MARITIME TRADE SECURITY:
PROMOTER OF TERRORISM?

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This thesis finds that the increasing cost of international trade resulting from certain post-9/11 maritime trade security policies may help to promote terrorism. By inadvertently levying disproportionate non-tariff trade barriers against those countries most likely to harbor terrorist organizations, these programs restrict lesser-developed nations’ ability to develop, and thus leave them more susceptible to becoming terrorist safe havens. In support of this argument, the thesis is divided into three main sections. The first demonstrates the strong link between a nation’s foreign trade and its level of development through a brief survey of international trade theory, by highlighting the reliance of some international actors on trade promotion as a means for increasing development, and by analyzing several case studies in which it is clear that trade played an instrumental role in increasing overall development. The second section expands upon this argument by examining the relationship between underdevelopment and terrorism. It investigates the issue by quantitatively analyzing terrorist attacks against the United States according to the level of development in those countries liable for producing or harboring the groups responsible for the attack. The third section looks at the effect of post-9/11 maritime trade security measures on trade and more specifically the policies’ adverse effects on developing countries. It outlines key U.S. maritime trade security programs – namely the Customs-Trade Partnership Against Terrorism and the Container
Security Initiative – and how some of their components constitute non-tariff barriers, especially for developing countries. At an international level, the chapter explores the costs associated with the International Ship and Port Security Code as well as Authorized Economic Operator programs. The thesis concludes by acknowledging that if trade promotes development, and low development is related to a nation’s propensity to harboring terrorism, then there is a logical if indirect link between trade and terrorism. If domestic and international maritime trade security programs disproportionately limit trading opportunities for the countries most likely to harbor terrorist groups, it becomes clear that such programs may inadvertently promote the conditions found to be most closely linked to countries that harbor terrorist organizations.
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CHAPTER 1
INTRODUCTION

The terrorist attacks of September 11, 2001, and the global war against terrorism that followed, increased security measures around the world. New security measures increased the cost of international commerce.

Businesses now experience longer delays at airports, seaports, and land-border crossings than they once did; their security equipment and personnel expenditures have skyrocketed; and the insurance fees that they pay for air and maritime transport have risen significantly.\(^1\) Evidence suggests that frictional trading costs have also increased since 9/11. For example, there are now additional air security surcharges of between $0.10 and $0.15 per kilogram and sea container surcharges of up to $12 per cubic meter.\(^2\) According to estimates by the Organization for Economic Co-Operation and Development (OECD), new security measures for trade cost between five and twenty percent of trade profits (or $60 to $180 billion in world trade flows) and impose a disproportionately high cost on developing countries.\(^3\) Insurers raise premiums on cargo and vessels traveling to and from developing countries because of uncertainties about the

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\(^2\) Ibid.

adequacy of local security procedures, and developing countries tend to rely more heavily on trade and investment inflows—particularly the more developed among them.\(^4\)

A study that assumed a one-percent increase in the cost of trade worldwide calculated an aggregate welfare loss of about $75 billion. While countries in North America, Western Europe, and Northern Asia lost the most in absolute terms, those in the developing world—namely South Asia, North Africa, and the Middle East—were affected relatively worse.\(^5\)

Although many of the maritime trade security policies implemented after 9/11 aim to make international trade more secure from direct terrorist activities, there is little evidence to suggest that such policies address two of the underlying causes of terrorism: desperation and poverty.\(^6\)

This thesis finds that the increased cost of international trade resulting from certain maritime trade security policies may help to promote terrorism. By inadvertently levying disproportionate non-tariff trade barriers against those countries most likely to harbor terrorist organizations, these programs restrict lesser-developed nations’ ability to develop, and thus leave them more susceptible to becoming terrorist safe havens.

In support of this argument, Chapter Two, “Trade vs. Development,” sets the groundwork by demonstrating the strong link between a nation’s foreign trade and its level of development. It does this by first examining literature on academic and economic

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\(^4\) Ibid.

\(^5\) Walkenhorst, 20.

theories of trade and development. It then highlights the reliance of some international actors on trade promotion as a means for increasing development and analyzes several case studies in which it is clear that trade plays an instrumental role in increasing overall development.

To demonstrate the link between trade and terrorism, Chapter Three, “Development and Terrorism: The Vulnerability of the Developing World,” expands upon the arguments made in Chapter Two by examining the relationship between underdevelopment and terrorism. If trade promotes development, and low development is related to a nation’s propensity to harbor terrorism, then there is a logical link between trade and terrorism. Although both current literature and past studies find a significant link between underdevelopment and terrorism, this chapter further investigates the issue by quantitatively analyzing terrorist attacks against the United States and the level of development in those countries liable for producing or harboring the groups responsible for the attack.

The fourth chapter, “Maritime Trade Security: A Barrier to International Trade,” investigates the effect of post-9/11 maritime trade security measures on trade and more specifically the policies’ adverse effects on developing countries. The chapter outlines key U.S. maritime trade security programs – namely the Customs-Trade Partnership Against Terrorism and the Container Security Initiative – and how some of their components constitute non-tariff barriers to trade, especially for developing countries. At an international level, the chapter explores the costs associated with the International Ship and Port Security Code and Authorized Economic Operator programs.
The thesis concludes by connecting the arguments made in Chapters Two, Three, and Four. If trade promotes development, and low development is related to a nation’s propensity to harboring terrorism, then there is a logical link between trade and terrorism. Similarly, if domestic and international maritime trade security programs disproportionately limit trading opportunities to the countries most likely to harbor terrorist groups, it becomes clear that such programs may inadvertently promote the conditions found to be most closely linked to countries that harbor terrorist organizations. The conclusion considers several policy alternatives as mitigation mechanisms that could counter this problem.
CHAPTER 2
TRADE AND DEVELOPMENT

As discussed in Chapter One, demonstrating the positive effects of trade on development is essential to determining the unintended consequences domestic and international maritime trade security programs have on a nation’s development.

According to economic theory, trade and foreign direct investment (FDI) make global markets more efficient by encouraging an international division of labor and by disseminating information related to technological advancements. These gains in efficiency improve economic growth, which increases development.¹ Similarly, export-promotion strategies, which change the system of incentives in a country to favor exports while minimizing or eliminating export barriers, have become the main avenue nations explore to open their products to the international market. Some countries - such as Mexico and Taiwan – have established duty-free processing zones in which inputs and raw materials are imported duty free.²

This chapter aims to demonstrate a strong link between a nation’s foreign trade and its level of development. Divided into four main sections, it first examines the literature on academic and economic theories of trade and development. It then examines the differences between import substitution and export promotion. To demonstrate the


influence of the idea that trade promotes development, the third section highlights the reliance of some international actors on trade promotion as a means for increasing development. The final section takes a look at four specific case studies in which it is clear that trade played an instrumental role in increasing overall development.

**International Trade Theory**

The foundation for international trade in modern economics was first laid in 1776, when Adam Smith’s *An Inquiry into the Nature and Causes of the Wealth of Nations* challenged the central idea of Mercantilism – an economic theory considered to be a form of economic nationalism in which the prosperity of a nation is dependent upon its supply of capital, assuming that the global volume of international trade is constant. Smith held that it was impossible for all nations to become rich simultaneously by following the mercantile system because of its zero-sum nature. In his analysis of international trade, he criticized mercantilist policies that restricted the quantity of trade, concluding that those policies erroneously defined the wealth of a nation in terms of the amount of bullion it held, rather than the amount it traded, or its flow of goods. Instead Smith suggested that all nations could increase their wealth if they practiced free trade and specialized their

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production in accordance with their absolute advantage. The proper governmental policy toward international trade should be similar to that toward domestic trade, allowing voluntary and unregulated commerce take place in free and open markets. A laissez-faire policy, he believed, would lead to increased growth and development in all countries.

Building on the works of Adam Smith, David Ricardo’s 1817 book, *On the Principles of Political Economy and Taxation*, introduced the concept of comparative advantage. According to this theory, it benefits a country to specialize in the goods it produces most efficiently, and to trade with other countries for those goods they produce less efficiently, even when capable of producing all products more efficiently than its trading partners. Ricardo explains comparative advantage using an example of wine and cloth production in England and Portugal:

> In Portugal it is possible to produce both wine and cloth with less labor than it would take to produce the same quantities in England. However the relative costs of producing those two goods are different in the two countries. In England it is very hard to produce wine, and only moderately difficult to produce cloth. In Portugal both are easy to produce. Therefore while it is cheaper to produce cloth in Portugal than England, it is cheaper still for Portugal to produce excess wine, and trade that for English cloth. Conversely England benefits from this trade because its cost for producing

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6 Ibid.

cloth has not changed but it can now get wine at a lower price, closer to the cost of cloth.\footnote{NCCR Trade Regulation: Swill National Centre of Competence in Research, “The Theory of Comparative Advantage,” http://phase1.nccr-trade.org/images/stories/mira/comparative%20advantage.pdf (accessed April 11, 2010).}


In the early 1900s, the theories of Smith and Ricardo were built upon and reformulated in the Heckscher-Ohlin model (H&O). As a result, the idea of comparative advantage now forms the basis of modern trade theory.\footnote{Palgrave Jones, “Heckscher-Ohlin Trade Theory,” University of Rochester, http://www.econ.rochester.edu/Faculty/jones/Palgrave_Jones_on_Heckscher_Ohlin.pdf (accessed April 7, 2010).} Developed by Eli Heckscher and Bertil Ohlin at the Stockholm School of Economics, the H&O model of international trade builds on the theory of comparative advantage by using the resources of a particular region to predict patterns of commerce and production. The H&O model holds that countries will export products that require readily available manufacturing processes and
inputs, while importing products for which the country lacks adequate natural resources or manufacturing capabilities to produce. The model also assumes variation in the input resources used in production to be the only difference between countries. The benefits derived from such trade activities are outlined in trade-growth theory which argues that trade helps to stabilize governmental and trade institutions in three distinct ways: 1) through diffusion of intermediate goods and technologies; 2) through market expansion for output from innovation; and 3) through diffusion of general knowledge.

**Import Substitution vs. Export Promotion**

Since the works of Smith, Ricardo, and Heckscher and Ohlin, international economics has expanded beyond the theories of absolute and comparative advantage, and the H&O model. During the 1950s and 1960s two schools of applied economic growth theory emerged: import substitution and export promotion. While import substitution was popular into the 1980s before falling into disfavor, export promotion has seen substantial success and has become the trade policy of choice for many developing nations.

**Import Substitution**

Import substitution development strategies impose high tariff and nontariff barrier on imports while simultaneously expanding domestic production to replace imports. Such strategies...

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13 Ibid.

strategies are based on the premise that by substituting imported products with locally produced goods, developing countries will be able to insulate domestic markets from external competition until nascent industries have been strengthened to a point at which they can be competitive.

Many developing countries – including most in Latin America – embraced import substitution during the 1950s and 1960s. This, however, yielded disappointing results, as most of these countries failed to achieve either industrialization or economic growth. Coincidently, countries in East Asia forwent import substitution in favor of export-oriented policies, which many economists believe contributed to the region’s economic growth in during the 1970s and 1980s.15

One criticism of import substitution, however, is that in order to reduce the expense of industrialization, governments often fixed the cost of food at an artificially low level. This had the unintended consequence of promoting industrialization at the expense of the farmers, which comprised the majority of the population in most countries that had adopted import substitution.16 Similarly, increasing tariffs on manufactured goods in hopes that multinational companies would produce or assemble these goods locally instead of importing them often had the unintended consequence of making products more expensive and of a lower quality.17

17 Ibid.
In the few examples where import substitution has had been successful, it has been accompanied by open trade policies targeted at specific sectors. For example, India’s import-substitution policies like the establishment of the Indian Institute of Technology and other regional technology institutes benefitted supply-side conditions in the Indian software industry, facilitating growth and giving India a comparative advantage in the industry. Due to the lack of demand for software domestically, the industry quickly became export oriented.\(^\text{18}\)

The consensus among most economists, however, is that on its own – without an export element – import substitution is not the best method for promoting development. This is primarily due to the following issues: 1) developing countries exhaust capital into industries that could not possibly survive without protection, thus taking limited resources away from more important infrastructure and social programs; 2) import substitution raises prices of import-competing goods and draws resources away from a country’s export-oriented capabilities, in turn lowering output, depressing income, and reducing exports; and 3) domestic markets are often not large enough to support optimal-size outputs on their own, causing overcapacity.\(^\text{19}\) As a result of these criticisms and the success of export promotion in East Asia, import substitution had become largely


unpopular by the mid-1980s.\textsuperscript{20}

**Export Promotion**

Export-promotion represents the use of programs to incentivize exporting by domestic firms. Such programs include export information and advice, product and market identification and development, financing pre- and post-shipment, foreign representation, payment guarantees, trade fairs and visits, and training. Overall, these incentives have yielded better development outcomes than import-substitution strategies. First taking root in East Asia in the 1950s and 1960s, export promotion has been adopted by developing nations worldwide. As a result, many developing countries have more than doubled their exports since the mid-1980s.\textsuperscript{21} Major theoretical support for export promotion is based on the following assumptions:

1) That a rise in exports enables the existing production units in the exports sector to increase the rate of utilization of capacity or to create fresh capacity through the additional demand for such goods from the foreign market. 2) That such a rise in export earnings enables the existing units of production in the economy to create and utilize capacity by making it possible for them to make the necessary complementary imports from abroad.\textsuperscript{22}

Consequently, some governments expect sustained export promotion to help accumulate the capitol necessary to “cover the cost of imports, solve balance-of-payment problems,

\begin{itemize}
help reduce the burden of increased foreign indebtedness, and create additional employment.”

The appeal of export promotion is not limited to the developing countries. In fact, most governments give some support to domestic companies looking to break into the international market. The Export-Import Bank of the United States, for example assists U.S. companies in financing the export of their goods and services abroad. Similarly, Canadian Exports, a government-run website, helps to promote Canadian products to importers from around the world.

Although a large majority of contemporary economists believe that export promotion and trade liberalization are necessary to increase levels of development, there remains some disagreement concerning the extent to which trade influences development. Some scholars contend that openness can lead to under-utilization of resources when institutional or market imperfections exist. Others argue that though export promotion has benefited many developing countries, its effects have varied drastically from one

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country to the next due to differing economic and institutional structures. Although increased trade helps development, it is not the primary driver of development. Without stable economic and governmental institutions, they argue a nation’s standard of living cannot increase.

These points are not without merit. While they assert that trade alone does not directly lead to development, they do not contradict the widely held view that that export promotion and trade liberalization are necessary to increase levels of development. Instead, they serve to qualify trade as a necessary, but not sufficient, condition for development to occur.

**Trade and Development among International Actors**

Numerous non-governmental organizations and government agencies from around the world base their policies on the understanding that trade promotes development. The Center for Global Development holds that “trade has the potential to be a significant force for reducing global poverty by spurring economic growth, creating jobs, reducing prices, increasing the variety of goods for consumers, and helping countries acquire new technologies.”

According to the U.S. Agency for International Development (USAID), for example, economic growth is the only way for poor countries to reduce and eradicate

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29 Ibid.

poverty. Such growth enables countries to generate the resources they need to withstand unstable financial markets, energy crises, and food shortages, while addressing internal development challenges like illiteracy, and poor health. Accordingly, USAID works to: 1) develop well-functioning markets in developing countries by championing microeconomic reforms; 2) enhance access to productive activities by helping poor households to obtain credit and other financial services needed to start small businesses and create income; and, 3) strengthen the international framework of policies, institutions and public goods by supporting international research, and helping poor countries to adopt international standards and practices such as customs procedures and financial management systems.31

Similarly, the Organization for Economic Co-operation and Development (OECD) argues that trade promotes development by increasing competition, promoting the transfer of technology, and enabling firms to exploit economies of scale.32 As a result, a major aspect of the OECD’s work is focused on strengthening trade policy dialogue with developing and emerging economies. In particular, the OECD aims to foster a better understanding of the effects of trade liberalization and promotion among developing countries, and the benefits of integrating these economies into the global multilateral


trading system. Through the Aid for Trade Initiative, USAID seeks to help those least developed countries lacking trade-related infrastructure and capacity to harness the power of trade and promote economic growth, poverty reduction, and development. The Aid for Trade Initiative aims to achieve these objectives by increasing trade, diversifying exports, maximizing the linkages with the domestic economy, and increasing adjustment capacity.

The United Nations (UN) has similar views concerning the relationship between trade and development. At a recent meeting of the United Nations Conference on Trade and Development (UNCTAD) ambassadors echoed arguments made by leading economists that “no country has been able to tackle poverty without increased trade because trade is essential for economic growth.” Worldwide increases in exporting accounts for nearly 40 percent of GDP growth in both developed and developing countries, excluding the United States, and has enabled developing countries to amass about three-quarters of the world’s currency reserves – over $4.4 trillion. As a result,

33 Organization for Economic Co-operation and Development, “Trade and Development,” http://www.oecd.org/department/0,3355,en_2649_39863354_1_1_1_1_1_1_1_00.html (accessed April 11, 2010).


the UN argues “international trade is inextricably linked with financing for development, and makes a strategic contribution to economic growth.”  \(^{37}\)

**Case Studies**

**Chile**

Chile is an example of how trade openness can promote development. Seen as one of South America’s most state-oriented and stagnant economies in the early 1970s, Chile transitioned to more liberal trade and export-oriented policies. Today Chile is one of the region’s strongest nations.  \(^{38}\)

Supported by a growing socialist movement, Salvador Allende was narrowly elected President of Chile in 1970. Upon taking office he enacted a program to nationalize private industries and banks, expropriate massive tracts of land, and collectivize the nation’s farms, which lead to an acute decline in domestic production and the export of goods.  \(^{39}\) As a result there was a severe shortage of food, consumer goods, and manufactured products. Inflation during this time reached 1,000 percent per annum.  \(^{40}\) By 1973, Chilean society had split into two hostile factions; the deterioration of the

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economy prompted mass demonstrations, recurring strikes, widespread rural unrest, and outbursts of violence.\textsuperscript{41}

On September 11, 1973, amid an economic meltdown, General Augusto Pinochet overthrew Allende in a military coup. The new government immediately moved to reverse Allende’s socialist policies by adopting free-market economic policies focused around export-oriented trade.\textsuperscript{42} Due to the elimination of non-tariff barriers, the lowering of tariff rates, and policies aimed at promoting foreign direct investment, Chile has experienced virtually uninterrupted growth since the early 1980s.\textsuperscript{43}

The country’s reliance on the export-oriented growth model has led to higher yields and greater productivity. While in 1970 Chile exported only $33 million worth of goods – primarily made up of agricultural, forestry, and fishing products – by 1991 total exports had jumped to $1.2 billion.\textsuperscript{44} Today, Chile exports more than $66 billion per year, and is ranked as South America’s most stable government, becoming the Organization for Economic Co-operation and Development’s first member in South America in January, 2010.\textsuperscript{45}

\textsuperscript{41} Ibid.


\textsuperscript{43} BNET, “Chile: sound economic policies promote growth and trade,” \url{http://findarticles.com/p/articles/mi_m1052/is_n6_v113/ai_12257901/} (accessed March 21, 2010)


Chile has substantially increased its access to foreign markets, by signing trade agreements with 59 countries, including bilateral free trade agreements with Mexico (1991), the United States (2004), Australia (2009), and Turkey (2009). Within the first five years of the U.S.-Chilean free trade agreement, bilateral trade increased by over 200 percent. Similarly, Chile attracts foreign direct investment with liberal profit and remittance rules guaranteeing the national treatment of foreign investors and allowing up to 100 percent foreign ownership in most sectors. It is clear that in the case of Chile, trade had dramatically improved the country’s level of development.

China

The People’s Republic of China is another example of a country that spurred significant economic growth by adopting export-led growth policies. Ruled for centuries by dynastic emperors, the modern state was established in 1949 after a civil war between the Chinese Nationalist government under Chang Kai-shek and the Chinese Communist Party under Mao Zedong. Between 1949 and the early 1970s, China’s economy was relatively isolated, having only limited interaction with world markets. Starting in the 1970s, however, China opened its boarders to international trade, established a securities

§ (accessed March 22, 2010); and Organization for Economic Co-operation and Development, “Chile Signs Up as First OECD Country in South America.” http://www.oecd.org/document/1/0,3343,en_2649_34487_44365210_1_1_1_1,00.html (accessed March 21, 2010).


47 BNET, “Chile: sound economic policies promote growth and trade,” http://findarticles.com/p/articles/mi_m1052/is_n6_v113/ai_12257901/ (accessed March 21, 2010)
market, liberalized trade laws, facilitated rapid growth in non-state sectors of the economy, and organized a banking system.48

These reforms shifted the focus of economic activity from agricultural products to manufactured goods. As a result, millions of Chinese citizens moved from the countryside to urban areas, creating a significant growth in manufacturing capacity and thus a need for greater access to foreign markets. Trade liberalization in the form of export-oriented growth policies has greatly aided China in rapid GDP growth. Between 1980 and 1990, China’s GDP increased at an average rate of 9.5 percent per annum. Over the same period, exports grew to 11 percent of GDP, nearly twice the global average.49 Similarly, between 2001 and 2008, net exports accounted for over 60 percent of China’s growth, a 20 percent increase from totals in the 1990s, and significantly larger than other countries in the region.50 China’s export oriented policies have also enabled it to significantly increase its share of world exports: from close to zero percent in the early 1970s, to 3.5 percent in 1999, to 9.33 percent in 2008.51

China’s export-led growth practices over the past four decades has seen the nascent markets of the 1970s, focused on low quality and mass-produced products,
transition into a market geared toward producing higher-end products in a value-added supply chain. As a result, China now produces a larger share of the world’s sophisticated products, including computer chips.\textsuperscript{52} These value-added exports are believed to contribute nearly 30-percent growth to the Chinese economy. This represents a significant increase from the 19 percent share of value added growth in the 1990s.\textsuperscript{53}

Poland

As one of the former Warsaw Pact countries closest to the West, Poland has significantly liberalized its economy. By integrating into the western economic model, Poland has avoided many of the economic problems facing other former Soviet states to become Europe’s sixth largest economy.\textsuperscript{54} Over the past six years, Poland’s exports have increased from $36 billion in 2003 to $180 billion in 2009, an increase of 400 percent.\textsuperscript{55} This included substantial gains coming from the export of livestock, machine and transportation equipment, and manufactured goods.\textsuperscript{56} Poland’s focus on manufactured goods and inputs has sheltered the country from the recent global economic crisis.

\textsuperscript{52} Ibid

\textsuperscript{53} Ibid

\textsuperscript{54} PMR Business Portal on Economy, Investments, and Politics in Poland, “Poland Climbs Above Netherlands to Become EU’s Sixth Largest Economy,” http://www.polishmarket.com/79998/Poland_climbs_above_Netherlands_to_become_EU_s_sixth_largest_economy_.shtml (accessed April 01, 2010).


\textsuperscript{56} PMR Business Portal on Economy, Investments, and Politics in Poland, “Poland Climbs Above Netherlands to Become EU’s Sixth Largest Economy,” http://www.polishmarket.com/79998/Poland_climbs_above_Netherlands_to_become_EU_s_sixth_largest_economy_.shtml (accessed April 01, 2010).
By adopting export-oriented trade policies after the collapse of the Soviet Union, Poland has opened its economy to multiple trading partners, mostly in Europe. Germany is by far its largest trading partner, purchasing nearly 15 percent of Poland’s exports. France, Italy and the United Kingdom are also major importers of Polish goods.\(^5^7\)

After opening its borders and increasing foreign trade, Poland’s GDP has increased significantly. After a negative growth rate in the first years after the dissolution of the Warsaw Pact, Poland’s GDP grew from -5 percent to nearly 7 percent annual growth in 1998.\(^5^8\) This is a remarkable change considering Poland’s nearly 60 years of Communist rule.

**South Korea**

South Korea has been one of the most dynamic economies in Asia over the past 40 years. Devastated by the Korean War, South Korea’s GDP per capita in the 1960 ranked among the lowest in the world. In response to its economic decline following the war, South Korea initially focused on GDP growth by raising government-financed lending, implementing severe import restrictions and by increasing consumer thrift. While these policies helped to improve GDP growth, they were unable to protect the Korean economy against the Asian economic crisis in 1997.\(^5^9\) After this economic shock, successive governments began liberalizing trade restrictions to increase foreign direct

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investment. These policies enabled GDP growth to stabilize at four to five percent annually in the first decade of the twenty-first century. While countries worldwide have experienced significant economic decline due to the current global recession, South Korea’s reliance on export oriented trade policies coupled with its robust currency have enabled it to maintain its strong economic standing.  

South Korea has also expanded its focus on export-oriented trade by signing a number of free trade agreements. In 2007, for example, it signed a free trade agreement with the European Union. As a result, South Korean exports in goods and services to European markets in 2007 and 2008 totaled nearly $50 billion. Similarly, in 2009, South Korea signed a free trade agreement with the Association of Southeast Asian Nations (ASEAN), allowing domestic industries increased export opportunities within the ASEAN free trade area. South Korea has also negotiated with the United States over the past several years to implement a free trade agreement. Due to the current US political environment, however, congressional leaders have indicated that it is unlikely that a free trade agreement with South Korea will be considered before the end of 2010.

60 Ibid
62 Association of Southeast Asian Nations, “ASEAN Member States,” http://www.aseansec.org/18619.htm (Accessed April 07, 2010). ASEAN is made up of the following countries: Brunei Darussalam, Cambodia, Indonesia, LAO PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.
Implemented after the Asian economic crisis in 1997, these free trade agreements have formed the basis for the sustained economic growth experienced by South Korea in recent years. South Korea’s continued pursuit of a U.S. free trade agreement indicates its commitment to the export oriented trade policies that have contributed to its impressive economic growth.

**Conclusion**

By analyzing the theories of absolute and comparative advantage, and considering the validity of the H&O model, it is clear that many developing nations have much to gain through international trade. While there are examples of where import substitution and export promotion have both been successful in promoting economic growth and development, most scholars agree that export promotion is a more effective method. In fact, many international organizations, like the OECD, and the UNCTAD work to promote exports and international trade as a means of fostering development in the developing world.

As demonstrated in the case studies explored above, openness to trade, and export promotion have had significant positive effects on developing countries from all corners of the globe. While developing nations should learn from these examples by lowering trade barriers and promoting exports domestically, developed nations should also work promote a global atmosphere in which tariffs and non-tariff trade barriers are minimized.

In the broader context of this thesis, understanding the positive effects of trade on development is essential to determining both the unintended consequences domestic and
international maritime trade security programs have on a nation’s development, and – as elaborated upon in the next chapter - the relationship between trade and terrorism.
CHAPTER 3

DEVELOPMENT AND TERRORISM: THE VULNERABILITY OF THE DEVELOPING WORLD

Many scholars and policymakers see a direct negative correlation between the level of development in a country and the probability that a country might harbor terrorist organizations; the issue, however, is more complex than this. Although this chapter does find substantial evidence to support the theory that countries supporting terrorism tend to be from the developing world, a breakdown of the data shows that those countries most likely to support terrorism within the developing world are the relatively more developed ones.

Expanding upon the findings in Chapter Two, this chapter examines the relationship between underdevelopment and terrorism. If, as determined in Chapter Two, trade promotes development, and low development is related to a nation’s propensity to harbor terrorist organizations, then there is a logical link between trade and terrorism. To examine the relationship between underdevelopment and terrorism, and to determine whether or not there is a significant link between the two, this chapter is divided into two main sections. The first section considers both current literature and past studies showing a connection between underdevelopment and terrorism. The second section investigates terrorist attacks against the United States and the level of development in those countries liable for producing or harboring the groups responsible for the attacks. This chapter finds that the relationship between development and those countries that harbor terrorist groups, especially when considering direct and indirect attacks on the United States, is
much more complex than the academic literature at first suggests. The correlation between terrorism and development is more than a simple negative relationship. While it is true that developed countries are much less likely to host terrorist organizations than developing countries, this study also shows that the least developed countries in the world are the least likely to harbor terrorist organizations.

**Definitions**

**Terrorism**

The term “terrorism” is highly fractious and complex, but for the purposes of this study it is defined using the U.S. Federal Criminal Code. Terrorism involves violent or harmful acts that appear to be intended to intimidate or coerce a civilian population, to influence the policy of a government by intimidation or coercion, or to affect the conduct of a government by mass destruction, assassination, or kidnapping. Terrorist attacks often transcend national boundaries.¹ For the scope of this paper, neither state-sponsored terrorist attacks nor U.S.-based domestic terrorist attacks are considered in the analysis. State-sponsored terrorist attacks against the U.S. are acts of war, while U.S.-based domestic terrorism and the issues that motivate such crimes are largely outside the realm of foreign policy.

**Development**

Development is the process of bringing out the capabilities or the possibilities of a state in order to make it more advanced or effective. Due to the term’s ambiguity (especially when referring to the status of countries) this study relies on a set of development-related

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definitions used by some of the world’s most respected organizations: the World Bank, the United Nations, and the U.S.-based Fund for Peace. The definition of development varies greatly among these organizations, as do the criteria used to measure it. For this reason, the three separate indices produced each year by these groups are used as independent variables to gauge the level of development of countries promoting terrorism. Cross-referencing the three separate results for each country thus provides a broader basis for capturing the concept of development and its implications.

**Development vis-à-vis Terrorism in Academic Literature**

Much has been written concerning the causes of terrorism, and many scholars acknowledge that only a small minority of people who share similar personal backgrounds or have experienced the same conditions become terrorists.\(^2\) Although the data on individual terrorists is limited, studies suggest that the “outstanding common characteristic of terrorists is their normality, [and] terrorism often seems to be the connecting link among widely varying personalities”;\(^3\) thus, much of what causes individuals to engage in terrorism is grounded in environmental factors.

In this regard, academic literature suggests that terrorist activity is directly linked to a country’s level of development. According to the theory of relative deprivation, people in countries with higher levels of economic development are more satisfied and, thus, less prone to rebellious action. Various findings suggest a negative relationship

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\(^{3}\) Ibid., 390.
between the level of economic development and terrorism. 4 Whereas a higher level of income tends to discourage such particularly intense forms of conflict as terrorism, underdevelopment limits a state’s capacity to control communal groups and intensifies grievances. 5

This theory has been tested and affirmed by a number of scholars. In “Reassessing the Causes of Nongovernmental Terrorism in Latin America”, for example, Andreas Feldmann employed regression analysis to analyze data from 17 Latin American countries from 1980 to 1985. 6 To test the causes of terrorism in Latin America, he examined the economic performance, structural economic inequality, level of state repression, nature of political systems, and previous incidence of terrorism in each of the 17 countries. He used a comprehensive dataset of unclassified transnational terrorist incidents (i.e., incidents involving agents from two or more countries) as a dependent variable.

Feldmann’s findings indicate that terrorist attacks in Latin America not linked to a foreign government are more likely to occur in underdeveloped areas with “poorly institutionalized regimes characterized by varying degrees of political and electoral liberties, a deficient rule of law, and widespread human rights violations.” 7 He also found

5 Ibid.
7 Ibid., 101.
a statistically significant association between unemployment and the incidence of nongovernmental terrorism, which led him to conclude that economic performance may also be a significant factor in prompting nongovernmental terrorist activity.\(^8\)

Similarly, Quan Li and Drew Schaub conducted a broadly scoped, pooled time-series analysis in an effort to discover the effect of economic globalization on the number of terrorist incidents within countries. Using the number of transnational terrorist incidents initiated within a country in a year as a dependent variable, and both that country’s economic development and the development of its top economic partner countries as independent variables (including foreign direct investment, portfolio investment, a country’s openness to trade, its economic development, and the development of its top economic partner countries), their study covered 112 countries from 1975 to 1997.\(^9\)

The study found that economic development in a country and its top economic partners reduced the number of transnational terrorist incidents within that country.\(^10\) In conclusion, Quan and Schaub ask national governments to realize that “economic globalization is not the cause of, but a partial solution to, transnational terrorism” and that “economic openness to the extent that it promotes economic development, may actually help to reduce indirectly the number of transnational terrorist incidents inside a

\(^8\) Ibid., 101.

\(^9\) Li and Schaub, 232.

\(^10\) Ibid.
country.” Closing borders to foreign goods and capital, on the other hand, may produce the opposite effect, as economic protectionism can generate more incentives to engage in transnational terrorist activities by hindering economic development.\(^\text{12}\)

Some policy makers have also argued that underdevelopment and poverty are primary causes of transnational terrorism. According to Palestinian writer and editorialist Marwan Bishara, “When people feel so inferior militarily and economically, they adopt asymmetric means—not unusual means—to get what they want.”\(^\text{13}\) In addition, poverty, underdevelopment, and instability are often associated with those countries willing to provide safe haven for terrorists or those unable to expel terrorists from their borders.\(^\text{14}\)

As part of the 2002 National Security Strategy, for example, President Bush announced that to combat the threat posed by underdevelopment, “the United States must promote development programs that achieve measurable results—rewarding reforms, encouraging transparency, and improving people’s lives.” Starting in 2002, his administration took on a development strategy that rewarded countries that governed justly, invested in their citizens, and took on policies that fostered economic freedom.\(^\text{15}\) Between 2002 and 2006, the Millennium Challenge Corporation approved close to $2 billion in grants to offer

\(^{11}\) Ibid., 254.

\(^{12}\) Ibid.


\(^{14}\) Li and Schaub, 236-237.

governments “the opportunity and the means to undertake transformational change by designing their own reform and development programs.”

These scholars and policy makers concur in both their conclusions and assumptions: a significant relationship does exist between a country’s level of development and its propensity to harbor terrorist groups. However, as the next section will show, most scholars and policy makers fail to realize is that this correlation is not strictly a negative one.

**Terrorist Attacks against the United States and the Level of Development of Those Responsible**

Evidence from scholars about the interrelationship between underdevelopment and transnational terrorism is reinforced when one considers the level of development in countries harboring terrorist organizations that have attacked the U.S. and its interests. This section presents the findings of a statistical analysis that covers more than 40 years of data. It looks at terrorist attacks from around the world and the level of development of countries in which the terrorist groups responsible for the attacks were either founded or now currently operate. The section is divided into three parts. The first part defines the indices used to determine a country’s level of development, the second describes the methodology used to conduct the study, and the third presents the study’s findings.

**Defining Development**

Despite the drastic differences that exist from one country to the next, policy makers often need to group countries according to their levels of development to study

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their varying economic and social situations and determine policies appropriate to specific developmental levels. Although several factors, such as per capita levels of income, the structure of the economy, and various social indicators, are typically used as measures for determining whether countries are developing or developed, organizations frequently use differing methodologies to make these determinations. As a result, data analysis in this chapter draws on methodologies designed by a three mainstream organizations, namely the World Bank’s *Comparing Levels of Development*, the United Nations’ *Human Development Index*, and the Fund for Peace *Failed State Index*.

**World Bank, Comparing Levels of Development**

The World Bank’s *Comparing Levels of Development* (CLD) is a crucial gauge in determining a country’s level of economic development. Unlike the other indices used in this paper, the World Bank relies solely on the economic performance of a country when determining its level of development. This is particularly important when one considers the direct effect that trade policies, like those mentioned in the introduction, have on development levels. According to the World Bank, “the productivity with which countries use their productive resources—physical capital, human capital, and natural capital—is widely recognized as the main indicator of their level of economic development.” Different organizations use different criteria to group countries by their

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18 Ibid.

levels of development; the World Bank uses GNP per capita and classifies countries into four distinct groups: low-income, with a score of one (GNP per capita of $765 or less in 1995); lower-middle-income, with a score of two (GNP per capita of $766 to $3,035); upper-middle-income, with a score of three (GNP per capita of $3,036 to $9,385); and high-income, with a score of four ($9,386 or more). Those countries falling into the low-income and lower-middle-income categories (which the World Bank assigns a score of one or two) are referred to as developing, while those in the upper-middle-income and high-income categories (which the World Bank assigns a score of three or four) are considered industrialized or developed countries.\textsuperscript{20}

**United Nations, Human Development Index**

The United Nations’ *Human Development Index* (HDI) is an important measure for determining a country’s development status because it uses indicators representing a variety of developmental fields. It assesses the average achievements of 177 diverse countries and areas by examining three basic dimensions of human development: health, knowledge, and standard of living.\textsuperscript{21} To measure these dimensions, the HDI uses a set of minimum and maximum values. The health dimension, for example, is measured by life expectancy at birth, which is calculated using a minimum value of 25 years and a maximum value of 85 years. Once a value has been calculated for a particular dimension in a particular country, it is recorded as a decimal. Accordingly, the health dimension of

\textsuperscript{20} Ibid.

a country with a life expectancy of 55 years would be recorded as 0.5.  

Similarly, the knowledge dimension of the HDI is determined by education levels, which are calculated using adult literacy rates and the combined gross enrollment ratios for primary, secondary, and tertiary schools. Each component is measured in terms of a percentage and recorded as a decimal. The literacy component of knowledge for a country where the literacy rate is 60 percent would, therefore, be recorded at 0.6.  

The standard of living dimension is measured using the GNP per capita as adjusted using the Purchasing Power Parity (PPP), which converts currencies from around the world to a common currency while accounting for price differences between countries. $1PPP, therefore, buys as many goods in a country as $1U.S. buys in the United States. Setting the minimum income level at $100 (PPP) and the maximum at $40,000 (PPP), the HDI then uses an income logarithm to reflect the diminishing importance of income as GDP increases. Once scores for the three HDI components are gathered, they are averaged in the overall index.

**Fund for Peace, Failed States Index**

The Fund for Peace’s Failed States Index (FSI) provides an additional level of complexity in determining a country’s development, focusing on aspects not covered by

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23 Ibid.


25 UNDP, “Human Development Indices.”
either the CLD or the HDI. Each year the Fund for Peace publishes its FSI, which provides a ranked assessment of where states stand in terms of stability. This chapter relies on data from the 2008 FSI, which includes 177 states, as it was latest assessment available at the time.

In calculating the FSI, The Fund for Peace uses an original methodology called the Conflict Assessment System Tool (CAST) to rate 12 social, economic, political, and military indicators, all of which provide snapshots of each state’s vulnerability or risk of violence. The 12 indicators are the following: Social Indicators – mounting demographic pressures, massive movement of refugees or internally displaced persons creating complex humanitarian emergencies, legacy of vengeance-seeking group grievance or group paranoia, and chronic and sustained human flight; Economic Indicators – uneven economic development along group lines and sharp and/or severe economic decline; Political Indicators – criminalization and/or delegitimization of the state, progressive deterioration of public services, suspension or arbitrary application of the rule of law and widespread violation of human rights, security apparatus that operates as a “state within a state,” rise of factionalized elites, and intervention of other states or external political actors.26

From May to December of each year, the CAST software reviews more than 30,000 open-source articles and reports from around the world, including international and local media reports; essays; interviews; polling and survey data; government

documents; independent studies from think tanks, NGOs, and universities; and corporate financial filings, as well as qualitative data, when available. The CAST software determines the number of mentions a certain country receives as a proportion of the sample for a given time period for each of the 12 indicators and issues each country a score accordingly. To ensure accuracy, each country’s score and the indicators that make up that score are reviewed by a subject-matter expert.  

A state’s rank is determined by adding the scores received by the 12 indicators, each of which is rated on a scale from zero to ten (zero being the most stable and ten being the least stable). Scores for each country thus range from zero to 120. Once scores are determined and countries are organized accordingly (the highest score being ranked first), the countries are labeled with one of the following four classifications: Alert (an aggregate score between 90 and 120), Warning (an aggregate score between 60 and 89.9), Monitoring (an aggregate score between 30 and 59.9), and Sustainable (an aggregate score between zero and 29.9). Table 3.1 depicts a breakdown of the FSI classification system.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Classification, Aggregate Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-35 (Somalia-Syria)</td>
<td>Alert, 90-120</td>
</tr>
<tr>
<td>36-127 (Burkina Faso-Bahamas)</td>
<td>Warning, 60-89.9</td>
</tr>
<tr>
<td>128-162 (Romania-Portugal)</td>
<td>Monitoring, 30-59.9</td>
</tr>
<tr>
<td>163-177 (Japan-Norway)</td>
<td>Sustainable, 0-29.9</td>
</tr>
</tbody>
</table>

Table 3.1: Failed State Index Ranking and Classification Chart

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27 Ibid.
28 Ibid.
Methodology

In order to establish whether or not a relationship exists between the level of development in a country and that country’s propensity to produce terrorist organizations that threaten the U.S., I evaluated a list of terrorist incidents from 1961-2003 that was published by the U.S. Department of State, Bureau of Public Affairs, Office of the Historian. In total, the list included 248 terrorist incidents from around the world.  

I narrowed the list down to 105 separate attacks by excluding terrorist attacks that did not involve the U.S.; for which the perpetrator could not be determined; were considered domestic attacks; or were government sponsored. Examples of the types of terrorist attacks that I excluded from the list include the Oklahoma City bombing in 1995 and Anthrax attacks in 2001, both of which were committed domestically by Americans. The assassination attempt on George H. W. Bush in 1993 was also excluded from the list because it was organized by agents of the Iraqi government. In total, I analyzed 105 different attacks.

I further divided the list into two separate classifications: direct and indirect attacks on U.S. targets. Direct attacks were those that specifically targeted the United States.

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States or its interests abroad. Americans killed by terrorist attacks that were not directed at American targets were not included in this classification. By contrast, indirect attacks included those that may have involved U.S. citizens but weren’t specifically directed at them. For example, while the 1983 bombing of the U.S. Embassy in Beirut is classified as a direct attack, the 2002 Bali nightclub bombing (which killed more than 200 people, seven of whom were American) is classified as an indirect attack.\(^{32}\) It is also important to note that attacks involving American airlines were classified as direct attacks, while attacks involving non-American airlines were classified as indirect. Of the 105 attacks analyzed, 62 were direct and 43 were indirect.

After classifying the attacks, I ascertained the organizations or persons responsible for each attack and their countries of origin. Using the FSI, CLD, and HDI, I cross-tabulated the average level of development of each country of origin with the percentage of incidents at each classification. This included looking at the direct and indirect attack classifications both together and separately.

**Findings**

The study found that the relationship between development and terrorist attacks is much more complex than the academic literature at first suggests, especially when considering direct and indirect attacks on the United States. Although it is clear that a negative correlation between terrorism and development exists, a breakdown of the data

analyzed shows that, within the developing world, the more developed countries are most likely to support terrorism.

Overall Findings

When measured against the World Bank’s one-to-four scale of development (CLD), 26 of the 105 incidents evaluated (24.8 percent) were committed by those living in low-income developing countries (CLD score of one), while 63 incidents (60 percent) were committed by those living in lower-middle-income countries (CLD score of two). Combined, 89 out of 105 attacks (84.8 percent) were carried out by terrorists harbored in the developing world. By contrast, just seven attacks (6.7 percent) were committed by terrorist groups from upper-middle-income countries (CLD score of three), while only nine attacks (8.6 percent) were executed by terrorists from high-income countries (CLD score of four). In total, just 16 attacks (15.2 percent) of all incidents analyzed were carried out by terrorists coming from the developed world.

Taken from another angle, the mean CLD development score of countries from which the terrorist attacks originated came to 1.99—just below the lower-middle-income classification. According to this measurement, while the average terrorist attack comes from what the World Bank refers to as a “developing” country, the CLD number is much closer to a lower-middle-income (CLD score of two) country than a low-income (CLD score of one) country. Table 3.2 depicts the overall findings for CLD.
Similarly, when measured against the FSI, 30 out of 105 terrorist attacks (about 28.6 percent) came from groups harbored by countries that have been given an Alert rating, while 65 attacks (61.9 percent) came from groups from countries that have been given a Warning rating. In all, 95 attacks (90.5 percent) came from terrorist groups harbored by either Alert- or Warning-classified states. The mean FSI score of countries from which the terrorists committing the attacks were harbored is 54.51, putting these countries in the lowest third of the 177 countries evaluated. Fifty-four point fifty-one is on par with the scores of countries like Bosnia-Herzegovina (ranked 54th on the FSI) and Bolivia (ranked 55th), both well within the FSI Warning classification and higher-ranked than the Alert states, which score between 90 and 120. Table 3.3 gives a breakdown of the overall findings for FSI.
Failed States Index: frequencies of all terrorist attacks

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Alert</td>
<td>30</td>
<td>28.6</td>
<td>28.6</td>
</tr>
<tr>
<td></td>
<td>Warning</td>
<td>65</td>
<td>61.9</td>
<td>90.5</td>
</tr>
<tr>
<td></td>
<td>Monitoring</td>
<td>8</td>
<td>7.6</td>
<td>98.1</td>
</tr>
<tr>
<td></td>
<td>Sustainable</td>
<td>2</td>
<td>1.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>105</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3.3: Failed State Index: Overall Findings (note: the Valid Percent is the percent adjusted for any missing data points)

Measured by the HDI, the countries most likely to be home to terrorist groups were countries that had Medium Human Development. Of the 96 attacks, 33 76 (79.2 percent) came from Medium-developed countries, 15 (15.6 percent) originated in High-developed countries, and only five (5.2 percent) were executed by terrorists from Low-developed countries. The fact that the vast majority of terrorist attacks came from terrorists in countries of medium development—or the more developed developing countries—and so few came from those with high or low development -- suggests that there is a window of development in which countries are most likely to harbor terrorist organizations. Table 3.4 gives the overall finding for HDI, while Graph 3.1 shows a comparative breakdown of the overall findings across all three indices.

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33 This number is lower than the 105 total attacks because data was not available in the Human Development Index for some countries.
Human Development Index: frequencies of all terrorist attacks

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>High human development</td>
<td>15</td>
<td>14.3</td>
<td>15.6</td>
</tr>
<tr>
<td></td>
<td>Medium human development</td>
<td>76</td>
<td>72.4</td>
<td>79.2</td>
</tr>
<tr>
<td></td>
<td>Low human development</td>
<td>5</td>
<td>4.8</td>
<td>5.2</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>91.4</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>System</td>
<td>9</td>
<td>8.6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.4: Human Development Index: Overall Findings (note: the Valid Percent is the percent adjusted for any missing data points)

Indexes of development and terrorist attacks

Graph 3.1: Indices of Development and Terrorist Attacks (note: numbers in the graph have been rounded to the nearest percent.)

Findings for Direct Attacks

Of the 105 terrorist attacks analyzed, 62 were determined to be direct, intentional attacks on the United States or its citizens and officials abroad. Although, as with attacks
overall, terrorist groups from developing countries carried out the majority of direct attacks, direct attacks were slightly more likely than average to come from countries with higher development.

Fourteen out of the 62 direct attacks (22.6 percent) were executed by terrorists from countries with a CLD score of three or four. This percentage is relatively higher than the 16 total attacks (15.2 percent) carried out by terrorist groups from the same countries. Additionally, 37 direct attacks (59.7 percent) came from terrorists in lower-middle-income countries (mirroring the percentage of total attacks), while 11 direct attacks (17.7 percent) were committed by terrorists from low-income countries (slightly less than the percentage of total attacks). As expected, the average level of development in countries harboring terrorists responsible for direct attacks on the United States is slightly higher than the average for both direct and indirect attacks discussed above. When measured against the CLD, the mean is 2.16—well within both the low-income and lower-middle-income classifications that that represent all developing countries. Table 3.5 gives a breakdown of the findings for direct attacks from the CLD.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid 1</td>
<td>11</td>
<td>17.7</td>
<td>17.7</td>
<td>17.7</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>59.7</td>
<td>59.7</td>
<td>77.4</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>11.3</td>
<td>11.3</td>
<td>88.7</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>11.3</td>
<td>11.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.5: World Bank Index: Direct Attack Findings (note: the Valid Percent is the percent adjusted for any missing data points)

The FSI findings are similar to those from the CLD: direct attacks were just
slightly more likely than the average to come from a more highly developed country, although the vast majority of direct attacks still came from Alert and Warning states. Eight direct attacks (12.7 percent), and 10 total attacks (9.5 percent) were carried out by terrorists from Sustainable or Monitoring countries. As for Alert and Warning countries, 39 direct attacks (62.9 percent) came from Warning countries and 15 (24.2 percent) came from Alert countries. The FSI average rank for direct attacks is also slightly higher than the rank for total attacks, coming to 59.02. This number is on par with the Philippines (ranked 59th on the FSI) and Indonesia (ranked 60th). According to this level of measurement, the average direct attack on the United States came from a terrorist groups harbored by countries falling within the FSI’s Warning-level category. Table 3.6 gives the FSI findings for direct attacks.

<table>
<thead>
<tr>
<th>Failed States Index: frequencies of direct attacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

Table 3.6: Failed State Index: Direct Attack Findings (note: the Valid Percent is the percent adjusted for any missing data points)

Direct attacks measured against the HDI show an even greater concentration in more highly developed countries. No direct attacks came from countries marked by the HDI as Low Human Development. Forty-three direct attacks (76.8 percent) were executed by terrorists from countries of Medium development, on par if not slightly less than the percentage of total attacks coming from similarly developed countries. The
biggest surprise, though, was that a total of 13 out of 56 direct attacks\(^{34}\) (23.2 percent) were carried out by terrorists from countries of High Human Development; just 15.6 percent of all attacks came from highly-developed countries. Furthermore, the mean rank on the HDI for countries from which direct attacks originated is 83.38, similar to the development levels of Armenia and Iran. Table 3.7 depicts the HDI findings for direct attacks, while Graph 3.2 gives a comparative breakdown of direct attacks across all three indices.

<table>
<thead>
<tr>
<th>Human Development Index: frequencies of direct attacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Valid</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Missing</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 3.7: Human Development Index: Direct Attack Findings (note: the Valid Percent is the percent adjusted for any missing data points)

\(^{34}\) This number is lower than the 62 total direct attacks because there was no HDI score available for some countries.
Findings for Indirect Attacks

Out of the 105 total attacks, 43 were determined to be indirect (41 percent), unintentional attacks on the United States. Indirect attacks were much more likely than direct attacks to come from developing countries.

On the CLD scale, indirect terrorist attacks were much more likely than direct attacks to originate in countries with a score of one. Fifteen indirect attacks (34.9 percent) were committed by terrorists coming from low-income countries, while just 11 (17.7 percent) direct attacks were made by terrorists from low-income countries. Conversely, just two indirect attacks (4.7 percent) were made by terrorists coming from high-income (level four) countries and no indirect attacks came from level three countries; a total of 14 (22.6 percent) direct attacks were executed by terrorists from level...
three and four countries. The mean CLD score for countries harboring terrorists who have made indirect attacks is 1.74, considerably lower than the mean score for countries harboring terrorist organizations responsible for direct attacks (2.16) and slightly lower than the score for total attacks (1.99). Table 3.8 gives a breakdown of CLD findings for indirect attacks.

<table>
<thead>
<tr>
<th>World Bank Index of Development: frequencies of indirect attacks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Valid</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 3.8: World Bank: Indirect Attack Findings (note: the Valid Percent is the percent adjusted for any missing data points)

The FSI scores for indirect attacks were similar to the CLD numbers. Fifteen out of 43 of indirect attacks (34.9 percent) were made by terrorists from Alert-level states, while just 15 (24.2 percent) direct attacks were. On the other hand, just one indirect attack (2.3 percent) originated in Monitoring-level countries, while 7 direct attacks (11.3 percent) were committed by terrorists coming from such countries. This shows that although the majority of attacks originated from countries that are considered to be developing, a state’s status as a developed country does not preclude it from harboring a terrorist organization; however, it does make it much less likely. The average FSI rank for countries in which indirect attacks originated is 48.02, similar to countries such as Cambodia and Iran. Table 3.9 gives a breakdown of FSI findings for indirect attacks.
Failed States Index: frequencies of indirect attacks

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tbody>
<tr>
<td>Valid</td>
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<td>26</td>
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<td>Warning</td>
<td>1</td>
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<td>97.7</td>
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<td>Monitoring</td>
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<td>Sustainable</td>
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<td>2.3</td>
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<td>Total</td>
<td>43</td>
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Table 3.9: Failed State Index: Indirect Attack Findings (note: the Valid Percent is the percent adjusted for any missing data points)

The HDI, however, shows the starkest difference between levels of development in countries from which indirect and direct attacks originated. Five out of 43 indirect attacks (12.5 percent) came from countries of Low Human Development, while 33 out of 40 indirect attacks\(^{35}\) (82.5 percent) were made by terrorist organizations from countries of Medium Development. Combined, 95 percent of indirect attacks came from Low- or Medium-developed countries. By comparison, just 77 percent of direct attacks originated in Medium-developed countries. No direct attacks were made by terrorists from countries of Low Human Development. Furthermore, just 2 (5 percent) indirect attacks—and 13 (23 percent) direct attacks—were made by terrorist groups in states with High Human Development. The mean HHI rank for indirect terrorist attacks is 110.75, which is similar to the development level of countries like Guyana and Bolivia. These results indicate that although the propensity for developing countries to harbor terrorist groups is much stronger than developed countries, it is the more developed among the developing countries that are most likely to harbor terrorists. Table 3.10 depicts the HDI findings for

\(^{35}\) Again, this number is lower than the 43 total indirect attacks because some countries were not listed on the HDI.
indirect attacks, while Graph 3.3 shows a comparative breakdown of the findings for indirect attacks across all three indices.

<table>
<thead>
<tr>
<th>Human Development Index: frequencies of indirect attacks</th>
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Conclusion

As is clear by the findings presented in this chapter, there is a distinct relationship between development and those countries that harbor terrorist organizations. CLD, FSI, and HDI results all indicated that more than 80 percent of terrorist attacks came from groups or individuals in the developing world. There was also only limited variation among the results from the three indices. Given the extreme differences in the methodologies used by each index to determine a country’s level of development, this demonstrates the depth and definitiveness of the results. Between 84.4 and 90.5 percent of terrorist attacks analyzed came from developing countries (a range of 6.1 percent). Similarly, direct attacks coming from developing countries ranged from 76.8 to 87.1 percent, (a 10.3 percent difference). Indirect attacks showed the smallest variation between the three indices, and ranged from 95 to 95.3 percent (a difference of 0.3 percent).

A 14.8 percent difference existed between the number of direct and indirect attacks; however, more than 80 percent of both types of attacks came from terrorists in developing countries. The average percentage of direct attacks was 80.4 percent, while the average percentage of indirect attacks was 95.2 percent. Though an interesting finding, determining a reason for this difference is outside the scope of this chapter.

While the results indicate that developed countries are much less likely to harbor terrorist organizations than developing countries, they also show that the very least developed countries in the world are also unlikely to harbor terrorist organizations. In fact, the evidence consistently shows that the subset of countries within the developing
world most likely to harbor terrorist organizations are the relatively more developed states. Only 19.5 percent\(^{36}\) of terrorist groups were harbored by the least developed developing countries, while 67 percent\(^{37}\) of terrorist groups were harbored by the more developed developing countries harbored terrorists. This suggests that there is a window of development in which countries are most likely to harbor terrorist organizations.

One could see this finding as an argument against helping the very least developed countries to develop for fear that doing so would push them into the window of development in which countries are most likely to harbor terrorists. Though further research is necessary to determine the validity of this fear, the concern does not preclude developed nations from working to improve trade conditions for developing countries. Since international trade flows are limited in the very least developed countries, reducing trade barriers will have little effect on their overall development. This is not the case with those countries most likely to harbor terrorists, as their international trade flows are significantly higher. As a result, reducing trade barriers will help push these countries into the ranks of the developed world, making their support of terrorism less likely.

Those countries most likely to harbor terrorists are also the developing states most engaged in international trade. When considered with the findings laid out in Chapter Two, it becomes clear that there is not only a link between development and terrorism, but also between trade and terrorism.

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\(^{36}\) This percentage was calculated by averaging the overall finding from each of the three indices: CLD, 24.8 percent; FSI, 28.6 percent; and HDI 5.2 percent.

\(^{37}\) This percentage was calculated by averaging the overall finding from each of the three indices: CLD, 60 percent; FSI, 61.9 percent; and HDI 79.2 percent.
CHAPTER 4
MARITIME TRADE SECURITY: A BARRIER TO INTERNATIONAL TRADE

In today’s globalized world, almost no nation can rely solely on what it produces domestically. Most countries are involved in international trade at some level. Everything from raw materials like oil, copper, and lumber, to consumer goods like food and clothing are transported overseas. Without shipping, intercontinental trade would not exist, nor would the bulk transport of raw materials and the import and export of affordable food and manufactured goods.¹ As the most cost-efficient method of bulk transport, over 90% of world trade is carried on the water. Worldwide maritime commerce supports 8.4 million jobs, and over $300 billion in personal income.² There are around 50,000 merchant ships trading internationally, which represent over 150 countries.³ In the United States, maritime trade makes up 78% of all international trade.⁴


Annually, U.S. maritime trade amounts to nearly 1.6 billion tons of cargo, valued at over $2 trillion and generating over $21 billion in U.S. customs revenue.

This reliance on international maritime trade, however, has not benefited all countries equally. A recent study analyzed the role of maritime freight costs in determination of ocean-shipped imports. By disaggregating imports (including detailed freight charges) from trading partners of 43 countries, the study found that in 2007 maritime transport costs made up about 6 percent of a product’s total cost. On average, this totaled a cost-per-weight shipping rate of about $59 per ton of merchandise. The study concluded that the cost of exporting from developing countries was significantly higher than the cost of exporting from countries within the Organization for Economic Cooperation and Development (OECD), and that it was cheaper to import into developing countries than into OECD countries. This disparity in shipping costs has significant implications for those in the developing word. The higher cost of shipping for developing countries makes it more difficult for these countries to export their goods to the global market. Conversely, the lower import costs into developing countries makes it easier for OECD-origin products to “flood” the developing world with their products. The Graph 4.1 reveals a significant uptick in shipping costs starting in the 2001-2002 timeframe. This is likely due in part to the trade barriers that resulted because of trade-security measures implemented around the world after 9/11.

In the United States, for example, the increase in security following 9/11 included a number of measures to improve supply-chain security. Legislation such as the Maritime Transportation Security Act of 2002 and the Safe Accountability for Every Port Act of 2006 codified programs like the Customs-Trade Partnership Against Terrorism (C-TPAT) and the Container Security Initiative (CSI). At an international level, the International Maritime Organization (IMO) amended the International Convention for the Safety of Life at Sea (SOLAS) to include the International Ship and Port Facility Security (ISPS) Code, while European Community countries along with Singapore, New Zealand, and members of Asia-Pacific Economic Cooperation (APEC) Authorized Economic
Operator Programs modeled after C-TPAT.\(^6\)

Many laud the benefits of these security initiatives, however, some are concerned that they create non-tariff barriers for trading partners and will “penalize developing countries who may not be able to afford the installation of the required facilities at their ports, and thus be unable to join the [initiatives].”\(^7\) In 2003, the OECD estimated the initial burden of implementing supply chain security measures on ship operators to be at least $1.3 billion, and $730 million per year thereafter, with most costs coming from management staff and security-related equipment expenditures. Similarly, the OECD analyzed the cost of system-wide procedural changes, like the United States’ 24-hour advance notice rule, which is estimated to cost approximately $281.7 million.\(^8\) U.S. programs have also been perceived as non-tariff barriers by some of America’s closest allies. According to the European Commission, the reluctance of Customs and Border Protection (CBP) to allow foreign participation in C-TPAT is discriminatory and increases costs for European exporters. Similarly, CSI causes additional costs and delays

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\(^6\) Asia-Pacific Economic Cooperation, “Member Economies,” http://www.apec.org/apec/member_economies.html (accessed March 1, 2010). The Asia Pacific Economic Cooperation (APEC) is made up of the following countries: Australia, Brunei Darussalam, Canada, Chile, China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, the Philippines, Russia, Singapore, Chinese Taipei, Thailand, the United States, and Vietnam.

\(^7\) J. Zarocstas, “US Security Clam is a Barrier to Trade WTO Delegates Warn.” Lloyd’s List, January 15 2004, 16.

in E.U.-U.S. shipments.\textsuperscript{9} When combined with the fact that exporters in developing countries often pay two to three times as much in import customs and duties in destination countries as do exporters in developed countries, it is clear that significant trade barriers to developing countries pervade the new maritime trade security environment.\textsuperscript{10}

In order to show this, this chapter will analyze the non-tariff trade barriers created by maritime trade-security measures enacted as a result of 9/11. It starts off with a brief overview of the evolution of maritime trade security in the United States, and gives a synopsis of major legislative initiatives that led to these changes. The second section outlines the key US-maritime security programs – namely the C-TPAT, and CSI – and how some of their components may constitute non-tariff trade barriers, especially for developing countries. The chapter then moves to an international level and explores the costs associated with the ISPS Code and Authorized Economic Operator programs. It concludes by showing how these new maritime trade security programs disproportionately restrict developing countries from gaining access to some of the world’s largest markets.


Background

The focus on trade security efforts in the United States dramatically shifted after 9/11. Priority moved from policies designed to ensure the free flow of goods into the United States and maximize the collection of tax revenues from import tariffs, to those aimed at preventing weapons of mass destruction, terrorist paraphernalia, and contraband from entering the country.

Maritime trade security efforts go back to the beginning of civilization, and for most of history were primarily focused on ensuring a constant flow of goods in and out of ports. Nations relied upon the strength of their navies and the robust infrastructure of their ports for maritime trade security. The ancient Greeks and Romans raised navies and merchant marine corps to secure commercial harbors and built lighthouses to protect trade.\(^{11}\) During the twelfth century, the naval convoy system, most famously used by the Spanish Treasure Fleets to transport goods between Europe and the New World, was developed to protect supply chains against pirates.\(^{12}\)

The groundwork for the U.S. maritime trade security infrastructure was set in 1789 when Congress passed laws to develop a tariff system and customs collections districts which led to the creation of the U.S. Customs Service. A year later, the U.S. Revenue Marine, which eventually became the U.S. Coast Guard, was established to


enforce maritime law and the newly created tariffs.\textsuperscript{13} Many of these responsibilities are now performed by Customs and Boarder Protection (CBP).\textsuperscript{14}

Following the September 11, 2001 terrorist attacks on the World Trade Center and the Pentagon, the U.S. government quickly developed organizational plans to better protect the United States against future terrorist attacks. Within a month, both Congress and the Bush Administration had started work on what would become the Department of Homeland Security.

On June 24, 2002, Bush’s plan was introduced in the House as H.R. 5005, the Homeland Security Act of 2002. On November 19, 2002, it was signed into law (Public Law 107-296), authorizing the biggest government reorganization in American history, and the most substantial reorganization of federal agencies since the 1947 National Security Act – which created the National Security Council and Central Intelligence Agency, and placed the different military departments under a secretary of defense.\textsuperscript{15} As a result, January 24, 2003 became the effective date of establishment for the Department of Homeland Security. By March 1, 2003, the majority of the previously existing agencies – Federal Emergency Management Agency (FEMA), the Transportation Security Administration (TSA), the Coast Guard, the Customs Service, and the United


States Secret Service – were transferred to the new department.”\textsuperscript{16} Though U.S. Customs and Border Protection (CBP) was also created on March 1, 2003 as a DHS agency – taking on the functions of the former Customs Service, Immigration and Naturalization Service, Border Patrol and Animal and Plant Health Inspection Service – a number of programs to be managed by CBP had already been implemented in order to safeguard U.S. borders against high-risk cargo, contraband and unsafe imports.\textsuperscript{17} C-TPAT and CSI – to be discussed in a later section – are two such programs.

\textbf{Legislation}

\textit{Maritime Transportation Security Act of 2002}

The Maritime Transportation Security Act (MTSA), represents a major shift in U.S. maritime trade security policy, from a policy focused on the free flow of goods to one designed to prevent terrorists from exploiting U.S. trade openness. The Act, signed into law on November 25, 2002, amends the Merchant Marine act of 1936 by authorizing an increased number of security officers, more screening equipment, and the building of additional security infrastructure at seaports.\textsuperscript{18} The bill also serves to better integrate federal, state, local, and private law enforcement bodies in overseeing America’s seaport


\textsuperscript{18} Maritime Transportation Security Act of 2002, Public Law 107-295, 107\textsuperscript{th} Cong., 2\textsuperscript{nd} sess. (November 25, 2002)
security. Provisions within the bill support the establishment of a port security training program, and authorize the Secretary of Transportation “to prescribe conditions of entry for or to deny entry into the United States to vessels arriving from foreign ports with ineffective antiterrorism measures.” The bill also authorizes the development of standards for screening cargo prior to loading in a foreign port for shipment to the United States either directly or via a foreign port and to enhance the physical security of shipping containers. Furthermore, the bill urged the negotiation of an international agreement that provided for a uniform comprehensive, international system of identification for seafarers that will enable the United States and another country to establish the identity of any seafarer aboard a vessel within the waters of the United States or such other country.

Safe Accountability for Every Port Act of 2006

The Safe Accountability for Every Port Act (the SAFE Port Act) further increases the maritime trade security measures outlined in the MTSA. Signed into law by President Bush on October 13, 2006, the Act authorizes $3.5 billion to be appropriated between 2006 and 2010 for the purpose of increased port security and safety measures.

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20 Ibid.

21 Ibid.

22 Ibid.
Specifically, the act delineates measures to strengthen physical security at the nation’s 22 largest ports by requiring the installation of radiation detection technology for Customs agents to “check inside cargo containers for dangerous materials without having to open them.” It also codifies into law both the Container Security Initiative, launched in 2002, and the Customs-Trade Partnership Against Terrorism, launched in November 2001, and requires the Department of Homeland Security to develop and implement response plans designed to improve the nation’s response to a terrorist attack and increase the speed with which the U.S. ports and waterways are reopened to trade.

**Domestic Maritime Trade Security Programs**

Customs-Trade Partnership Against Terrorism

Pursuant to the above-mentioned legislation, the Customs-Trade Partnership Against Terrorism (C-TPAT) was created to help strengthen trade security infrastructure at every step along the supply chain - from small manufacturers in developing countries to large importers in the United States and Europe. Launched in November 2001 and enhanced by provisions in the MTSA and the SAFE Port Act, C-TPAT is a voluntary program to enhance U.S. border security by strengthening the overall international supply chain.

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23 The White House, President George W. Bush, “President Bush Signs SAFE Port Act,” http://www.whitehouse.gov/news/releases/2006/10/print/20061013-2.html (accessed February 15, 2010); “Bush Signs SAFE Port Legislation,” abc News, entry posted October 13, 2006, http://blogs.abcnews.com/politicalradar/2006/10/bush_signs_safe.html (accessed February 15, 2010). The 22 ports affected by the SAFE Port Act of 2006 are the following: Los Angeles, CA; New York-Newark, NY/NJ; Elizabeth, NJ; Charleston, SC; Savannah, GA; Seattle-Tacoma, WA; Norfolk, VA; Houston, TX; San Francisco-Oakland, CA; Miami, FL; New Orleans, LA; Philadelphia, PA; Baltimore, MD; Port Everglades, FL; San Juan, Puerto Rico; West Palm Beach, FL; Gulfport, MI; Chester-Wilmingston, PA; Jacksonville, FL; Boston, MA; Honolulu, HI; Fernandina, FL; Tampa, FL. Karen Travers.

chain. It is administered by CBP, and is the largest public-private sector partnership to emerge after 9/11. Launched with only seven major importers, the program grew within four years to include more than 8,800 companies made up of importers, carriers, consolidators, licensed customs brokers, and manufacturers. By working with CBP to develop security criteria, best practices, and implementation procedures, and by aiding CBP in protecting the global supply chain from the concealment of terrorist weapons (especially WMD), member companies receive the benefit of reduced inspections upon arrival to U.S. ports and expedited customs processing, which includes “front of line” inspections and penalty mitigation. C-TPAT’s benefits are divided into three tiers, which ensure that benefits are commensurate with a member’s status within the program. Graph 4.2 depicts the import value, entries, customs examinations, and customs examinations of C-TPAT members, and gives a breakdown of the exam ratio of C-TPAT members by tier.


C-TPAT’s certified members qualify for tier one, which lowers the company’s targeting score for customs examination, often resulting in 5-8 times fewer border inspections for members than non-members. Tier two members have been both certified and validated. They receive even fewer inspections than tier one members. If selected for examination, a tier two member receives priority treatment by being moved to the front of the inspection line. A tier three certification is reserved for those members that exemplify best practices in supply chain security and exceed C-TPAT’s minimum security requirements. In addition to receiving benefits enjoyed by tier one and two members, tier three members are given “green lane” access with “no security inspections and infrequent random inspections.”

Though C-TPAT is likely to improve overall security to the global supply chain, components of the program act as non-tariff barriers to companies in the developing world. According to the program’s security criteria, importers must conduct a comprehensive assessment of their international supply chains including outsourced and contracted elements (e.g. foreign facilities, conveyance, and domestic warehousing) to receive a certification. They are required to work with these business partners to ensure that necessary security measures are in place and adhered to, and are responsible for establishing processes by which business partners are chosen.\footnote{U.S. Customs and Border Protection, “C-TPAT Importer Security Criteria,” \url{http://www.cbp.gov/xp/cgov/trade/cargo_security/ctpata/security_criteria/criteria_importers/ctpata_importer_criteria.xml} (accessed December 04, 2009)} An Importer must also provide information indicating which of their business partners, eligible for C-TPAT, have and have not received a certification. Similarly, those business partners not eligible for the program (e.g. many companies in the developing world) must demonstrate that they have met C-TPAT security criteria.\footnote{Ibid.} To cope with these regulations, many C-TPAT companies contractually require businesses to improve security, extending C-TPAT’s reach well beyond the borders of the United States.\footnote{U.S. Customs and Border Protection, “Securing the Global Supply Chain: Customs-Trade Partnership Against Terrorism (C-TPAT) Strategic Plan,” (2004) \url{http://www.cbp.gov/linkhandler/cgov/trade/cargo_security/ctpata/what_ctpatctpata_strategicplan.pdf} (accessed February 15, 2010). 26.} Lloyd’s Practical Shipping Guide, entitled \textit{Risk Management in Port Operations, Logistics and Supply-Chain Security}, highlights some of the problems that arise from increased trade security regulations on developing countries:
Regulations often serve as a “fear factor” for small companies with limited resources and the Internet-based paperwork can mean problems for those in rural or remote communities. Add to this the uncertainty of continuously revised regulations under an implement and amend approach, and it is not hard to reach the conclusion that security can drive away the faint-hearted supplier. Micro-businesses and artisans, the path to economic development in many developing countries, will see security as a barrier to growth.  

Similar concerns have been voiced at the United Nations Conference on Trade and Development. Members at a recent meeting on the Development of Multimodal Transport and Logistics Services, which “felt that the developing countries had difficulty in meeting the requirements of the C-TPAT, which would significantly affect their exports.” Since all C-TPAT importers must prove that the companies they work with at every point in the supply chain meet C-TPAT requirements, companies that cannot afford to meet these requirements – or are ineligible to participate in the program – are flagged for increased security checks by customs officials, resulting in a major non-tariff barrier into the U.S. market.

Non-compliance by developing-world companies can mean more than just increased scrutiny by customs officials and can seriously disadvantage these countries’ trade programs. The American Association of Exporters and Importers (AAEI), for example, has expressed concerns that though importers often lack the “expertise or


wherewithal to guarantee container security…[U.S. companies] could be held responsible for security in places where they may have no control, such as the premises of small suppliers in Third World Countries.”

Since non-compliance with C-TPAT results in disenrollment from the program and a loss of competitive advantage, importers drop small suppliers in the developing world in favor of more established suppliers having better security, often in more developed countries. In fact, a 2007 survey conducted by the University of Virginia, found that 12.2 percent of the C-TPAT member-companies surveyed had rejected foreign suppliers, manufacturers, or vendors due to security concerns in the previous year.

The Heritage Foundation has also voiced its concern with the seemingly contradictory objectives of the U.S. National Security Strategy. On the one hand, the strategy calls for “encouraging economic development through free markets and free trade and enhancing the capacity of developing nations to compete in a global economy.” On the other hand, “the United States is also rightly promoting international security regimes designed to prevent terrorists from attacking or exploiting global trade networks.” Heritage points out that while meeting C-TPAT requirements many not be


37 Ibid.
difficult for rich nations, they are for developing countries that lack adequate financing, developed infrastructure and healthy human capital programs.\(^{38}\)

**Container Security Initiative**

In January 2002, CBP announced the Container Security Initiative (CSI). Like C-TPAT, CSI was codified into law by both the MTSA, and the SAFE Port Act. The program, which has commitments from more than 26 customs administrations, is now operational at close to 60 ports worldwide, making approximately 90% of all maritime containerized cargo destined for the United States subject to prescreening prior to importation. CSI aims to ensure that all containers posing a potential threat to the United States are identified and inspected before they are loaded onto ships. By stationing teams of U.S. inspections officers from both CBP and Immigration and Customs Enforcement (ICE) at foreign ports to work jointly with foreign officials, the program focuses on three primary elements: 1) identifying high-risk containers, 2) prescreening and evaluating containers before they are shipped to the United States, and, 3) using technology to prescreen high-risk containers to ensure that screening can be done rapidly without delaying the flow of trade.\(^{39}\) With the support of the World Customs Organization (WCO), the European Union (EU), and the G8, the program continues to expand.\(^{40}\)

As part of the CSI, ocean carriers that ship containers to the United States are required to forward manifest information – which consists of information about the

\(^{38}\) Ibid.


\(^{40}\) Ibid.
container’s sender, recipient and contents – to CSI officials at least 24 hours before the containers are loaded onto a vessel. This is known as the “24-hour rule.” Manifests are then analyzed at CBP’s National Targeting Center in Arlington, VA. According to CBP, about 5-6% of containers are identified as being at risk and warrant either a closer review of shipping documentation or a physical inspection. For many developing countries, shipping to the United States will require systematic use of CSI ports. Using such ports, however, means additional transshipment costs, increased freight rates, and operational costs. Though the United States does provide some aid for investment in such equipment, the majority of the burden is born by the ports.

Although CSI arguably improves U.S. maritime supply-chain security, it also serves as a non-tariff barrier to developing countries whose smaller ports are often unable to afford CSI participation costs. The program incentivizes the use of CSI ports. Because goods are scanned prior to their arrival at U.S. ports, resulting in shorter wait times and fewer security checks, a significant number of shipping companies have moved away from smaller non-CSI ports to keep their competitive advantage. The expense of meeting CSI requirements (especially to small port facilities that need to upgrade their


systems to handle electronic shipping manifest data, hire new security personnel, and purchase Gamma and X-ray machines, bio sensors, and advanced container locks) limits membership to only the larger and more modern port facilities. According to Luciano Pugliatti of Crown Agents, an NGO working to help developing nations modernize their customs infrastructure, “customs in less-developed countries face problems of corruption, under-capacity, outmoded inspection methods, and loss of national revenue to fraud and smuggling. Such nations don't have the money to buy high-tech inspection equipment, nor do they have the trained personnel to run them.”

India fears that CSI has “imposed additional costs on exports to the United States...[and] may penalize developing countries who may not be able to afford the installation of the required facilities at their ports, and thus are unable to join the US initiative.” Similarly, Malaysia, is concerned about “who would bear the cost if unloading was delayed or if consignments were detained for further inspection.”

Based on documentation fees levied by carriers, the OECD estimates the overall implementation costs of the 24-hour rule to be approximately $281.7 million. This number, however, does not cover the costs associated with delays, liabilities, or fines. According to the United Nations Conference on Trade and Development (UNCTD),

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46 Ibid.

"non-CSI ports may find it difficult to stay competitive, and as far as U.S. trade is concerned may sooner or later be used only for pre-carriage purposes - goods being loaded at one of these ports on feeder vessels to join the nearest CSI port."48 This would disproportionately increase shipping distances and costs for developing countries. Shipping experts like Pugliatti fear that, as a result, increased supply-chain security measures could negate the trade facilitation and modernization that has taken place in the developing world over the past decade by the widening gulf between developed and underdeveloped nations."49

CSI disadvantages Exporters in the EU as well. According to the EU’s 2009 annual report on US trade and investment barriers, CSI is causing “significant additional costs and delays to shipment of European machinery and electrical equipment to the United States.”50 As a result, a number of small European engineering companies have stopped exporting to the United States.51 The majority of CSI ports are in developed countries; only 12 of 58 (21 percent) CSI ports are located in the developing world.52

48 Ibid.


51 Ibid.
Although CSI aims to ensure that all containers posing a potential threat to the United States are identified and inspected before they are loaded on to ships at foreign ports, the program makes it more difficult for small ports and exporters in the developing world to maintain a competitive advantage. Image 4.3 shows where the CSI and C-TPAT programs have jurisdiction within the supply chain.


**International Maritime Trade Security Programs**

**International Ship and Port Facility Security Code**

Developed by the International Maritime Organization (IMO) in the wake of 9/11 as an amendment to the International Convention for the Safety of Life at Sea (SOLAS), the International Ship and Port Facility Security Code (ISPS) was designed to provide a standardized framework for evaluating risk and enhancing the security of the international maritime supply chain.\(^53\) As a convention of the IMO – a specialized agency

of the United Nations responsible for improving safety and security in international shipping – the ISPS code is a binding agreement between all of the IMO’s 169 member nations. As such, the Code poses a substantial burden on ships and port facilities by requiring the following: 1) compliance with international security standards; 2) restricted access and prevention of the introduction of unauthorized weapons; 3) appropriate alarm mechanisms; 4) security plans for all vessels and port authorities; 5) training and drilling for port facility and vessel security; 6) collection, assessment, and dissemination of intelligence information; and, 7) maintenance of all international communication protocols and standards.

In 2007, a UNCTD global study on the average cost of implementing the ISPS Code put ISPS average investment costs per port worldwide at $287,000 and average annual running costs at $105,000. This same study, however, found significant cost differences in the implementation and annual running costs at small ports (up to 10 ISPS port facilities) versus those at large ports (over 10 ISPS port facilities). The average implementation cost at small ports was $386,000 with annual running costs at $128,000. At large ports, the average implementation cost was $181,000 with annual running costs

SOLAS was first signed in 1914 as a response to the sinking of the RMS Titanic and included provisions outlining the type of emergency equipment and safety procedures, such as a specific number of lifeboats and continuous radio watches, seafaring vessels were required to have. Newer versions of SOLAS were adopted in 1929, 1948, 1960, and 1974.


Consequently, ISPS compliance costs small ports 113 percent more than large ports, while the yearly operational expenses associated with ISPS costs small ports 58 percent more than large ports. The economy of scale enjoyed by large ports vis-à-vis small ports only exacerbates these differences in cost. Graph 4.4 gives a breakdown of the initial and annual costs associated with the ISPS code for large and small ports.

According to the International Chamber of Commerce, ships having not received a Ship Security Certificate (ISSC), or that are unable to prove full compliance with the ISPS, “should anticipate serious delays, the potential imposition of legal penalties, and the possible denial of entry to certain ports. Non-compliance with ISPS could also have
implications for insurance cover.”

Developing countries are concerned with the lack of clarity about the treatment of ISPS compliant vessels arriving to the United States and other nations after stopping at a foreign port facility that is not ISPS compliant. According to Christopher Koch, President and CEO of the World Shipping Council, shippers “should expect consequences to cargo that passes through noncompliant facilities, and those consequences may become more substantial as time passes and the government becomes less tolerant of foreign ports that are not compliant with the Code.” Some suggest the possibility of Automated Targeting Systems around the world assigning higher security-risk scores to cargo containers stopping at non-ISPS compliant ports, which would make such containers more likely to experience inspections delays.

While the ISPS code has increased global maritime trade security standards and improved supply-chain safety, by requiring members of the IMO to meet strict and expensive port security standards, it burdens small ports and developing countries at a disproportionate level.


59 Ibid.

60 Ibid.
Authorized Economic Operators

Similar to C-TPAT in nature, voluntary Authorized Economic Operator (AEO) programs are being developed in nearly 70 countries worldwide. To date, however, Canada, Japan, Jordan, New Zealand, Singapore and European Union are the only countries outside the United States that have fully operational AEO programs in place.\footnote{U.S. Government Accountability Office, Supply Chain Security: CBP Works with International Entities to Promote Global Customs Security Standards and Initiatives, but Challenges Remain, 2008, 22.}

Through such programs, countries hope to help domestic companies “capitalize on new customs simplifications” and mitigate the costs associated with non-tariff trade barriers. These barriers include increased transaction costs, waiting times, physical and documentary controls that have resulted from new security regulations implemented after 9/11.\footnote{KPMG Tax, Audit, Advisory, “AEO – Authorized Economic Operator Switzerland,” http://www.kpmg.ch/docs/AEO-Authorized-Economic-Operator-Switzerland_EN_301009_www.pdf (accessed March 10, 2010).}

AEO programs, like C-TPAT, reduce members’ risk scores, and as a result, physical and document-based controls at ports of entry are lower. AEO members, also receive priority treatment when selected by customs for further examination. This not only means that they are able to request an inspection sight that provides for the shortest delay, and thus lowest cost, but also that AEOs will be the first to be inspected if non-members are also selected for inspection.\footnote{European Commission, Directorate-General, Taxation and Customs Union, Authorized Economic Operators: Guidelines (Brussels, 2007), 14, http://ec.europa.eu/taxation_customs/resources/documents/customs/policy_issues/customs_security/AEO_guidelines_en.pdf (accessed March 10, 2010).}
Although there is no obligation to join AEO programs, many require members to ensure that the companies they work with at every point in the supply chain meet AEO requirements. Consequently, those developing-nation manufacturers and suppliers unable to afford the needed security upgrades are sometimes dropped by AEOs in favor of more secure trading partners. The European Commission, for example, expects many AEOs to pressure their providers and partners so that in the long run AEOs would have a long-term interest in working with one another.\(^{64}\)

Companies in the developing word that cannot afford to meet AEO requirements, or are ineligible to participate in such programs, are flagged by host-nation customs for increased security checks, resulting in a major non-tariff barrier. Consequently, Australia, concerned that a growing international network of AEO programs “may develop into a form of trade barrier for Australian traders, decided not to implement a formal AEO accreditation regime after the completion of its AEO pilot program in 2009.\(^{65}\)

Similar efforts have started to take place in the developing world. The World Customs Organization, for example, started a capacity-building program to develop AEO programs with regional intergovernmental organizations like the East African Community – made up of Burundi, Kenya, Rwanda, Tanzania, and Uganda – and the South African Customs Union – made up of Botswana, Lesotho, Namibia, South Africa,
and Swaziland. Similarly, Panama and Paraguay are also considering AEO pilots programs. These efforts have yet to be implemented.  

Conclusion

The major maritime trade security programs implemented after 9/11, like C-TPAT, CSI, the ISPS code, and AEO exacerbate the existing incongruence in the level of trade barriers between developed and developing nations by disproportionately penalizing those countries that cannot afford comply with the new regulations. C-TPAT and other AEO programs limit membership to companies in more developed nations by requiring importers to conduct comprehensive assessments of their international supply chains and ensure that the necessary security measures are in place and adhered to. Since non-compliance with program security measures results in disenrollment, members often drop small suppliers in the developing world in favor of more established suppliers having better security, often in more developed countries. Further trade barriers to developing nations are formed by the expedited access to port facilities and fewer security inspections granted C-TPAT and AEO members because it puts non-members at a competitive disadvantage.

The ISPS code disproportionately presents a non-tariff barrier to developing countries as well. ISPS compliance costs small ports 113 percent more than large ports, while the yearly operational expenses associated with ISPS cost small ports 58 percent more than large ports. The economies of scale enjoyed by large ports vis-à-vis small ports

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only exacerbate these differences in cost. While the ISPS code has increased global maritime trade security standards and improved supply-chain safety, by requiring IMO members to meet strict and expensive port security standards, it burdens small ports and developing countries at a disproportionate level.

Similarly, although CSI arguably improves U.S. maritime supply-chain security, it also serves as a non-tariff barrier to developing countries whose smaller ports are often unable to afford CSI participation costs. The program incentivizes the use of CSI ports due to the shorter wait time and fewer security checks associated with using a CSI port. As a result, a significant number of shipping companies have moved away from smaller non-CSI ports to keel their competitive advantage. Furthermore, for many developing countries, shipping to the United States will require systematic use of CSI ports. Since very few CSI ports are located in the developing world (southern hemisphere), using such ports will increase shipping costs and duration for many developing nations.

The non-tariff trade barriers created by these maritime trade security programs, combined with the fact that exporters in developing countries often pay two to three times as much in import customs and duties in destination countries than do exporters in developed countries, it is clear that significant trade barriers to developing countries pervade the new maritime trade security environment. This disparity has significant implications for those in the developing word. The higher cost of shipping for developing countries makes it more difficult for these countries to export their goods to the global

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market, thus limiting GDP growth and economic development. Similarly, the lower import costs into developing countries makes it easier for developed countries to “flood” the developing world with their products, which limits economic development by making it impossible for small industries in developing countries to compete. Given the link between a nation's propensity to harbor terrorists and development it becomes apparent that by creating non-tariff trade barriers the maritime trade security programs discussed in this chapter may inadvertently promote an environment more favorable to terrorists.
CHAPTER 5
CONCLUSION

Although many of the maritime trade security policies implemented after 9/11 aim to make international trade more secure from direct terrorist activities, there is little evidence to suggest that such policies address two of the underlying causes of terrorism: desperation and poverty. This thesis found that given the positive relationship between trade and development, and the link between development and a nation’s propensity to harbor terrorist organizations, the increased cost of international trade resulting from certain maritime trade security policies may help to promote terrorism. By inadvertently levying disproportionate non-tariff trade barriers against those countries most likely to harbor terrorist organizations, these programs restrict lesser-developed nations’ ability to develop, and thus leave them more susceptible to becoming terrorist safe havens.

To arrive at this conclusion Chapter Two analyzed the theories of absolute and comparative advantage, and considering the validity of the H&O model, and clearly demonstrated that many developing nations have much to gain through international trade. It found that while there are examples of where import substitution and export promotion have both been successful in promoting economic growth and development, most scholars agree that export promotion is a more effective method. In fact, many international organizations, like the OECD, and the UNCTAD work to promote exports and international trade as a means of fostering development in the developing world.

As demonstrated in the case studies Chapter Two explores, openness to trade, and export promotion have had significant positive effects on developing countries from all
corners of the globe. While developing nations should learn from these examples by lowering trade barriers and promoting exports domestically, developed nations should also work promote a global atmosphere in which tariffs and non-tariff trade barriers are minimized.

Building on the finding that trade promotes development, Chapter Three outlines a quantitative study, which found a distinct relationship between development and those countries that harbor terrorist organizations. According to the study, more than 80 percent of terrorist attacks analyzed came from groups or individuals in the developing world. While the results indicate that developed countries are much less likely to harbor terrorist organizations than developing countries, they also show that the very least developed countries in the world are also unlikely to harbor terrorist organizations. In fact, the evidence consistently shows that the subset of countries within the developing world most likely to harbor terrorist organizations are the relatively more developed states. Only 19.5 percent\(^1\) of terrorist groups were harbored by the least developed developing countries, while 67 percent\(^2\) of terrorist groups were harbored by the more developed developing countries harbored terrorists. This suggests that there is a window of development in which countries are most likely to harbor terrorist organizations.

One could see this finding as an argument against helping the very least developed countries to develop for fear that doing so would push them into the window

\[^1\text{This percentage was calculated by averaging the overall finding from each of the three indices: CLD, 24.8 percent; FSI, 28.6 percent; and HDI 5.2 percent.}\]

\[^2\text{This percentage was calculated by averaging the overall finding from each of the three indices: CLD, 60 percent; FSI, 61.9 percent; and HDI 79.2 percent.}\]
of development in which countries are most likely to harbor terrorists. Though further research is necessary to determine the validity of this fear, the concern does not preclude developed nations from working to improve trade conditions for developing countries. Since international trade flows are limited in the very least developed countries, reducing trade barriers will have little effect on their overall development. This is not the case with those countries most likely to harbor terrorists, as their international trade flows are significantly higher. As a result, reducing trade barriers will help push these countries into the ranks of the developed world, making their support of terrorism less likely.

Those countries most likely to harbor terrorists are also the developing states most engaged in international trade. When considered with the findings laid out in Chapter Two, it becomes clear that there is not only a link between development and terrorism, but also between trade and terrorism.

With this conclusion in mind, Chapter Four found that the major maritime trade security programs implemented after 9/11, like C-TPAT, CSI, the ISPS code, and AEO exacerbate existing incongruence in the level of trade barriers between developed and developing nations by disproportionately penalizing those countries that cannot afford to comply with the new regulations. C-TPAT and other AEO programs limit membership to companies in more developed nations by requiring importers to conduct comprehensive assessments of their international supply chains and ensure that the necessary security measures are in place and adhered to. Since non-compliance with program security measures results in disenrollment, members often drop small suppliers in the developing world in favor of more established suppliers having better security, often in more
developed countries. Further trade barriers to developing nations are formed by the expedited access to port facilities and fewer security inspections granted C-TPAT and AEO members because it puts non-members at a competitive disadvantage.

The ISPS code disproportionately presents a non-tariff barrier to developing countries as well. ISPS compliance costs small ports 113 percent more than large ports, while the yearly operational expenses associated with ISPS cost small ports 58 percent more than large ports. The economies of scale enjoyed by large ports vis-à-vis small ports only exacerbate these differences in cost. While the ISPS code has increased global maritime trade security standards and improved supply-chain safety, by requiring IMO members to meet strict and expensive port security standards, it burdens small ports and developing countries at a disproportionate level.

Similarly, although CSI arguably improves U.S. maritime supply-chain security, it also serves as a non-tariff barrier to developing countries whose smaller ports are often unable to afford CSI participation costs. The program incentivizes the use of CSI ports due to the shorter wait time and fewer security checks associated with using a CSI port. As a result, a significant number of shipping companies have moved away from smaller non-CSI ports to keel their competitive advantage. Furthermore, for many developing countries, shipping to the United States will require systematic use of CSI ports. Since very few CSI ports are located in the developing world (southern hemisphere), using such ports will increase shipping costs and duration for many developing nations.

The non-tariff trade barriers created by these maritime trade security programs, combined with the fact that exporters in developing countries often pay two to three times
as much in import customs and duties in destination countries than do exporters in
developed countries, it is clear that significant trade barriers to developing countries
pervade the new maritime trade security environment.\textsuperscript{3} This disparity has significant
implications for those in the developing word. The higher cost of shipping for developing
countries makes it more difficult for these countries to export their goods to the global
market, thus limiting GDP growth and economic development. Similarly, the lower
import costs into developing countries makes it easier for developed countries to “flood”
the developing world with their products, which limits economic development by making
it impossible for small industries in developing countries to compete. Given the link
between a nations propensity to harbor terrorists and development it becomes apparent
that by creating non-tariff trade barriers the maritime trade security programs discussed in
this chapter may inadvertently promote an environment more favorable to terrorists.

The United States and other global powers need to address this issue, not only
because of the security risks associated with not doing so, but also because it is their
moral responsibility. As depicted in Chapter Four, the United States, along with the
European Union and members of the International Maritime Organization, created post-
9/11 maritime trade security programs to increase security against terrorism. Achieving
this goal, however, has come at the expense of export oriented nations in the developing
world. Improved quality of life in the developed world has come at the expense of that in
the developing world.

\textsuperscript{3} United Nations Conference on Trade and Development, “Trade and Transport Facilitation:
In order to minimize the negative effects of these maritime trade security programs, the United States should work to reduce non-tariff trade barriers to offset those created by the programs. It should also increase aid, directed at improving maritime security trade infrastructure and compliance to maritime trade security programs, to countries whose trade was severely limited by the newly implemented trade security measures. Such aid would improve overall supply chain security while reducing the negative effects of the newly implemented programs.

Specifically, the U.S. Government should form a joint-task force between Customs and Border Protection (CBP), the U.S. Agency for International Development (USAID), and the Department of Commerce to develop policies targeted at helping U.S. trading partners most effected by the post-9/11 trade environment. Through such a task force, those within the U.S. government focused on improving maritime trade security would gain the perspective of those most involved with improving regional development and fostering the free flow of goods, thus ensuring that task force policies are developed with a broad range of ideas.

Similarly, by expanding Millennium Challenge Corporation’s funding to those projects aimed at improving port infrastructure in the developing world, the United States can help those countries struggling to meet the specific requirements outlined in various Authorized Economic Operator (AEO) programs, the Container Security Initiative (CSI), and the International Ship and Port Facility Security Code. This will reduce the non-tariff barriers produced, and increase levels of development in target countries by reducing the
disincentives of AEO members to use exporters from developing countries, improving the likelihood that the United States will grant CSI status to ports in developing countries – thus improving their comparative trade advantage with the United States, and increasing general compliance with ISPS code requirements.

The United States should also help trading partners in the developing world to implement multilateral free-trade agreements and regional free-trade areas. This will help to offset the negative effects of increased security measures by reducing the overall cost of trading internationally.


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