting functions that the contracting data supports.

3. Phase III: Case Synthesis

Assess the Philippines as a microcosm of the broader theater, applying scenario-based interpretation.

C. DATA SUMMARY AND REGIONAL CONTEXT

Table 1 provides an overview of the datasets used in this analysis and clarifies the analytical contribution of each source. The table maps how DoD-filtered FPDS records, USASpending data, micro-purchase logs, SF-44 transactions, and Marine Corps requirement datasets were integrated to build a comprehensive picture of the commercial support environment in the Philippines and the broader INDOPACOM region. Together, these sources establish both the theater-level contracting baseline and the Marine Corps-specific sustainment activity necessary for functional alignment and capability gap analysis. All monetary fields were standardized to the U.S. dollar. The INDOPACOM AOR's commercial support landscape is dominated by major hubs in Japan, Korea, and Australia, with the Philippines showing moderate but steadily increasing activity.



Table 1. Data Mapping

Dataset Name	Description	Primary Analytical Contribution
DoD Contracts in Philippines FY	FPDS-NG and USASpending contract actions performed in the Philippines; includes all services and DoD agencies.	DoD baseline for comparison; establishes contracting volume in the Philippines.
M29000 Purchase Log (SF-44s)	Field-level SF-44 purchases executed by Marine units in the Philippines.	Shows tactical rapid contracting and distributed sustainment activity.
Micro-Purchase Log	Micro-purchases executed by Marine Corps units stationed or operating in the Philippines.	Reveals local vendor availability, redundancy, and sustainment depth.
Federal Contract Actions	Broader DoD contract obligations sorted by PSC across INDOPACOM countries.	Establishes DoD commercial support network depth; used for regional comparisons.
Primary Vendor List	Consolidated vendor list of all DoD vendors in the Philippines.	Represents total marketplace capacity.
PSC April 2025 Taxonomy	Official DoD PSC hierarchy used to classify contracting purpose and map to functions.	Enables functional mapping across Sustainment, Movement and Maneuver, and C2.
AMS PID Contract Requirements	List of requirements tied to Marine Corps exercises, EDCA site activities, and logistics needs.	Identifies Marine Corps-specific sustainment demand for capability gap analysis.
Exercise Support Table	Pre-structured Marine Corps requirement dataset; includes exercise-based and base-operating support needs.	Maps planned Marine Corps requirements to commercial supply; reveals gaps.

D. FUNCTIONAL ALIGNMENT ANALYSIS

The functional alignment analysis examines how the commercial support environment in the Philippines supports the doctrinal warfighting functions of sustainment, movement and maneuver, and command and control. This section analyzes contracting data to identify patterns of vendor diversity, functional capacity, and operational risk within each category. By integrating Marine-Corps specific contracting data within the broader DoD footprint, the analysis reveals where the Philippines has commercial potential, where



redundancy is lacking and where capacity gaps must be addressed for operational effectiveness and alignment with doctrine (Joint Chiefs of Staff, 2019; U.S. Marine Corps, 2018).

1. Mapping Product Service Codes to Warfighting Functions

The foundation of the functional assessment is the translation of PSC codes into doctrinally relevant groupings, as represented in Table 2. Sustainment is represented by codes associated with construction, base operating support, facilities maintenance, subsistence, and supply categories. Movement and maneuver captures transportation services, port support, vehicle leasing, airlift, and related logistics functions. Command and control corresponds to communications equipment, IT services, cyber-related support, network installation, and other telecom-aligned services. The data refinement process ensured that each PSC code in Marine Corps and DoD-wide datasets aligned to one of the functional categories and is represented in Table 2.

Table 2. Product Service Code Mapping and Alignment

Function	PSCs (Categories)	PSC Alignment Description
Sustainment	- Y1XX, Z1XX (Construction, maintenance, facility repair) - S2XX, F0XX, J0XX (Facilities support, utilities, equipment maintenance) - 89XX, 91XX, 13XX, 61XX (Subsistence, fuel, generators, electrical equipment) - V2XX, W0XX (Transportation of supplies, lease/rental of equipment)	PSCs associated with logistics support, construction, base operations, material distribution, maintenance, and life-support functions.
Movement and Maneuver	- V1XX, V2XX, V3XX (Air, ground, and maritime transportation services) - R499, R706 (Transportation support, freight handling) - W0XX, K0XX (Equipment leasing and vehicle procurement support)	PSCs tied to movement of personnel, materiel, equipment, intra-theater lift, and mobility-related contracting.
Command and Control	- D3XX, D4XX, D7XX (IT and telecommunications services) - J0XX (Maintenance of communication equipment) - 58XX, 70XX, 74XX (Communication devices, ADP equipment, software)	PSCs enabling network connectivity, telecommunications, IT infrastructure, and C2 system support.



This mapping approach provides a logical, repeatable way to measure commercial support capacity in the Philippines and follows the structure provided in the PSC Manual. The PSC Manual assigns each PSC to a discrete category and subcategory based on acquisition purpose (DoD, 2025). It also aligns with how joint and Marine Corps doctrine conceptualize logistics and command support relationships in planning and execution (JCS, 2020; U.S. Marine Corps [USMC], 2019). While the underlying data does not include vendor geocoordinates or precise site-specific performance details, PSC grouping produces a high-confidence profile of what the Philippine commercial support environment supports. Decision makers can utilize the dataset in planning scenarios to contextualize geographic relevance and availability.

2. Department of Defense Commercial Support Environment versus Marine Corps Utilization

The functional alignment of the data revealed a significant delta between the DoD-wide commercial capacity and the Marine Corps' actual usage.

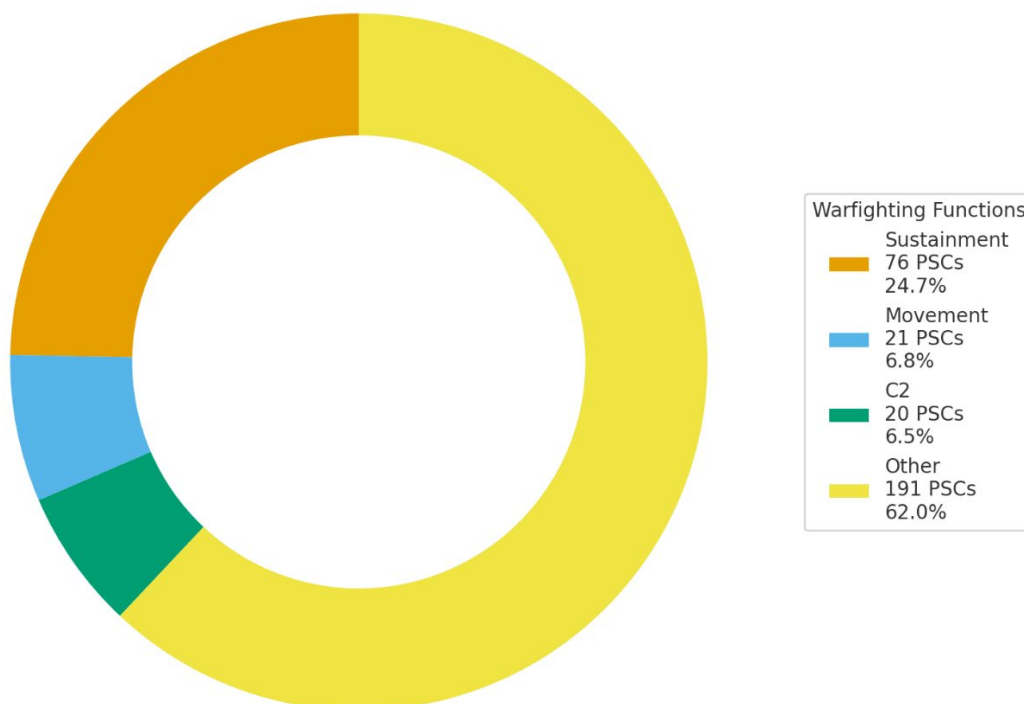


Figure 5. Distribution List across Department of Defense Branches

The vendor list showed a robust commercial support environment utilized by other branches of the DoD across sustainment and transportation, with 308 distinct PSC codes representing the full spectrum of DoD contracting activity in the Philippines. As shown in Figure 6, the breadth demonstrates a diverse and healthy commercial support environment accessed by multiple services and agencies (General Services Administration [GSA], 2024a).

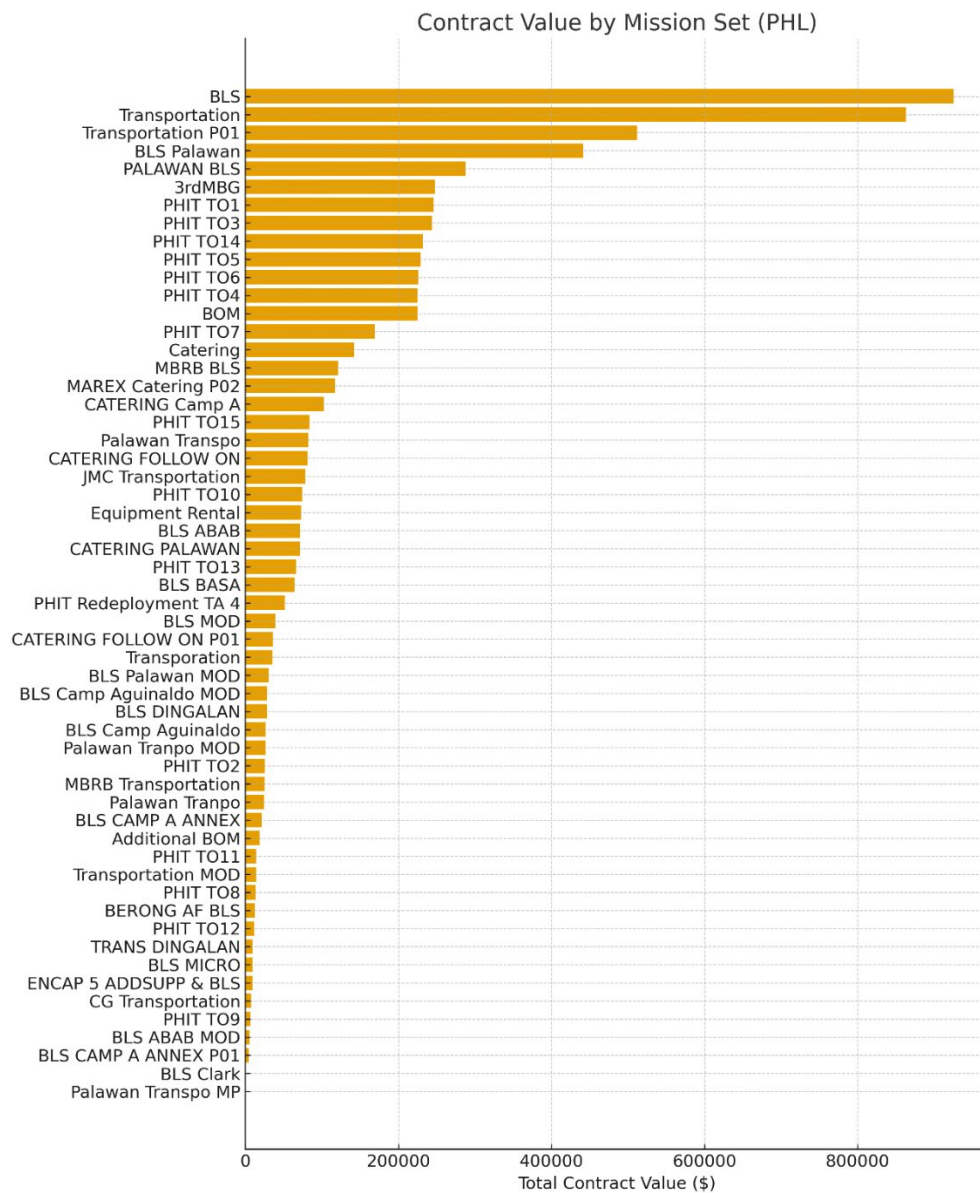


Figure 6. Contract Value by Mission Set



However, Marine Corps contracting activity only draws from a fraction of this broader environment. Across our combined FPDS and Federal Contract Actions datasets for the Philippines, Marine Corps awards roughly \$1.4 million out of about \$65 million in DoD contract value, or approximately 2.2 percent of the available contracting activity, calculated as the sum of USMC obligations divided by the aggregate DoD contract value for the period covered in this study. This fraction was derived using the standard obligation-share formula:

$$USMC\ Share = \frac{Total\ USMC\ Obligations}{Total\ DoD\ Obligations},$$

$$USMC\ Share = \frac{1.44M}{65.1M} \approx 0.0221198 \text{ (or 2.2\%).}$$

FPDS records concentrate overwhelmingly in sustainment and transportation codes, with minimal presence in C2-aligned PSCs. Micro-purchase logs reinforced this pattern, showing routine use of local vendors for consumables, minor construction materials, equipment repairs, and services. (Department of the Treasury, 2024).

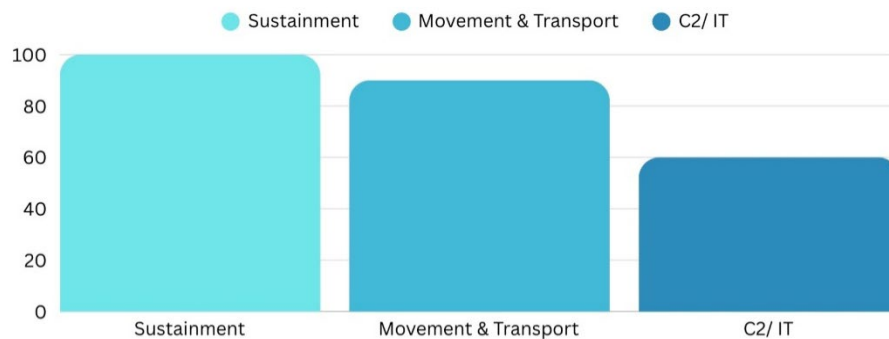


Figure 7. Product Service Code Distribution

To illustrate this disparity, Figure 7 compares DoD-wide PSC usage to Marine Corps-specific usage and highlights the narrow scope of micro purchase transactions. The delta reveals a functional reality that the commercial support environment is healthy and available, but the Marine Corps is not currently engaged with it. The gap between the

overall commercial support environment and the Marine Corps' contracting actions sets the stage for identifying capability shortfalls that can be addressed by decision makers through deliberate contracting actions and joint force alignment and coordination.

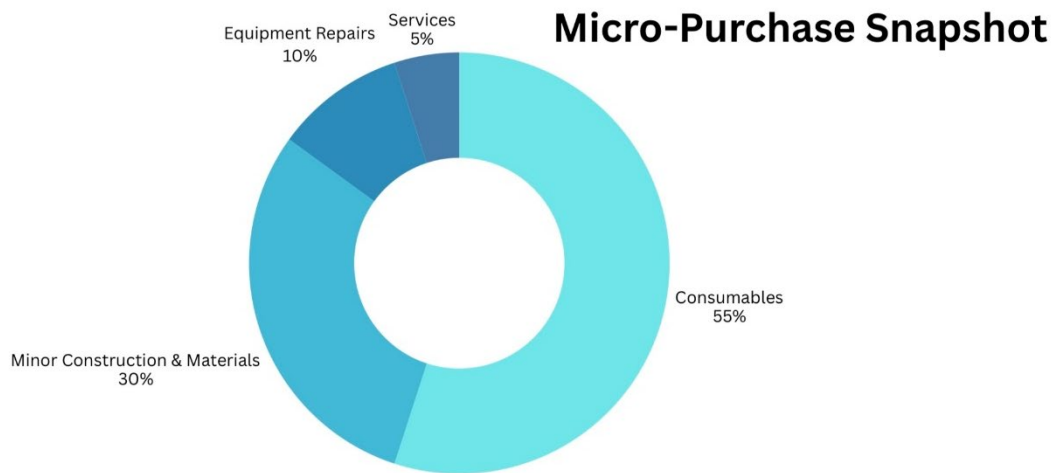


Figure 8. Micro-Purchase Snapshot

3. Functional Capacity and Redundancy

a. Sustainment

Sustainment is the strongest and most diverse commercial function in the Philippines. Across DoD records, sustainment PSC codes constitute the largest share of contracting actions and obligations. The Marine Corps utilized sustainment-related micro-purchases and SF-44 transactions for day-to-day operational needs supplemental to contracting actions, including procurement of tools, constructions materials, hardware, vehicle parts, small generators, consumables, and maintenance services. This heavy reliance indicates a mature and resilient sustainment environment, mostly in urban areas. (GAO, 2022; DoD, 2023a). Table 3 depicts the sustainment-specific PSC mapping.

Table 3. Sustainment-Specific Product Service Code Mapping

Function	PSCs (Categories)	PSC Alignment Description
Sustainment	- Y1XX, Z1XX (Construction, maintenance, facility repair) - S2XX, F0XX, J0XX (Facilities support, utilities, equipment maintenance) - 89XX, 91XX, 13XX, 61XX (Subsistence, fuel, generators, electrical equipment) - V2XX, W0XX (Transportation of supplies, lease/rental of equipment)	PSCs associated with logistics support, construction, base operations, material distribution, maintenance, and life-support functions.

Despite high vendor diversity, the sustainment capability is not evenly distributed across the AOR. For example, sustainment vendors are located in or near Manila, Angeles and Clark, and Cebu.

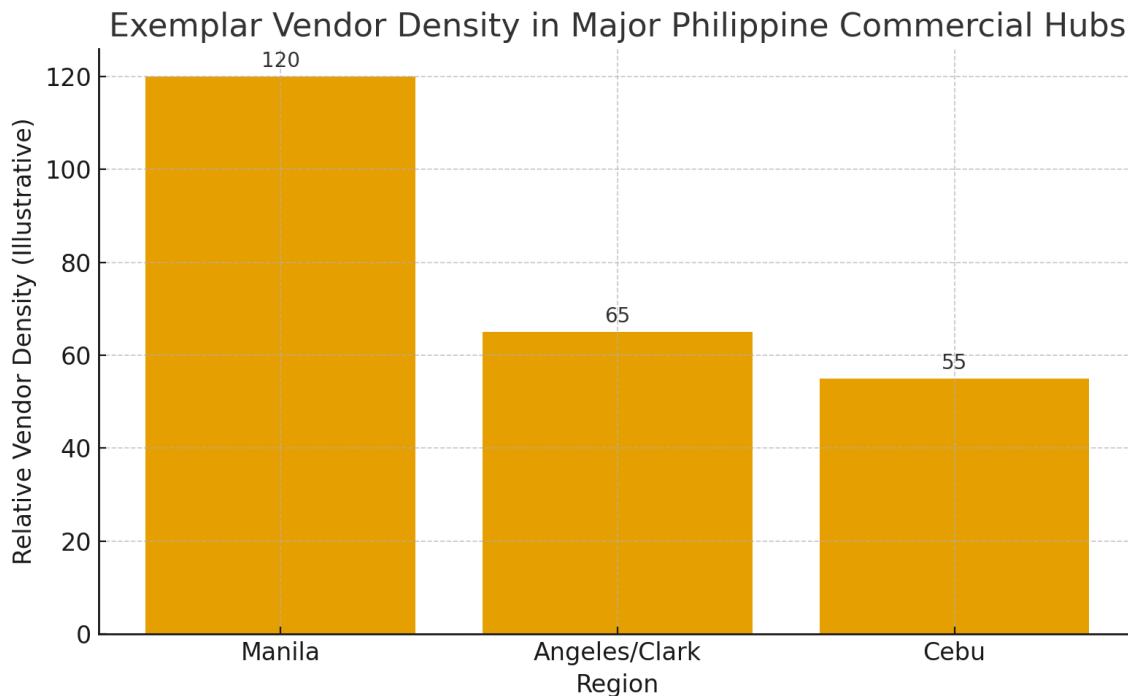


Figure 9. Exemplar Graphic of Vendor Diversity

These regions host the most developed commercial and industrial sectors in the Philippines. Conversely, sustainment capacity decreases significantly in Cagayan and Palawan, where several EDCA sites are located. This geographic imbalance means that while sustainment support is strong during steady-state operations, near major cities, sustainment support in more remote areas require pre-planning and additional lead time.

b. Movement and Maneuver

Movement and maneuver capacity is moderate but fragile. DoD contracting shows significant use of commercial air and ground transportation services. Marine Corps-specific contracting actions include leasing of vehicles for transportation of people, freight services, and limited use of air or sea transport. However, this commercial transportation capacity is concentrated in a few key hubs. The most significant air and sea transportation nodes in the Philippines include Manila, Subic, Clark, and Cebu. These hubs act as chokepoints for the entire logistics system. These hubs are critical nodes in the Philippine logistics network (Japan International Cooperation Agency, 2022).

Table 4. Movement and Maneuver–Specific Product Service Code Mapping

Function	PSCs (Categories)	PSC Alignment Description
Movement and Maneuver	- V1XX, V2XX, V3XX (Air, ground, and maritime transportation services) - R499, R706 (Transportation support, freight handling) - W0XX, K0XX (Equipment leasing and vehicle procurement support)	PSCs tied to movement of personnel, materiel, equipment, intra-theater lift, and mobility-related contracting.



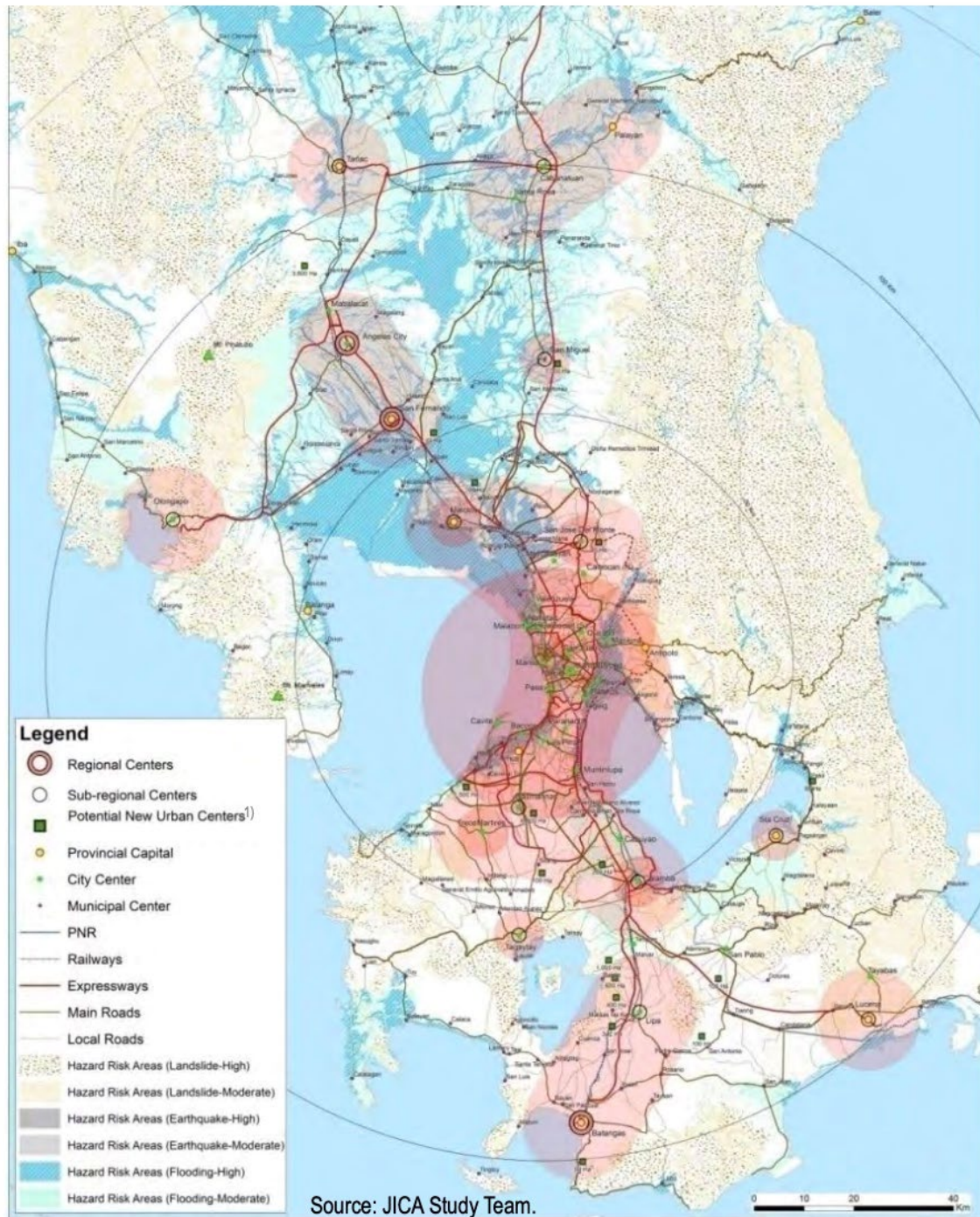


Figure 10. Roadmap for transport infrastructure development for Metro Manila and its surrounding areas. Source: Japan International Cooperation Agency (2022).

Due to the clustering of commercial movement providers in these chokepoints, any disruption could significantly degrade military mobility. During gray-zone activity, political pressure, cyber operations, or kinetic warfare attacks could reduce access to key ports and airfields that support commercial transport. Movement capacity is therefore reliable in steady-state operations but at risk during competition or conflict, especially in provinces that lack logistics depth.

c. Command and Control

Command and control represents the most significant functional gap in the commercial support environment. C2 contracting was extremely rare in the Philippine commercial support environment. Out of all contracting actions in the dataset, only 1.98% were associated with C2-related PSC codes. These actions accounted for just 1.08% of total dollars obligated, indicating that commercial C2 support is not only infrequent but also financially minimal. Philippine commercial firms generally do not provide tactical communications support, tactical networks, or hardware and software maintenance. The lack of C2 commercial support means that the Marine Corps must rely primarily on organic capabilities or joint interagency partners for command and control. The absence of commercial option increases operational risk in crisis, especially in response to adversaries targeting networks, telecommunications, or digital infrastructure. C2 is the most structurally vulnerable warfighting function in this analysis.

Table 5. Command and Control–Specific Product Service Code Mapping

Function	PSCs (Categories)	PSC Alignment Description
Command and Control	- D3XX, D4XX, D7XX (IT and telecommunications services) - J0XX (Maintenance of communication equipment) - 58XX, 70XX, 74XX (Communication devices, ADP equipment, software)	PSCs enabling network connectivity, telecommunications, IT infrastructure, and C2 system support.

4. Geographic Distribution

The functional alignment shows meaningful geographic patterns. Sustainment and transportation vendors cluster around Manila, Angeles and Clark, and Cebu, which correspond to the Philippines' major commercial corridors. Cagayan and Palawan each contain fewer than five PSC-coded vendor types, compared to 20–40 categories in the major hubs. This equates to an 80–90% reduction in commercial redundancy at EDCA sites. (DoD, 2023a).

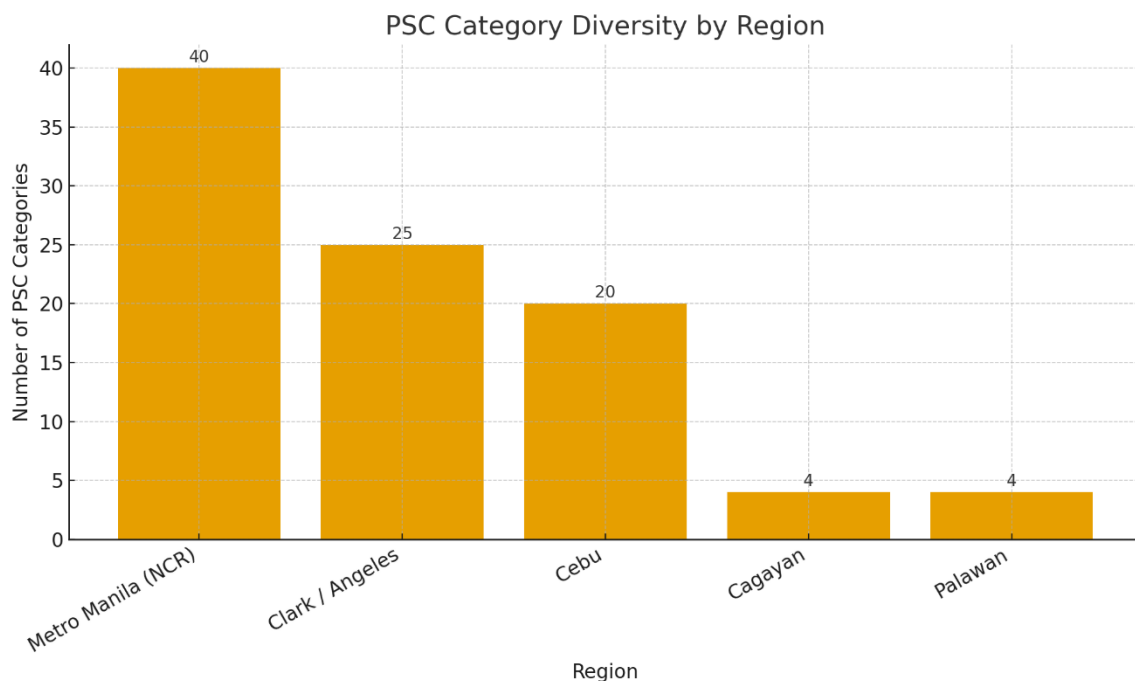


Figure 11. Product Service Code Category Diversity by Region

These geographic disparities reveal that while the overall commercial market possesses significant depth, it is not uniformly distributed. Support remains strong in central Luzon and the Visayas, but it drops sharply in northern Luzon and the western island chains. Command and control is sparse nationwide and nearly nonexistent outside the capital region.

5. Operational Implications

The functional alignment analysis carries several operational implications. Sustainment support is viable in steady state operations near major urban centers, and Marine Corps forces have demonstrated effective use of the Philippine commercial market for small-scale requirements, as evidenced through 456 micro-purchases. Movement and maneuver is more limited. Its reliance on commercial hubs makes it vulnerable to disruption, particularly in a gray-zone scenario. Command and control shows minimal commercial viability, creating a vulnerability for Marine Corps units that depend on resilient communications for distributed operations.

The Philippines' commercial limitations also highlight the importance of bilateral logistics agreements. The United States and the Philippines maintain an active Acquisition Cross-Servicing Agreement (ACSA), which allows reciprocal provision of logistics support, supplies, and services during exercise and contingencies (DoD, 2017; JCS, 2016). ACSA provides an alternative source for fuel, transportation, maintenance, and materiel support in regions where commercial redundancy is sparse. While ACSA cannot compensate for gaps in commercial command and control capacity, it strengthens sustainment and movement options and provides flexibility in contested logistics environments.

These implications underscore the importance of functional analysis for planning. They also highlight the operational areas where the Marine Corps must take deliberate planning measures. Integrating both commercial and bilateral mechanisms in the planning process function as mitigation for commercial support limitations.

These functional patterns shape the level of operational risk associated with emerging concepts such as SIF and EABO. SIF elements require reliable sensing and reporting networks, yet the limited C2 capacity outside the Manila corridor increases risk for dispersed elements operating inside contested space.



6. Functional Capability Gaps

The functional analysis identifies several gaps across the warfighting functions. Sustainment has strong commercial depth, but the geographic concentration limits support for remote EDCA sites within the last mile. Movement and maneuver has moderate commercial capacity but is dependent on critical nodes that present a single point of failure as well as significant dependence on bilateral agreements such as ACSA. Command and control is the true capability gap with minimal commercial redundancy and requires self-sustainment.

These gaps align with the most sensitive requirements in current Marine Corps concepts. Limited C2 depth affects the persistence and survivability of SIF, while uneven sustainment distribution constrains the placement of EABO nodes and limits the flexibility assumed in DMO.

These findings show that while the Philippines presents a meaningful commercial support environment, its strength varies significantly by function and region. This lack of uniformity has significant implications for operations, particularly the operations in direct support of EABO, DMO, and SIF. The analysis in this section directly informs the synthesis and recommendations in Chapter VII, and provides a functionally grounded perspective on the Marine Corps' capability to leverage commercial support via contracting in the Philippines.

E. THE PHILIPPINES CASE STUDY: ANALYTICAL SYNTHESIS

1. Integrated Findings from the Data

The Philippines represents the critical test case for evaluating how the commercial support environment functions under the pressure of a contested logistics scenario. The preceding sections established several foundational patterns: sustainment capacity in the Philippines is deep but geographically concentrated, movement and maneuver support is node-dependent and vulnerable to disruption, and commercial command-and-control capabilities are sparse across the archipelago. Synthesizing these findings reveals a commercial ecosystem that is operationally useful in steady-state conditions but fragile



when mapped against the demands of distributed Marine Corps operations in a gray-zone environment.

At the macro level, the Philippines demonstrates a commercial support environment that is mature enough to sustain routine activity but not yet resilient enough to withstand coercion disruption, or rapid escalation. The DoD-wide dataset shows hundreds of vendors delivering construction, base support, transportation, and maintenance services across multiple PSC categories. However, the Marine Corps draws from only a narrow subset of this broader marketplace. The delta between DoD usage and Marine Corps utilization suggest that significant commercial potential exists, but it remains largely untapped by the Marine Corps; an imbalance with direct operational implications.

The functional disparities identified in Section D becomes clearer when viewed through the lens of the gray-zone scenario described in Chapter II. Sustainment vendors cluster around Manila, Clark, Angeles, and Cebu; regions with robust conditions, these areas provide rapid access to construction materials, basic supplies, generators, tools, automotive parts, and facility maintenance services. However, the distance between these commercial hubs and remote EDCA sites, such as those in Cagayan and Palawan, creates logistical friction. Even without adversary interference, moving supplies or services to these locations requires additional lead time. Under gray-zone pressure, those timelines could lengthen or collapse entirely if commercial vendors face coercion, permitting delays, cyber activity, or broader economic pressure at the national level.

The Philippines amplifies these functional limitations in ways that directly affect concept execution. SIF and EABO allow small units to disperse across austere locations, but the commercial environment in Cagayan and Palawan contains too little C2 and sustainment depth to support persistent operations without external reinforcement. In contrast, the Manila–Clark–Cebu corridor aligns well with the commercial assumptions embedded in these concepts.



2. Operational Meaning under Gray-Zone Conditions

Movement and maneuver support exhibits similar fragility. Commercial transportation capacity is significant but overwhelmingly concentrated in a handful of air and maritime nodes (Manila, Subic, Clark, and Cebu). These chokepoints form the backbone of Philippine logistics and therefore the backbone of U.S. commercial reliance. The same centralization that enables efficient cargo flow in peacetime creates single points of failure during a crisis. A cyberattack on port processing systems, a political decision to restrict outbound cargo, or maritime harassment around key sea routes could isolate entire regions and degrade the Marine Corps' ability to reposition forces or resupply forward elements. In operational terms, the chokepoint dependency identified in Section D means that commercial transportation can support DMO only as long as the foundational infrastructure remains uncontested, a risky assumption in any Philippines-based gray-zone scenario.

The synthesis becomes starker when examining command and control. The commercial C2 ecosystem in the Philippines is almost nonexistent for military-relevant functions. There is limited commercial presence in tactical communications, network support, or cyber-resilient IT services. PSC codes that map to C2 appear infrequently in Philippine contracting data, and when they do, they reflect administrative or enterprise-level IT work, not operational or tactical capability. For distributed Marine Corps forces, this gap means that C2 cannot be outsourced or supplemented locally. C2 will remain an organic requirement or a joint/coalition dependency. In a gray-zone environment where networks may be targeted early, this lack of commercial redundancy becomes a fundamental operational vulnerability.

Taken together, the Philippine commercial support environment reflects an ecosystem that is functionally strong, geographically uneven, and operationally sensitive. It can support sustained presence near urban centers, reinforce EDCA site development, and provide routine sustainment for training, exercises, and steady-state operations. But it cannot, at present, assure resilient support for distributed stand-in forces operating at the edge of the archipelago during prolonged gray-zone competition.



3. Implications for Commercial Resilience and Force Design

These findings reinforce the operational logic of the Marine Corps' emerging concepts. EABO, DMO, and SIF all assume that small, dispersed formations will rely heavily on a combination of organic capability, joint force integration, and local commercial support. The analysis in this chapter shows that while the Philippines offers meaningful commercial opportunities, it also imposes structural constraints, vendor concentration, chokepoint dependency, and limited C2 capabilities create vulnerabilities that Marines must plan around and not discover in crisis.

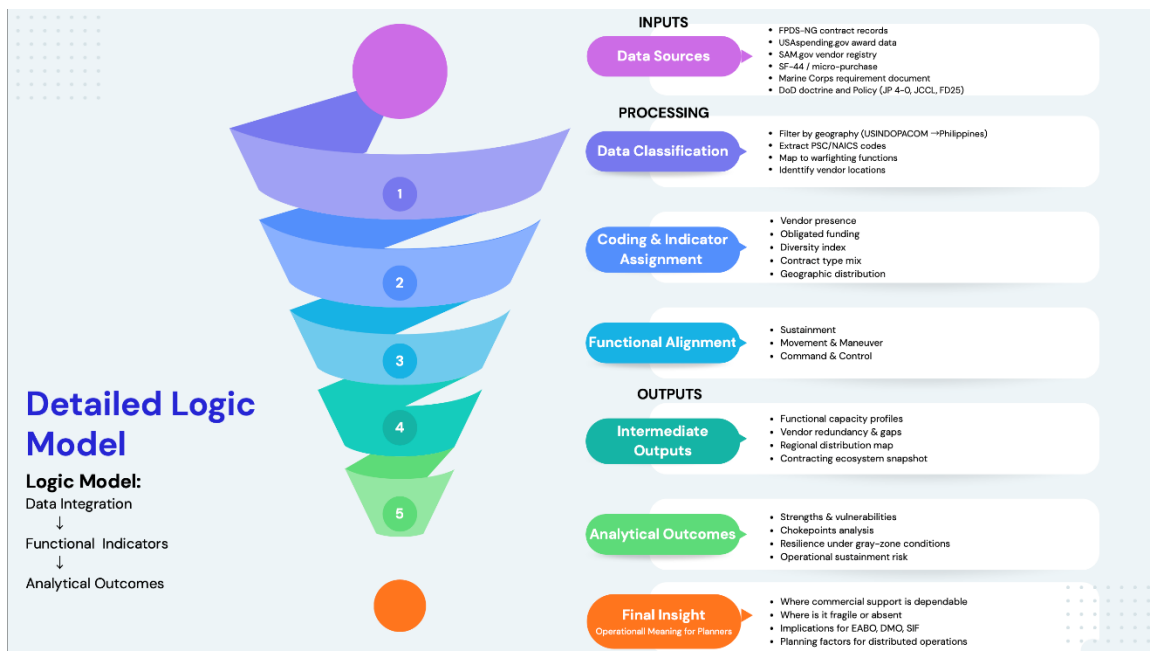


Figure 12. Funneling of Logic Model

As depicted in Figure 12, the Philippines embodies a microcosm of the broader USINDOPACOM commercial landscape: promising but uneven, accessible but contested, and capable but not yet resilient. The synthesized assessment of the Philippine commercial ecosystem provides the analytical bridge to Section F, where the findings are evaluated directly against the study's research questions and translated into operational meaning,

capability implications, and planning considerations for Marine Corps forces operating in contested environments.

In sum, the Philippines offers a commercial support environment with meaningful capacity but uneven resilience. It can reliably sustain steady-state operations near urban centers and established logistics corridors, yet it remains vulnerable at the operational edge where EDCA sites and distributed Marine forces are most likely to operate. Vendor concentration, chokepoint dependency, and the near absence of commercial C2 capacity create structural limits that must be factored into planning. These insights clarify where commercial support strengthens Marine Corps posture, and where it may fail first under gray-zone stress, setting the stage for the broader interpretation and evaluation in Section F.

F. SYNTHESIS AND INTERPRETATION

The integrated findings from the theater-wide patterns and the Philippine case study reveal a commercial support environment that can enable Marine Corps activity in the Philippines, but only under specific conditions. When assessed against the demands of distributed operations in a gray-zone scenario, the commercial support environment demonstrates uneven resilience, functional imbalances, and distinct geographic limitations that planners must understand before relying on it for operational advantage. This synthesis provides a broader interpretation of what the data mean for Marine Corps forces positioned inside an adversary's weapons engagement zone.

From an operational perspective, the Philippines presents a sustainment environment that appears strong at the surface. Vendor diversity, micro-purchase availability, consistent DoD contracting activity, and established logistics corridors through Manila, Clark, and Cebu indicate a functional capacity capable of supporting routine exercises, rotational presence, and steady-state posture. This aligns with doctrinal expectations that sustainment should be flexible, responsive, and robust in support of forward units (U.S. Marine Corps, 2018). However, when viewed through the lens of resilience rather than availability, the limitations become more apparent. The sustainment network is geographically concentrated, reliant on commercial infrastructure that is



vulnerable to political, cyber, or gray-zone disruption, and characterized by limited sustainment density around EDCA sites where distributed Marine forces are most likely to operate. This geographic imbalance, more than raw vendor count, defines the actual readiness of the sustainment environment under contested logistics conditions envisioned in joint doctrine (JCS, 2019).

Movement and maneuver capability introduces even sharper constraints. The commercial transportation network offers meaningful capacity in peacetime, but its dependency on a small number of critical nodes makes it sensitive to disruption. The data consistently show that access to Manila, Subic, Clark, and Cebu largely determines the Corps' ability to move equipment, personnel, and supplies. In a gray-zone environment characterized by harassment, political pressure, or cyber intrusion, the Marine Corps cannot assume reliable access to these hubs. Joint logistics doctrine warns against overreliance on single points of failure and emphasizes the importance of maintaining multiple distribution pathways (JCS, 2019). In this context, the movement environment in the Philippines lacks the redundancy needed to support distributed forces operating along the archipelagic periphery.

Command and control stands apart as the clearest functional gap. Across all datasets analyzed, the commercial telecommunications and IT environment demonstrated almost no relevance to Marine Corps tactical or operational C2 requirements. Philippine industry can support commercial communications, but not the secure, resilient, expeditionary systems needed for stand-in forces. This finding reflects the doctrinal requirement that C2 must be both assured and survivable when operating in contested environments (JCS, 2015; USMC, 2019). The absence of a commercial fallback option means Marine Corps units must rely primarily on organic systems, joint force enablers, and pre-coordinated bilateral support mechanisms. Any disruption to national telecommunications infrastructure during gray-zone activity would degrade commercial services long before it affects U.S. military C2 systems, further widening the functional gap between what is available and what is required.

Synthesizing these functional patterns reveals several broader insights about the commercial ecosystem and the Marine Corps' posture in the Philippines. First, the Corps



is drawing from a narrower segment of the Philippine commercial market than the broader DoD enterprise. This reflects both organizational behavior and real differences in functional suitability. Second, the analytical indicators used in this study proved effective in identifying strengths and limitations. Vendor diversity, functional alignment, and geographic clustering highlighted where capacity exists, where resilience is limited, and where operational risk is concentrated. Third, the relationship between geography and function is decisive for the Marine Corps. Sustainment is only helpful when it is proximate. Movement is only reliable when corridors remain accessible. Command and control is only viable when it is resilient.

Finally, this synthesis underscores an important consideration for planners: commercial support in the Philippines is an enabling asset, not an assured one. It can strengthen forward presence, reduce logistical burden, and enhance sustainment, but it cannot independently sustain distributed stand-in forces under prolonged gray-zone pressure. As recognized in U.S. Indo-Pacific posture documents, the operational environment in the Philippines requires blending commercial capability with organic logistics, joint support mechanisms, bilateral frameworks such as ACSA, and prepositioned assets (DoD, 2023a). The findings of this chapter clarify where commercial support enhances Marine Corps capacity and where it introduces operational risk that must be mitigated through deliberate planning.

G. SUMMARY

This chapter examined the commercial support environment across the Indo-Pacific and applied a detailed functional assessment to the Philippines as the focal case study. The analysis demonstrated that the broader DoD presence in the Philippines accesses a diverse and capable commercial vendor base, while the Marine Corps relies on a narrower subset of that environment. Sustainment capacity is substantial but geographically concentrated in major population centers. Movement and maneuver capability is functional but reliant on a small number of critical logistics nodes. Command and control capability is largely absent within the Philippine commercial sector, which reinforces doctrinal expectations



that expeditionary C2 must remain organic, resilient, and capable of surviving contested environments (Joint Chiefs of Staff, 2015; U.S. Marine Corps, 2019).

The geographic distribution of vendors reinforces these functional observations. Commercial support clusters around Manila, Clark and Angeles, and Cebu. Vendor presence decreases significantly near remote EDCA sites where distributed Marine forces are most likely to operate. This uneven distribution limits the scalability of commercial support and its reliability during gray-zone disruption or operational friction. The commercial environment can effectively support steady-state training and routine engagement, but it cannot serve as the sole foundation for sustaining dispersed Marine units in contested conditions. The difference between functional capacity and functional resilience is central to understanding where commercial support is helpful and where it is not.

Overall, the findings indicate that commercial support in the Philippines meaningfully enhances Marine Corps posture but cannot replace the need for organic logistics, joint integration, bilateral agreements, or prepositioned resources. The strengths and limitations identified in this chapter provide a functionally grounded understanding of what the Philippine commercial environment can offer to Marine Corps operations. These insights form a foundation that will support planning, risk mitigation, and decision-making in the chapters that follow.



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V. LIMITATIONS

This thesis does not offer a complete solution to theatre level sustainment challenges, but it aims to give planners and acquisition professionals a clearer starting point, grounded in data and aligned with operational reality. The absence of direct interviews or surveys at this stage limits the study's ability to assess perceptions of reliability or responsiveness. However, the framework is designed to be extensible and could be paired with qualitative inputs or subject matter expert interviews in future work.

This research is constrained by several factors. First, open-source data may lack granularity regarding contract execution, subcontracting, or actual delivery of services. Many obligations listed in FPDS represent ceiling values or task orders, not realized performance. Second, the warfighting function mapping involves some subjective interpretation unless clearer DoD tagging becomes available.

Although this study provides a structured and data-driven assessment of the commercial support environment in the Philippines, several limitations affect the scope, generalizability, and completeness of the findings. These limitations do not undermine the value of the analysis but highlight areas where caution is warranted in interpretation and where further research would strengthen understanding.

The first set of limitations relates to data availability and fidelity. This study relied on DoD contracting systems such as FPDS, USASpending, SAM, micro-purchase logs, and SF-44 records. While these systems provide authoritative information on contracting actions, they do not capture every dimension of commercial capability. Many Philippine companies capable of supporting DoD requirements do not have active SAM registrations, do not appear in FPDS transactions, or have minimal federal contracting history. As a result, the vendor diversity captured in this dataset reflects only the portion of the commercial market that has participated in or been visible to U.S. government contracting channels. This means the analysis likely underrepresents the full Philippine commercial ecosystem, especially in sectors that have not historically supported DoD missions.



A second data limitation involves geographic precision. The datasets used for this study do not consistently include vendor geocoordinates or detailed place-of-performance information. Without precise location data, the analysis relies on city-level or region-level proxies to approximate geographic clustering and distribution. This approach captures broad commercial patterns but cannot reliably determine micro-level proximity to specific EDCA sites, ports, or airfields. As a result, conclusions regarding site-specific supportability should be considered directional rather than definitive. Additional research using geographic information systems (GIS), vendor surveys, or locally derived business registries would be required to validate the true spatial distribution of commercial capacity.

A third limitation concerns functional interpretation through PSC codes. These coding systems are useful categorization tools but imperfect proxies for operational capability. Individual vendors may perform work across multiple functional areas even if their codes capture only one. Similarly, PSC codes do not reveal the quality, scalability, or resilience of vendor performance. Therefore, while PSC code mapping provides a logical and replicable framework, it does not fully represent the complexity of commercial behavior or the nuance of capability within each warfighting function.

Additionally, this study's findings are influenced by Marine Corps contracting patterns, which are comparatively narrow relative to the broader DoD presence in the Philippines. The Marine Corps may have underutilized certain commercial sectors due to organizational preferences, exercise structures, or lack of awareness of vendor availability. This means that the capability gaps identified in the analysis may reflect Marine Corps exposure rather than absolute commercial limitations. A comparative study of U.S. Army, Navy, or Air Force contracting behavior in the Philippines may reveal additional commercial capabilities that were not captured in this dataset.

Finally, the analysis is limited by its focus on publicly available and unclassified information. Access to classified or operationally sensitive contracting data, especially for forward-deployed or special access programs, is beyond the scope of this study. Classified assessments of telecommunications, infrastructure resilience, foreign investment patterns, and adversary threat capabilities were outside the scope of this thesis. These factors may influence the true resilience of commercial capabilities under gray-zone or contested



conditions. The operational implications presented here should therefore be understood as grounded in unclassified analysis and should be further evaluated through classified planning channels before informing operational decisions.

Despite these limitations, the methodology and findings of this study provide a structured, replicable, and operationally meaningful foundation for understanding how commercial support can and cannot contribute to Marine Corps operations in the Philippines. The limitations identified here provide an opportunity for future research to refine, deepen, or expand the analytic framework developed in this thesis.



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VI. CONCLUSION

The findings of this study highlight several areas where the Marine Corps can strengthen its ability to leverage commercial support in the Philippines while mitigating functional and geographic vulnerabilities. The following recommendations are grounded in the observed patterns of vendor distribution, functional capacity, and operational risk, and are intended to inform planning, posture, and future research.

A. RECOMMENDATIONS

The Marine Corps currently draws from a narrow subset of the available commercial ecosystem. Increasing vendor engagement, particularly in Luzon and the Visayas, can expand sustainment and transportation options. This should include contractor outreach events, coordination with the U.S. Embassy Joint U.S. Military Assistance Group (JUSMAG), and use of industry days focused on Philippine suppliers. By broadening the pool of known and approved vendors, the Marine Corps can increase redundancy and decrease reliance on a small number of suppliers.

The analysis shows that vendor density is lowest near EDCA sites in Cagayan and Palawan. To mitigate this gap, the Marine Corps should utilize early contracting strategies, pre-awarded IDIQ mechanisms, and targeted prepositioning of sustainment assets in these regions. Prepositioning should focus on power generation, Class IV materials, engineering equipment, and basic sustainment packages that are not reliably available in local markets. This approach aligns with doctrinal principles of operational reach and logistics preparation of the environment.

Movement and maneuver capacity in the Philippines relies heavily on Manila, Clark, Subic, and Cebu. The Marine Corps should prepare alternative logistics pathways that reduce dependence on these nodes during gray-zone disruption. This may include contracting smaller inter-island shipping companies, coordinating with the Philippine Navy and Coast Guard for lift support, and identifying viable commercial airfields and seaports outside the main corridors. Wargaming and rehearsal of logistics under degraded access conditions should become part of INDOPACOM planning cycles.



Given the negligible commercial capacity for tactical communications, C2 must remain organic to USMC units or delivered through joint enablers. This study cautions against attempts to contract C2 support within the Philippine market. Instead, planners should focus on layered C2 architecture, mobile communications packages, cyber-hardening, and joint interagency communications agreements. Coordination with U.S. Navy and Air Force C2 assets should be strengthened to ensure distributed resilience.

The Acquisition and Cross-Servicing Agreement (ACSA) with the Philippines provides access to fuel, transportation, maintenance, and emergency services in areas where commercial redundancy is insufficient. Marine planners should institutionalize ACSA as a standard support mechanism for exercises, EDCA operations, and distributed activities. The Marine Corps should also expand its understanding of host-nation logistics authorities, foreign military sales processes, and memorandum-of-understanding mechanisms that can complement contracting shortfalls.

Marine Rotational Force-Southeast Asia (MRF-SEA) will depend heavily on host-nation infrastructure and commercial support. This study recommends incorporating commercial support assessments into annual planning cycles, EDCA site development discussions, and partner capacity-building activities. The Philippine case study offers a model that can be replicated in other regional environments to guide posture decisions.

Several limitations in this study can be resolved through additional research. GIS mapping of vendors, transportation routes, and EDCA locations would provide a more precise understanding of geographic supportability. Surveys or interviews with Philippine businesses, chambers of commerce, or logistics associations may reveal additional vendor capacity not captured in DoD databases.

The analytical framework developed in this study can be applied to Vietnam, Indonesia, Malaysia, Japan, and other regional partners. Extending the model across the region would provide a comparative view of commercial support capacity and inform where stand-in forces can most effectively distribute across the theater.

These recommendations provide practical, doctrinally aligned, and analytically grounded steps that planners and decision-makers can use to strengthen Marine Corps



operations in the Philippines. They aim to close functional gaps, improve resiliency, and enhance posture through a combination of commercial engagement, bilateral agreements, organic capabilities, and future research.

B. FUTURE RESEARCH

The findings and limitations of this study reveal several areas where additional research would enhance understanding of commercial support capacity in the Philippines and improve the Marine Corps' ability to plan for distributed operations in the Indo-Pacific. Future research should examine port throughput, telecommunications resilience, and the role of foreign investment in critical infrastructure. The following areas represent the most relevant opportunities for future investigation.

First, additional research is required to improve geographic precision within the commercial support environment. The datasets used for this thesis do not consistently include vendor geocoordinates or accurate place-of-performance information. A follow-on study that incorporates geographic information systems (GIS), commercial mapping tools, or local business registries would allow for more precise assessments of commercial support near EDCA sites, ports, airfields, and potential expeditionary advanced base locations. This geographic refinement would be especially valuable for evaluating the "last tactical mile" supportability of remote operating areas.

Second, future research should examine the Philippine commercial ecosystem through local business surveys, industry interviews, or partnerships with the Philippine Chamber of Commerce and Industry. Many Philippine companies capable of supporting military or humanitarian missions do not appear in U.S. federal procurement systems. Direct engagement with local industries may reveal additional sustainment, engineering, construction, transportation, or technical capabilities that DoD has not historically accessed. Such research would help validate or refute the patterns identified in this study and provide a more complete understanding of latent commercial capacity.

Third, there is a need to evaluate Philippine infrastructure resilience using independent assessments. This includes deeper analysis of port throughput, inter-island transport capacity, telecommunications network vulnerability, and the effects of foreign



investment in critical infrastructure. Understanding how these systems perform under stress, including gray-zone disruption or natural disasters, would help the Marine Corps distinguish between commercial capacity in steady-state conditions and commercial resilience under contested conditions.

Fourth, future studies should explore the role of bilateral logistics agreements and host-nation support authorities in greater depth. This thesis identified the potential value of the Acquisition and Cross-Servicing Agreement (ACSA) in mitigating commercial gaps, but additional analysis is needed to understand its practical limitations, the responsiveness of Philippine logistics providers under ACSA, and opportunities to expand or operationalize the agreement in support of stand-in forces.

Fifth, the functional assessment framework developed in this study can be applied more broadly across the Indo-Pacific. Applying the same methodology to partner nations such as Vietnam, Indonesia, Japan, Malaysia, or Thailand would allow planners to compare commercial environments across the theater. A regional comparison would help the Marine Corps refine its distributed posture, identify where commercial support is most viable, and understand where organic or joint capabilities must compensate for commercial shortfalls.

Finally, future research should examine how commercial support integrates with emerging Marine Corps force design concepts. This includes understanding how commercial markets can support stand-in forces, expeditionary advanced bases, distributed maritime operations, and the Marine Littoral Regiments. A deliberate focus on commercial-military integration would help refine not only logistics planning but the broader operational design of Marine Corps forces in the Western Pacific.

Together, these research opportunities can strengthen the analytical foundation for understanding commercial support in the Indo-Pacific, improve operational planning for future crises, and help align Marine Corps posture with both the opportunities and limitations of regional commercial ecosystems.



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