

Implications of Piracy on Supply-chain Security
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Introduction

The vulnerability of the maritime sector has been noted in several prominent private and public government documents, both domestic and worldwide. In addition to maritime terrorism, the maritime region harbors many other threats to our sovereignty, natural resources, environment, economic prosperity, and social welfare. While perhaps not as devastating as a maritime terrorism event, maritime piracy challenges not only maritime security itself, but also cargo supply-chain security. Piracy networks abuse the maritime environment for their own illicit purposes, primarily for financial gain, often disrupting the free flow of commerce. Unsecured and ungoverned waters are potential havens for pirate activity, providing relatively cheap and inconspicuous movement. In essence, piracy is a crime that preys upon the cargo supply-chain, slowly feeding off its network of intricate transportation systems. The sheer importance of maritime trade makes it a lucrative market for piracy groups to engage in high profit margins while maintaining a low cost structure.

On average, more than 6.8 billion tons of commerce move across the world's oceans, with a worth over \$7.4T USD (Badolato, n.d., p. 7; Rae, 2006). Increasing worldwide maritime piracy and the growing power and influence of organized maritime crime groups are significant threats to democratic institutions and free market systems in many countries and regions. It is imperative that seafaring governments take steps to increase supply-chain security through the mitigation of piracy networks and engagement in wide-ranging maritime security improvements in order to maintain sovereignty and a free market economy.

Understanding Maritime Piracy

Most public critics and security experts correlate the act of piracy to an act of terrorism, stating that each is analogous to the other in regard to the end means. In contrast, some governments categorize piracy within a port area as maritime-armed robbery. One reason piracy has been so difficult to define is that different people can view the same act and each interpret it according to his or her own experiences, prejudices, and values. The problem is compounded when we consider international politics and social and cultural differences between nations. For example, when the public learns of a piracy attack against a ship, most have a tendency to associate the event with that of Walt Disney's™ *Pirates of the Caribbean*. Today's acts of piracy are very far removed from the Hollywood movie sets. Maritime piracy can be dispelled of the sense of romanticism set against a backdrop of swashbuckling, pillaging, and ruthless behavior. Piracy attacks against ships present a danger to both a ship's crew and the surrounding environment. In order to understand piracy and its affect upon the maritime transportation domain, one must first have a working definition of piracy.

Under both the international and U.S. domestic definitions, piracy is an attack by a non-government vessel or aircraft against another vessel operating on the high seas, undertaken for private gain. According to the International Maritime Organization (IMO) and the United Nations Convention on the Law of the Sea (UNCLOS), piracy is defined as an act taking place in international waters and maritime-armed robbery is defined as occurring in the controlled waters of a nation state (International Maritime Organization, 2002). The International Maritime Bureau (IMB)—the internationally accepted data source for both terms—defines piracy and

armed robbery as “an act of boarding or attempting to board any ship with the apparent intent to commit theft or any other crime and with the apparent intent or capability to use force in furtherance of that act” (International Maritime Bureau, 2006). In contrast, piracy used by recognized terrorist organizations as a source of funding is considered a terrorist logistical support action, not an act of piracy or armed robbery. While there are several definitions for piracy, it is best defined as an act of armed robbery at sea with an end means for financial gain. The economic motivations for piracy largely depend upon maritime trade’s stability (Greenberg, Chalk, Willis, Khilko, & Ortiz, 2006). As reported by the United Kingdom’s Maritime and Coastguard Agency, the most frequent type of piracy event involves boarding a vessel and stealing its cargo (Maritime and Coastguard Agency, 2005). Typically, the cargo most sought after is containerized cargo, primarily due to its accessibility, value, and quick turnover time on the black market.

For the most part, piracy groups operate by watching and learning, looking for vulnerabilities in shipping companies’ security procedures. These groups have a tendency to operate in small teams. There is evidentiary proof that piracy groups have, in most cases, been able to obtain the cargo manifests of vessels and use them to select target vessels to attack. Within the maritime shipping industry, this type of document often passes through many hands. It passes with little to no effort to maintain a secure hold on the information that can be obtained by piracy groups regarding a ship’s cargo and location. Subsequently, a ship may be at a high risk of an attack without having any knowledge or pre-indicator warnings that an attack is imminent. This presents undue concern to many seafarers who pass through high-risk trade routes in piracy prone areas. The majority of attacks that occur are done via small to medium sized *go-fast* boats, its crews manned with automatic weapons. The boats either sneak up to board or out-manoeuvre the targeted vessel, boarding and then commandeering the ship. Ships are usually hijacked and taken to nearby ports where cargo is offloaded ashore or lightered onto smaller boats and barges.

Regional Concerns of Piracy

For centuries, maritime piracy has plagued the commercial shipping industry, ultimately impeding the international cargo supply-chain. In today’s dynamic maritime trade environment, maritime piracy remains a high concern throughout the global supply-chain arena. “Piracy attacks appear to be most prevalent in countries with emerging economies, numerous estuaries and offshore islands, large stretches of remote coastal areas, and ongoing political insurgencies” (Reinhardt, n.d., p. 1). Piracy events are usually categorized as occurring in five regions of the world: West Africa, East Africa, Indian Ocean, Central and South America and the Caribbean, and Southeast Asia. The maritime supply-chain has always remained susceptible to piracy events, primarily due to the complexity and vast openness of trade routes on our world’s oceans. On average, most piracy events occur within the coastal regions of a nation while ships are at anchorage awaiting cargo operations or while in port conducting cargo operations. IMO and IMB report that nearly 72% of the reported incidents in 2007 had occurred while the target vessels were at anchor or in port.

Overall, piracy statistics have been somewhat steady within the world’s maritime regions. A review of piracy activity in 2007 indicates that there were 282 piracy events reported to the IMO. As indicated by the IMO, “the total number of incidents of piracy and armed robbery against ships, reported to have occurred or to have been attempted from 1984 to the end of December 2007, has risen to 4,515” (International Maritime Organization, 2008, p.2). However,

according to the IMB, this is the result of an increased global awareness and reporting system and not necessarily an increase in actual piracy events. Compared to 2004, acts of piracy actually decreased by approximately 20%. Piracy in waters off South and Central America and the Caribbean have typically accounted for the smaller portion of documented worldwide piracy events, reaching only 9% of the total number of reported events. In contrast, several piracy events in recent months off the coast of Somalia and East Africa have attracted worldwide media attention, labeling these regions as the new hot beds for acts of piracy. This region accounts for 22% of the incidents that were reported during 2007 (West Africa has similar figures). By far, though, the most significant piracy events have and still occur within the Southeast Asia region (Singapore Straits, Malacca Straits, South China Sea), capturing 28% of the total number of events that occurred in 2007. This region boasts one of the richest export oriented economies in the world with a host of countries relying on its maritime supply-chain. It is reported that over 50,000 vessels transit this region annually, making it one of the most dynamic shipping trade routes in the world.

Effects of Piracy on the Maritime Supply-chain

Because of globalization, unrestricted international trade, expansion of global markets, and exponential growth in the world's users population, domestic and international trade is expected to more than double in the next 20 years (United States Maritime Administration, 2001). As estimated by the International Maritime Organization, "\$30 billion in worldwide annual losses makes the theft of cargo one of the most serious property crimes in the entire world" (Edward, n.d., p. 1). The International Chamber of Commerce estimates that financial losses incurred by piracy attacks against the supply-chain average \$8 to \$16B USD annually. Losses such as this create an enormous burden upon vessel owners/operators, shippers, suppliers, and consumers. A series of piracy attacks directed at several seafaring nations in 2008 have forced many governments to adopt a new perspective towards piracy and armed robbery at sea, and to take a new approach to better deter piracy acts. Major maritime trading nations such as Spain, the Philippines, Denmark, and Indonesia have experienced serious acts of piracy that continue to signal future threats to their maritime industries. To these and other nations, it is widely understood that the human and material cost of these acts is far greater than the cost of preventing them. If maritime piracy attacks were to escalate to the point that major shipping traffic must alter its trade routes, the effects would be staggering. Astronomical freight rates and merchandise costs would result, producing undesirable ripple effects to consumers (Mitropoulos, 2005). As an example, certain computer transportation carriers have had to redirect their delivery routes because of a substantial increase in cargo theft over past years. This has caused some OEMs to add an additional \$150 to the average price of a laptop (Chubb Corporation, n.d.).

Piracy has both economic and political effects. Due to the frequency and often severity of piracy events against ships, the relative security cost equivalent is often factored into the insurance risk premiums for marine operators and owners (Singer, 2006, p. 20). "[This is] something which needs to be handled with a lot of responsibility because the insurance market reacts to this based on the best information it has," as stated by a spokesperson from Lloyd's Marine Intelligence Unit (Rae, 2006). It is also no secret that the market impacts from piracy can have detrimental effects that can be spread across the entire cargo supply-chain, creating local and regionalized economic dislocations. The Australian Department of Foreign Affairs and Trade (2003) states that "it creates the need to carry higher levels of inventory due to the potential for . . . piracy to cause bottlenecks in delivery systems, . . . undermining supply-chain

management” (Australian Department of Foreign Affairs and Trade, 2003, p. 7). This is primarily due to today’s globalized market economies, relying on *just-in-time* manufacturing and distribution of goods. As a result, the real economic costs are transferred to related shippers through the suppliers (Mitropoulos, 2005).

From an international perspective, the International Ship and Port Facility (ISPS) Code and the 1988 IMO Convention for the Suppression of Unlawful Acts (SUA) against the Safety of Maritime Navigation were designed to provide the protocols and an international framework through which contracting governments could enhance their capacity to detect and deter acts of unlawful intervention (such as piracy) to international shipping. Over 110 nations are party to the SUA and 167 nations are signatory to the ISPS Code. While there has been much progress in the maritime security arena in identifying and thwarting piracy and other forms of illicit activity, significant piracy events continue to occur, especially in the Gulf of Aden area and off Somalia. Two disturbing trends are on the rise and have created sizeable impacts upon shipping companies: (a) the increased levels of violence used in piracy attacks in order to secure a ship’s profitable cargo and (b) the downrange effect piracy events have on the cargo supply-chain.

The East Africa region has received notable attention for its rampant increase in reported piracy attacks since September 2008. For example, a Ukrainian freighter called the *MV Faina* (carrying weapons) was hijacked. Cruise liner companies have altered and canceled passenger tours, with some companies disembarking passengers in a safe port prior to entering piracy prone waters and flying them to meet back up with the ship once it is safe again. In another incident, pirates endangered the cruise ship *M/S Nautica* firing upon the ship’s 650 passengers and 400 crew. Further, a review of IMB and IMO reports indicate that many reports often go unreported by shipping companies because of the potential for a spike in insurance premiums for cargos and loss in future charter agreements. Therefore, the number of piracy events that occur may be greater than what is actually reported. Despite worldwide maritime authorities’ outreach efforts to shipping companies, it is quite common for company management to pressure shipmasters into not reporting a piracy event. This is because the port state that will or is hosting the victimized vessel will normally conduct laborious investigations into the incident, thereby causing further delays and expenses—often outweighing the value of the cargo itself.

With 75% of the earth covered in water, the amount of effective procedures to mitigate policing piracy is scarce. Notable maritime security expert Paul Singer of Securewest International states, “The growing threat of piracy and armed attack has met with a wholly inadequate response from [vessel] flag states, coastal states, and the authorities” (Singer, 2006, p. 22). Maritime government authorities and security critics argue that the efficacy of the ISPS Code and SUA can only do so much. Shipping companies are faced with turning to third party policing resources that operate under non-standardized operating policies, charging outrageous service fees in return for less than adequate service. Currently, the majority of seafaring nations continue to rely on international naval and coalition forces patrolling waters and conducting ship escorts because many coastal nations (such as Somalia) cannot adequately deal with the problems of piracy. Many of these forces are already limited in their security force structure (availability of patrol boats and duration of patrols) and over-stretched across an extremely wide operating environment in order to subdue acts of piracy (Singer, 2006, p. 20).

The focus of dealing with piracy needs to start on shore, not at sea. The issue lies with those nations that lack a stabilized framework of governance and fail to pursue adjudicating piracy offenders. Until such nations take an aggressive stance against such acts, we will

continue to see piracy spread, simply compounding the problem for maritime transportation companies.

Nexus to Maritime Terrorism

The possible nexus between maritime piracy and maritime terrorism is a growing concern to maritime security professionals. Stated in a white paper produced by JINSA Research Analyst Jonathan Howland (2005), “The nexus between piracy and terrorism affords terrorist groups a lucrative cash flow, access to deadly cargoes, and a means to launch spectacular attacks with the potential to wreak havoc on the global economy.” Important lessons can be learned from piracy events when addressing terrorism. Due to the increased sophistication and precision of attacks, piracy acts may signal the start of serious preparations for maritime terrorist attacks (Reinhardt, n.d., p. 3). Some critics have urged that recent maritime piracy events further highlight the need to protect maritime transportation systems, clearly indicating “terrorist[s] could find the weak-link in a trusted supplier’s supply chain” through the exploitation of pirate groups (Young, n.d.).

It would be foolish to argue against statements such as this, especially when one considers past maritime terrorism incidents, which have threatened the maritime supply-chain. For instance, the 1985 hijacking of the passenger ship *Achille Lauro*, numerous maritime attacks by the Sri Lankan Tamil Sea Tigers since the 1990s, and the 2002 bombing of the oil tanker *Limburg*. Using a colloquial explanation, terrorists want to add something dangerous to a vessel while a piracy group wants to steal it. Terror organizations typically operate behind the scenes, as opposed to piracy groups who are more deliberate and forthright in their actions. It is almost impossible to have a vessel 100% secure when dealing with the threat of piracy in addition to terrorism; therefore, it is imperative that a vessel’s crew operate in a diligent manner when it comes to applying practical security measures.

Piracy events continue to occur even though national and international maritime security regulations have been enacted. Prompted by a continuance of piracy assaults, the United Kingdom House of Commons Select Committee on Transport conducted an assessment to determine the current state of piracy and its impact upon the maritime supply-chain. In its published report, the Committee found that there has been very little done to curb the effects of piracy on the supply-chain, despite the efforts of IMO, IMB, and maritime nations.

The bottom line is that maritime piracy generates considerable problems for transportation shippers, suppliers, consumers, and international law enforcement agents on an annual basis, just like organized crime networks. The threat from piracy to supply-chain security is real and continues to extend across the maritime domain.

Effectiveness of Anti-piracy Initiatives

World efforts to combat piracy began to increase in 2001 because of greater international recognition of the problem and increased political will. Action by international agencies, bilateral and multilateral efforts by affected countries, and efforts by the shipping industry strive to stem the rising tide of piracy activity. For example, after 2001, the IMO increased its efforts to combat piracy by developing an intimate relationship with both foreign governments and commercial shipping interests through hosting technical seminars, conferences, and meetings to examine what measures might be successful (Rae, 2006). In addition, the IMO encouraged more regional cooperation and multilateral efforts to combat piracy. The attacks of September 11, 2001, inspired the IMO to enact the 2004 ISPS Code. As a result, the Code set provisions for ships to strengthen and add additional protective layers of defense to a vessel and port’s security

via risk management processes. The commercial shipping industry also began to apply pressure to various governments to step up their anti-piracy efforts. Case in point, the Association of South East Asian Countries (ASEAN) has taken an aggressive approach with its key-trading partners to address piracy and develop innovative security provisions for ships that trade within the region (Reinhardt, n.d.).

While programs such as the ISPS Code have improved security, a more focused approach in maritime security planning needs to take root. Security measures to mitigate the threat of piracy for the shipping community needs to take on a more proactive front rather than a reactive posture. As previously mentioned, some governments have already begun to take this path. However, there needs to be a more “holistic approach . . . to tie the various players and components along the supply-chain together into a maritime supply chain security scheme” (Khalid, n.d.). This involves not just the vessel owners/operators and port facilities (which is premise behind the ISPS Code), but also freight handlers, distribution companies, and warehouse owners. In combating piracy, Southeast Asian countries have found that a critical element is collaboration with bordering countries’ with a focus on maritime governance. This enterprise-wide approach goes beyond simply conducting patrols, escorts, and response services; it integrates a framework of deliberate and crisis-action planning at a regional level. The result has been a standardized operational effort that is efficient and aligned with the international maritime security guidelines (such as the ISPS Code). In addition, collaboration by nation states to subvert acts of piracy provides a layered defense; this enhances cooperation, professional exchange of information, and capacity building, especially when international navies and maritime security forces are spread so thin, as mentioned previously.

Conclusions

Maritime commerce is vital to the international economy. Therefore, we must ensure that all sea-trading partners employ adequate security measures in order to prevent piracy attacks from crippling the maritime commerce system. Several successful piracy attacks combined with minimal deterrents have made piracy an attractive option for criminal elements, preying off the cargo supply-chain. The majority of attacks will continue to target commercial shipping, especially in waters off East Africa. With the globalization of trade, piracy groups can use a very efficient international transportation system as a means to increase their financial gain and potentially disrupt the cargo security supply-chain. It is most appropriate that governments focus significant attention to strengthening maritime security efforts in an effort to not only decrease terrorism, but to destabilize those groups that conduct illicit acts against the commercial shipping community—all without impeding economic activity. This requires an unprecedented level of cooperation at every level of government as well as strong international and private sector partnerships. Charles Reinhardt (n.d.) states it best:

The simple reality is that in the aftermath, ports, carriers, vessel operators, shippers, forwarders, brokers and the like will find themselves on one of two lists: those who are known and trusted—or those who are not. The latter will face the far more costly penalty of being shut out of world markets for a long time to come. (p. 4)

International cooperation to regulate the maritime industry to increase and validate security for vessels, facilities, and infrastructure has come a long way in recent years. Maritime security initiatives led by the IMO, International Chamber of Commerce, and the European Union have provided greater visibility of those risks associated within the maritime industry. Despite the improvements made to maritime security, seafaring governments must still band together in

order to create a bi-lateral system of information exchange and best practices to curb the risk to the supply-chain network from the threat of piracy.

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